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**DRAFT INITIAL STUDY/
PROPOSED MITIGATED NEGATIVE DECLARATION**

McINTYRE RANCH MASTER PLAN

**PREPARED FOR:
Greater Vallejo Recreation District**

**PREPARED BY:
Michael Kent & Associates**

May 2009

**DRAFT INITIAL STUDY/
PROPOSED MITIGATED NEGATIVE DECLARATION:
McINTYRE RANCH MASTER PLAN**

May 2009

Prepared For:

**Greater Vallejo Recreation District
395 Amador Street
Vallejo, CA 94590**

**Alta/LandPeople
511 First Street
Benicia, CA 94510**

Prepared By:

**Michael Kent and Associates
5931 Golden Gate Avenue
San Pablo, CA 94806-4126**

in association with

**Environmental Collaborative, Biological Consultants
Holman & Associates, Consulting Archaeologists
Meg Scantlebury, Historical Resources Consultant
Parisi Associates, Traffic Engineers**

McIntyre Ranch Master Plan
Initial Study/Mitigated Negative Declaration

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California Environmental Quality Act (CEQA) Environmental Checklist Form

1. Project Title:

McIntyre Ranch Master Plan

2. Lead Agency Name and Address:

Greater Vallejo Recreation District
395 Amador Street
Vallejo, CA 94590

3. Contact Person and Phone Number:

Shane McAfee
General Manager
Greater Vallejo Recreation District (GVRD)
(707) 648-4603

4. Project Location:

In the northeastern portion of the City of Vallejo, Solano County, California, Vallejo, on the opposite side of an approximately 750-foot-high ridge from Columbus Parkway and the urbanized area of the City. The site is bordered on all sides by open space (the Vallejo Swett Ranch, a property owned by the Solano Land Trust). Assessor's Parcel Numbers (APNs): 0182-040-050 (ranch) and 0182-040-040 (driveway).

5. Project Sponsor's Name and Address:

Greater Vallejo Recreation District
395 Amador Street
Vallejo, CA 94590

Contact:
Shane McAfee
(707) 648-4603

6. General Plan Designation:

Vallejo General Plan: Open Space/Conservation

7. Zoning:

PF (Public & Quasi-Public Facilities)

8. Description of Project:

Introduction

The McIntyre Ranch Master Plan is proposed on a 22.15-acre site located in northeastern Vallejo, on the opposite side of an approximately 750-foot-high ridge from Columbus Parkway and the urbanized area of the City to the southwest (see Figure 1). The Greater Vallejo Recreation District (GVRD) purchased the site in 1986 using park dedication funds. The residential and ranch facilities at the ranch are in various states of disrepair. The purpose of the Draft McIntyre Ranch Master Plan (Master Plan) prepared in December 2008,¹ which is the subject of this Initial Study/Mitigated Negative Declaration, is public uses that provide maximum benefit to local residents served by GVRD.

Project Site

The 22.15-acre site of the proposed McIntyre Ranch Master Plan consists of Assessor's Parcel Number (APN) 0182-040-050 (the driveway leading to the Ranch is APN 0182-040-040), as shown in Figures 2, 3, 4, and 5. The ranch was previously owned by Kenneth Swett, descendant of the original settlers of the area, who owned the surrounding Vallejo Swett Ranch and the nearby Eastern Swett Ranch. Swett constructed the main house on the site in approximately 1942 and lived there with his family until they sold the property to the McIntyres in 1975. The property includes an architecturally distinctive home that has suffered structural and weather damage and is no longer habitable, two barns, a stone jockey house or tack room, and other outbuildings. These facilities are in various states of disrepair.

The McIntyre Ranch property is surrounded by the 905-acre Vallejo Swett Ranch, a property owned by the Solano Land Trust (SLT) (see Figure 1). Farther southwest, on the opposite side of an approximately 750-foot-high ridge, is Columbus Parkway and an urbanized portion of Vallejo. The Vallejo Swett Ranch property is planned to be opened to the public on a limited basis in the next two years, including access to a portion of the Bay Area Ridge Trail that will connect from GVRD's nearby 30-acre Blue Rock Springs Regional Park to the McIntyre Ranch property, and north to existing trails in public open space around the Hiddenbrooke residential development.

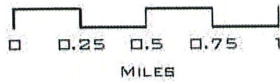
The McIntyre Ranch site supports a diversity of plant and animal species, and its location in an area of expansive rangeland and permanently protected open space provides important habitat for terrestrial species. Nearly all the large vegetation on the site consists of introduced ornamentals. While past disturbance generally precludes the occurrence of special-status plant species and limits the likelihood of occurrence of any special-status animal species, sensitive biological resources remaining on the site include possible wetlands, stands of native grasslands, and potential habitat for special-status species.² There is a significant stand of native grasses that extends along the northwest boundary of the site. This is a continuation of native grasslands on the adjacent Vallejo Swett Ranch.

¹ LandPeople, McIntyre Ranch Master Plan, Draft December 22, 2008.

² Jim Martin, Environmental Collaborative, *McIntyre Ranch Master Plan Appendix B: Biological Constraints Assessment*, Draft April 9, 2008, Appendix B of: LandPeople, *Draft McIntyre Ranch Master Plan*, April 9, 2008.



DRAFT
May 21,
2007



GREATER VALLEJO
RECREATION DISTRICT

FIGURE 1: SITE LOCATION AND
ADJACENT LAND USES

MCINTYRE RANCH
MASTER PLAN

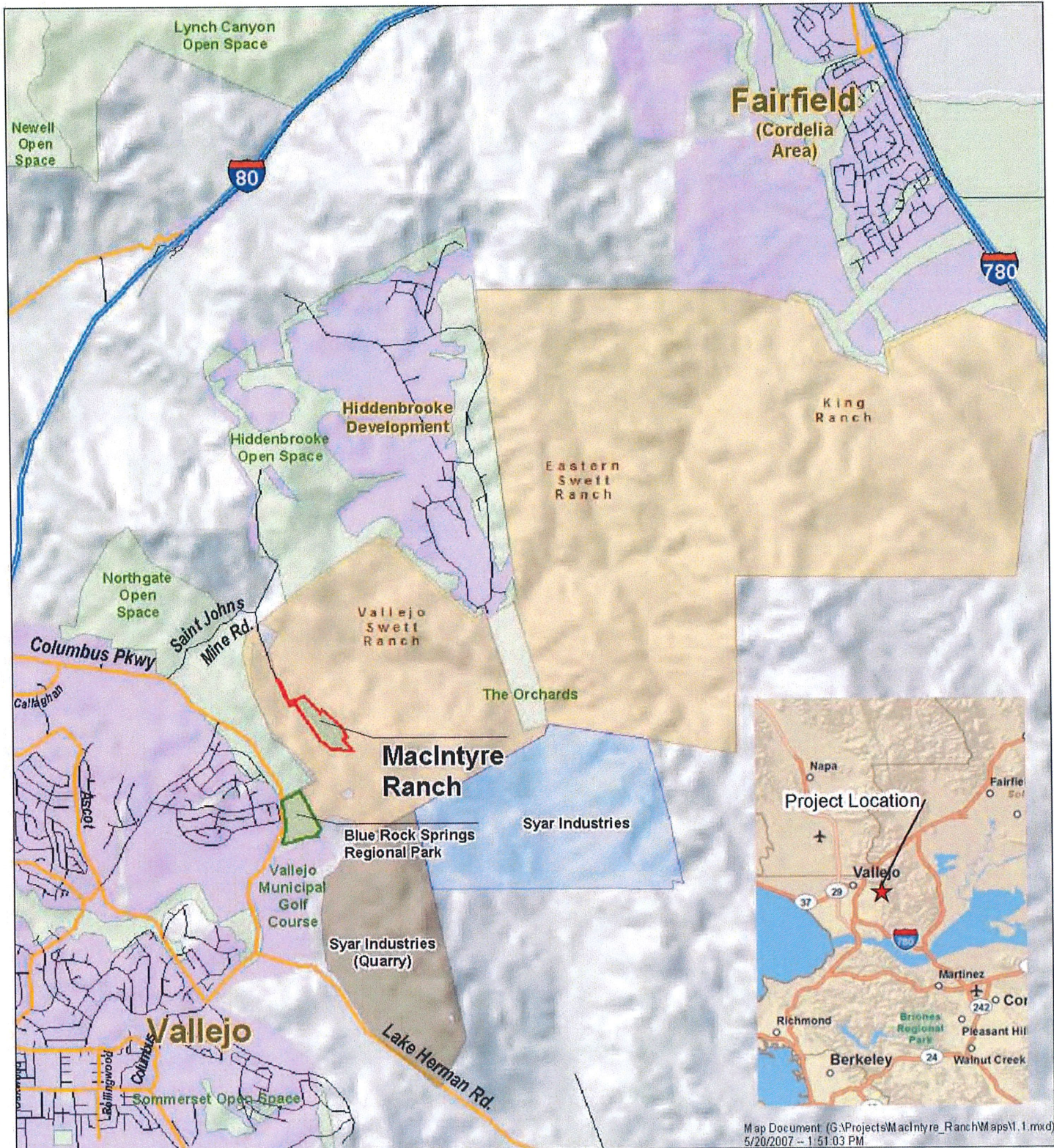
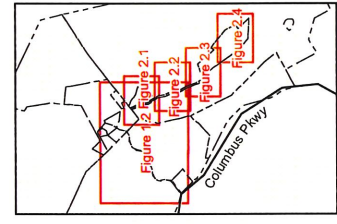
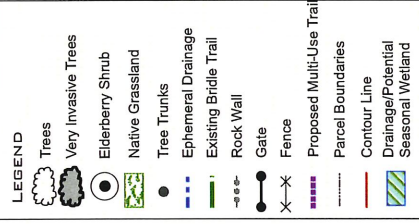


FIGURE 2:
EXISTING CONDITIONS
AND BIOLOGICAL
RESOURCES,
DRIVEWAY, NORTH
DRIVEWAY, NORTH

MCINTYRE RANCH
MASTER PLAN



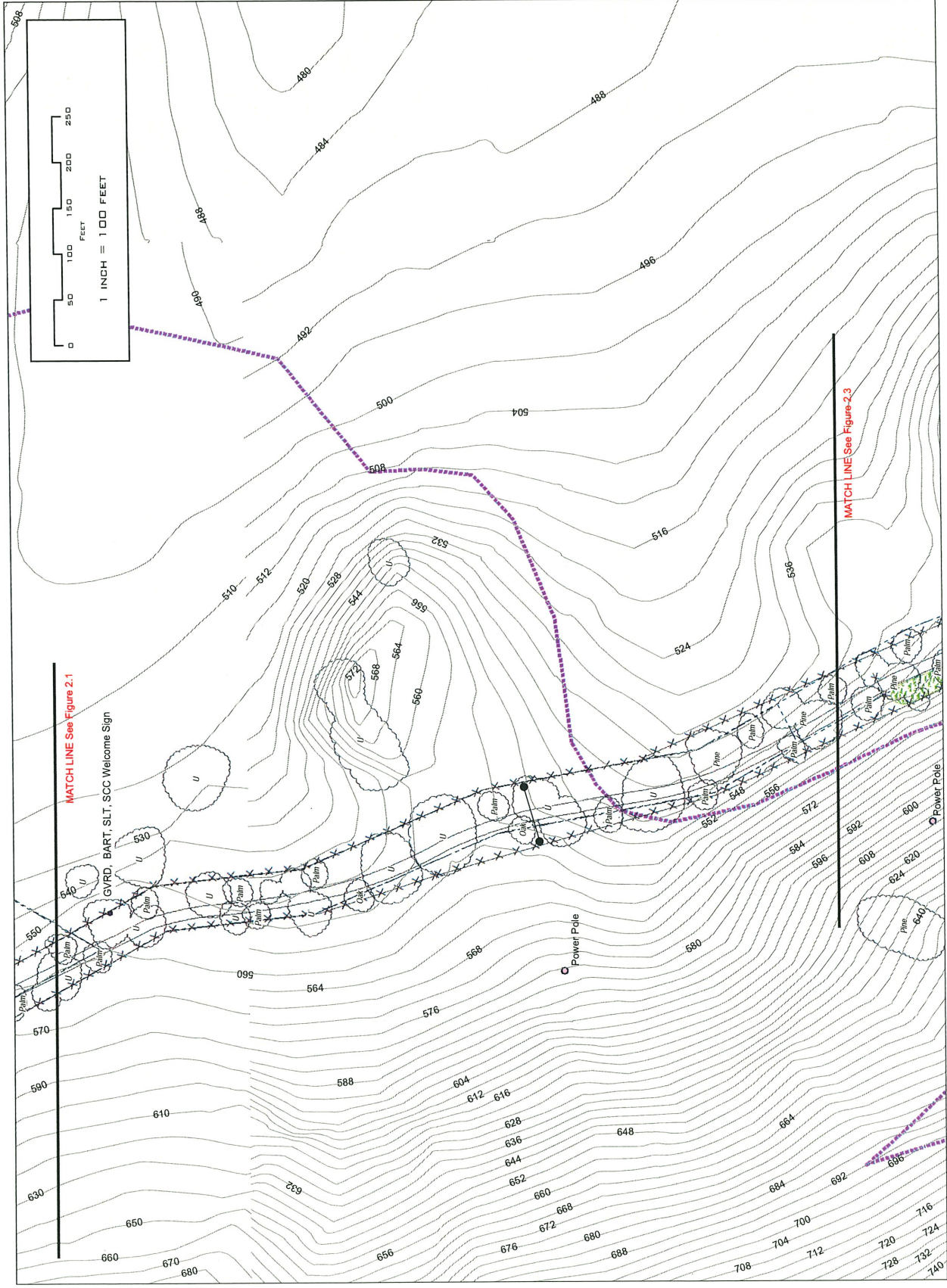
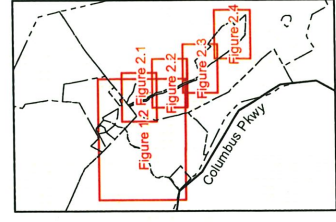
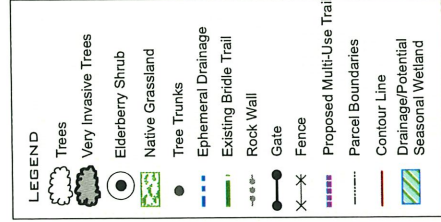


FIGURE 4:
EXISTING CONDITIONS
AND BIOLOGICAL
RESOURCES, MAIN
RANCH, NORTH

MCINTYRE RANCH
MASTER PLAN

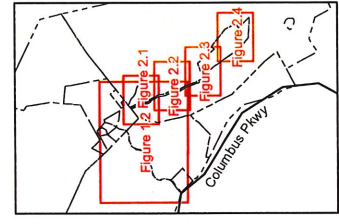
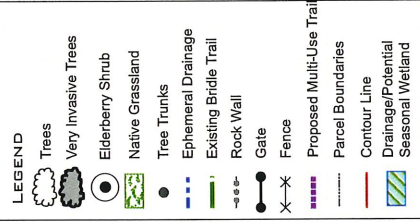


FIGURE 5:
EXISTING
VEGETATION,
SOUTH

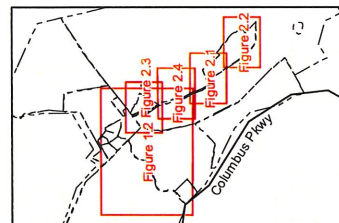
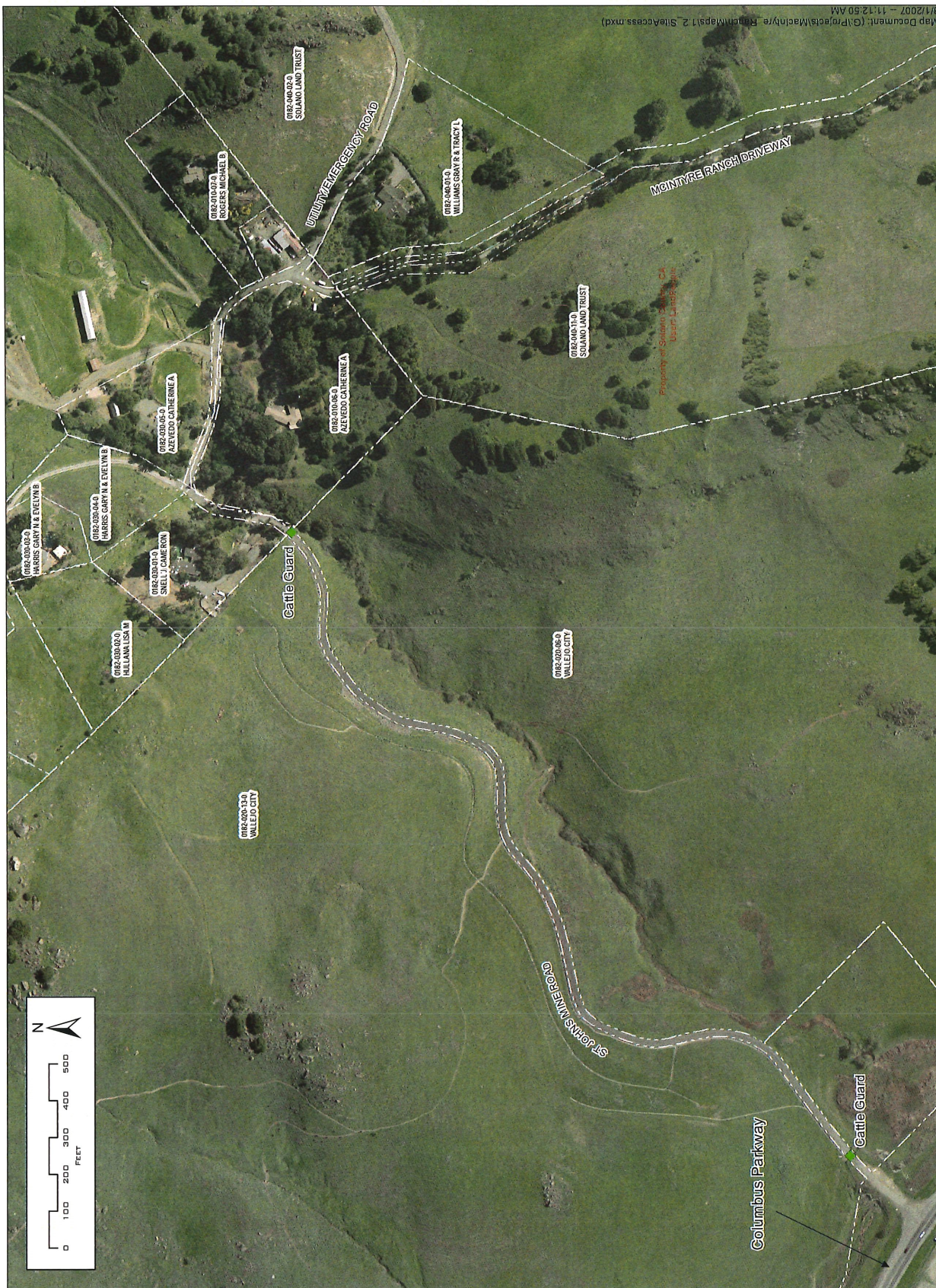
MCINTYRE RANCH
MASTER PLAN



- LEGEND**
- Trees
 - Very Invasive Trees
 - Tree Trunks
 - Intermittent Drainage
 - Existing Bridle Trail
 - Rock Wall
 - Gate
 - Fence
 - Proposed Multi-Use Trail
 - Elevation Contours
 - 100 foot
 - 40 foot
 - 4 foot
 - Drainage/
Potential Seasonal
Wetland
 - Native Grassland



FIGURE 6:
SITE ACCESS



The mature trees provide suitable nesting habitat for a number of raptors and other birds. Both special-status and more common bat species may roost in one or more of the structures on the site.

There are a series of ephemeral streams on the site, as indicated on Figures 4 and 5. Some of these drainages are not well defined, and wander through the pastures, creating seasonally swampy areas. The drainages are potential regulated jurisdictional waters (wetlands). There is a remote potential for California red-legged frog individuals to disperse along the drainages and be attracted to the seasonal wetland areas during the winter and early spring months, but permanent breeding habitat is absent. In addition to the drainages mentioned above, a drainage located east and northeast of the main house in the southern portion of the site, as shown on Figure 5, formerly contained accumulated water. After the closure of a leaking pipe by GVRD, this area no longer contains water,³ although the drainage remains.

The driveway is lined with a series of Canary Island date palms and Monterey pines, and a few blue gum eucalyptus. Numerous rows and groves of blue gum and pines are located in the central ranch area, along with grove of poplars, and a few Monterey cypresses. Around the Main House there is a greater variety of trees and shrubs, including coast redwoods, deodar cedar, Monterey cypress, casurina, Grecian laurel, and, north of the main house and swimming pool area, the remains of an old plum orchard. South of the Main House is a dense grove of Monterey pines extending down the hillside and around a meadow area to the east. Another grove of poplars is located north of this spot along an ephemeral stream. Several of the introduced ornamental trees and plants on the site are very invasive, and are reproducing and spreading, including the blue gum eucalyptus, acacia, elms, giant reed, and pampas grass.

Access to McIntyre Ranch is via Columbus Parkway, a major arterial that is currently being widened to four lanes in the project vicinity, and St. Johns Mine Road (see Figure 6). The Columbus Parkway intersection with St. Johns Mine Road has recently been improved with a traffic signal and left turn lanes on Columbus Parkway. St. Johns Mine Road is a paved road providing access to six residences located in a saddle along the main ridge of the hills east of Vallejo, as well as to the McIntyre Ranch. Beyond the residences the paved road continues to the east as a gated service and emergency access road to the Hiddenbrooke development area of Vallejo, connecting to Highgate Road at the west side of the development. The road is also the alignment of a sewer main, utilities and other infrastructure serving Hiddenbrooke. The connection to the McIntyre Ranch extends south from St. Johns Mine Road through private property, passing between an actively used equipment shed and yard located on the east side of the road north of the ranch entrance, and trucks, trailers and other equipment stored in a flat area on the west side of the road.

Existing Tenant Use

In May 2006 GVRD approved a license agreement with Alternatives Counseling and Coaching (ACC), a private partnership that provides equine-assisted psychotherapy for adults and children and horsemanship experiences for non-riders. The agreement allows ACC to conduct the following activities on the McIntyre Ranch property:

- Equine-assisted psychotherapy, riding and horse training activities;
- Environmental education programs for youth and adults;

³ Randy Anderson, Principal, Alta/LandPeople, email to Michael Kent of Michael Kent & Associates, 19 February 2009.

- Educational programs in basic horsemanship, ranch experience and other related programs to the general public through GVRD;
- Related collaborative programs with community organizations, Solano Land Trust, and local corporations;
- Boarding up to eight horses; and
- Self-contained mobile home on the property for a live-in caretaker.

ACC agreed to provide site improvements including renovation of an existing barn for storage, a source of permanent water to pasture areas, and reclaiming some designated landscape areas.

Goals of the McIntyre Ranch Master Plan

The project sponsor (GVRD) has three overall objectives for public use and improvements at McIntyre Ranch:

- 1) Provide for public uses that provide maximum benefit to local residents served by GVRD;
- 2) Generate revenue from public use and compatible private use that will help to offset costs of owning, operating, and maintaining the land and facilities; and
- 3) Maintain the site in an environmentally sound and aesthetically pleasing condition, including minimizing impact on neighboring properties.

Master Plan Site Use and Improvement Elements

The Master Plan is organized around four relatively distinct use areas (Northern Grove Area, Central Farm and Equestrian Area, Main House Site, and Pine Grove Area), as shown in Figure 7. Each of these areas would have uses and facilities that are complementary, and could also function independently. Overall, the proposal for McIntyre Ranch consists of a U.S. Geological Survey research/office facility, an outdoor education center, a demonstration farm and equestrian center, a small retreat conference center, and a rustic picnic and camping facility for organized groups, especially youth. The Master Plan envisions McIntyre Ranch as a modest facility serving a broad range of users and focused on Vallejo citizens.

The individual elements of the Master Plan are described below.

USGS Western Ecological Research Center - Northern Grove Area

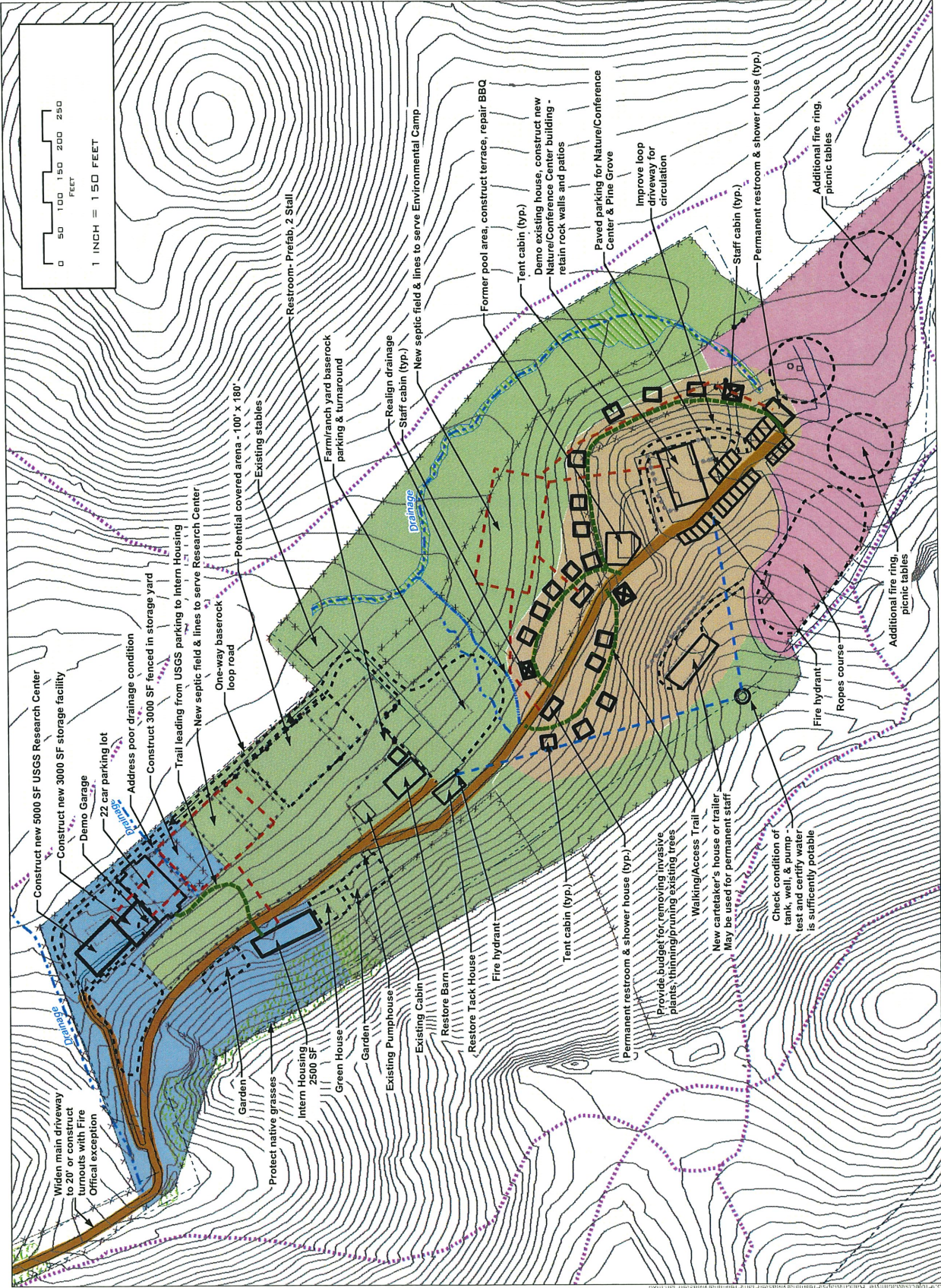
The U.S. Geological Survey (USGS) Western Ecological Research Center would be located at the north end of the Ranch, which consists of approximately four acres. The USGS Western Ecological Research Center conducts research on the nation's biological resources and provides science support for management agencies, and would relocate from temporary facilities on Mare Island in Vallejo. The Western Ecological Research Center would consist of the following improvements:

1. An approximately 5,000-square-foot Main Building, with offices, work space, and meeting space.
2. An enclosed Storage Building (approximately 3,000 square feet) and storage yard (approximately 3,000 square feet), replacing an existing smaller garage which would be demolished, with reinforced concrete floors to accommodate the weight large storage freezers, a locked gate, and parking for government vehicles and watercraft.

MASTER
PLAN
FIGURE 7

MAY, 2009

MCINTYRE RANCH
MASTER PLAN



3. A three- to six-bedroom, approximately 2,500-square-foot Intern Housing building.
4. An approximately 7,000-square-foot paved parking area with 22 parking spaces, which would supplant the most northerly of the existing horse paddocks.
5. Septic tank and disposal field for the Research Center, located in the second and third most northerly of the existing paddocks. The paddock use is expected to remain above the disposal field.
6. A 12-foot-wide base rock surface road connecting to stable area, with a gate at the north end to prevent general public entry into the paddocks area, to allow one-way loop circulation for maintenance and for emergency access.
7. A potable water connection, using, if it remains, the water supply line from the former Caretaker's House (see Water Supply and System, below, for discussion of related improvements).

The structures and storage yard identified above would have a footprint of approximately 0.5 acre.

Central Farm and Equestrian Area

This area would serve as the center of equestrian and agricultural activity. The existing equine therapy and general equestrian uses would continue, if an acceptable agreement can be reached with GVRD. A demonstration farm type use could be developed at McIntyre Ranch; some additional uses of the existing structures, and additional agricultural structures and facilities may be required, such as a greenhouse, additional animal pens and sheds. The following improvements would occur at the Central Farm and Equestrian Area:

1. New foundation and related structural repairs at the existing Barn, which would be used to shelter farm animals, store feed and equipment, provide office space, and potentially as agricultural museum and demonstration space.
2. Restore and improve the Tack House, which would be used to store tack (equestrian equipment) and/or other agricultural supplies, and as an office for the farm and/or equestrian uses.
3. Minor repairs to the Cabin, which would be used as an office or for storage.
4. (Possibly) Construct an additional stable building near the existing stables, which are in good condition and would not be altered by the project.
5. (Possibly) Install a small prefabricated covered steel arena (approximately 100 by 180 feet) on the site of the existing paddock arena.
6. Within the central barn area, construct a loop road around a base rock surfaced space with a 50-foot centerline turning radius to accommodate trailer-towing rigs, with parking capacity for approximately 50 regular vehicles, or approximately eight regular vehicles plus sixteen truck-horse trailer rigs (assuming approximately 13 feet by 40 feet per rig).
7. Install a new prefabricated plastic greenhouse near the former bunkhouse location or in another area on the periphery of the central Ranch area.
8. Improve/formalize at least six separate small to large sized existing areas for use as pastures or gardens. The Pine Grove area may be grazed to manage fuel load. The area to the west of the bunkhouse site would be excluded from grazing and cultivation to protect the existing stand of native grasses.

9. If a farm/garden program is established, install agricultural outbuildings: smaller barns and sheds to store farm supplies and equipment and to house small farm animals.
10. Interim or permanent handicapped-accessible portable toilets.

Nature Center and Children's Environmental Camp - Main House Site

The existing Main House, which is badly damaged and is deemed infeasible to restore, would be demolished, and a new nature center/conference conference/activity center structure of approximately the same size would be constructed at the same site, consisting of the following:

1. Demolish the Main House, while retaining the adjacent rock building and garden walls and planters, terraces, lawn and garden areas, walkways, and driveway circling the house. This may be improved as a one-way access loop, as discussed in On-site Roads, below.
2. Construct an approximately 3,600 square foot Nature/Conference/Activity Center including a dining area and kitchen, featuring "green" building techniques, similar to the Solano Land Trust's Rush Ranch Nature Center. The structure would be either a prefabricated or a custom designed and built structure, and would include water and sewage system improvements as discussed in Water Supply and System and Sewage System, below. This structure would serve as the main indoor activity area for the environmental camp, as a meeting space to expand on the USGS Research Center facilities, and/or for activities and events for the general public.
3. Construct basic overnight accommodations for students. 18 Tent Cabins in three clusters of six, are envisioned, with each cabin accommodating up to 4 students.
4. Construct three Restroom/Shower buildings in close proximity to the tent cabin clusters.
5. Construct a new terrace area, with a concrete paved area with space for approximately ten picnic tables accommodating up to 80 people, a new shade structure to partially cover the area, and refurbishment of the existing rock barbeque/sink/counter structure.
6. Renovate landscape areas around the Nature/Conference Center and terrace by clearing selected existing plants, and installing a new low-flow automatic irrigation system and new native, drought-tolerant, fire-resistant planting.
7. Construct approximately 24 parking spaces south of the Nature/Activity Center, by grading and paving an area adjacent to the driveway, to add to the approximately 15 existing spaces along the perimeter of the existing driveway circling the site.
8. Provide a Staff/Caretaker Residence at the former Foreman's House site (a graded landing west of the Main House site), by grading and paving a base rock driveway, constructing a foundation/pad, and installing utility, water and septic connections to serve a caretaker trailer, RV, or manufactured home.

Pine Grove Area

The camping facilities at the Pine Grove Area would be expanded, with use limited to youth groups or in conjunction with organized events and activities at the Nature/Conference Center, rather than general public use. Access would be hike-in or walk-in, except for potential drop-off of supplies (vehicles would not be allowed to leave improved roads). Improvements would consist of the following:

1. Install two more fire rings with benches, a potable water spigot, and three picnic tables each, similar to the existing site in the north end of the grove.
2. Provide a portable handicapped-accessible toilet, or a prefabricated double unit unisex toilet.
3. Gradually clear and replace the non-native pines with native oaks and potentially bays.
4. Install a ropes course (an outdoor personal development and team building facility consisting of ropes suspended between trees or poles) in an approximately 120-foot by 200-foot area in the western portion of the Pine Grove Area.

St. Johns Mine Road Improvements

To provide access to the McIntyre Ranch, the existing St. Johns Mine Road would be improved as follows:

1. Trim vegetation and grade an embankment back slightly for sight distance.
2. Stripe or re-stripe the road to add white stripes on each side and a yellow centerline.
3. Re-pave and stripe the driveway access to the Ranch across the private property north of the project site.
4. Improve a base rock-surfaced carpool parking area approximately 20 feet by 120 feet on the south side of the road outside the first cattle guard near the intersection of St. Johns Mine Road and Columbus Parkway.

Sewage System

The site is served by a septic system, but its condition is unknown, and attempts to locate the existing tank and leech/disposal fields have been unsuccessful. The project site is too distant from the nearest sewer lines, located along Columbus Parkway or in the Hiddenbrooke development, to make connection to sewers a practical alternative. The proposed new septic system, with disposal fields that meet the required 50-foot setback from the adjacent ephemeral drainage⁴, would consist of:

1. A sewage tank and disposal field in the paddock area south of the proposed USGS Research Center to serve that facility and the nearby intern housing.
2. A sewage tank and disposal field in the pasture area north of the Main House site to serve the Environmental Camp and Nature Center building and restrooms in the Farm/Equestrian Area.
3. Sewer lateral lines from proposed USGS facilities, restrooms, kitchen and laundry facilities to the sewage disposal tank and field.
4. Interim or permanent handicapped-accessible portable toilets in the Pine Grove Area and Central Farm and Equestrian Area.

⁴ Solano County Code, Chapter 6.4, Sewage Standards, p. 34.

Water Supply and System

The existing well, water tank, and water lines on the site are adequate for the existing uses, but have not been tested to confirm that if they would provide adequate supply for the proposed uses, or if the water meets County public health standards. The project would include the following:

1. Prepare an engineering study and design for on-site water supply and delivery for fire and drinking water, to determine if the existing well, pump, tanks and water lines can be used, if any improvements or replacement are needed, potential impact on and sustainability of the ground water supply, and adequacy of water supply for firefighting purposes.
2. Test and document the existing well and water supply to verify that it meets public drinking water standards, and maintain an ongoing testing program as required by County code.
3. Based on testing described above, make improvements to the well and water system or treatment as required to meet County standards, which may include installation of a water treatment system.
4. In the event that steps 1 through 3 above do not result in an adequate water supply, provide a connection to City water main in St. Johns Mine Road.

Fire Service and Safety

The site is served by the Vallejo Fire Department. It is in a wildland interface area surrounded by grasslands, with many fire-prone non-native trees (pines and eucalyptus) on the property and around the structures. Fire safety components of the proposed project consist of:

1. Complete an engineering study and design for on-site water supply and delivery for fire and drinking water, to determine if the existing tanks can be used, and/or any improvements or replacement needed.
2. Install fire hydrants near the USGS Research Center, in the central agricultural area, and near the proposed Nature Center.
3. Install water lines meeting fire flow standards from the existing water tank and/or the unused second tank, connecting to the above fire hydrants.
4. Remove flammable brush and shrubs from within 40 feet of existing and proposed structures. Managed grazing by the resident horses or goats, or potentially by cattle through arrangement with the grazing tenants on the adjacent land, may be employed.
5. Design and implement a tree trimming and removal program, incorporating both the safety benefits of clearance to meet California Department of Forestry and Fire Protection (CDF) standards, and the aesthetic and historic value of the trees.
6. Improve on-site roads as described in "On-Site Roads", below.

Drainage

The Master Plan would not add substantial new impervious surfaces to the site. Vegetated interceptor ditches and other Best Management Practices for erosion control and protection of water quality would be employed in the detailed design drainage features and operation of the facility. Poorly-defined drainage routes in the vicinity of the former barn site and at the north end of the paddocks would be relocated and/or improved to prevent wet conditions.

On-Site Roads

The existing on-site road system does not meet standards for regular public access or emergency access. Road improvement actions would consist of the following:

1. Apply to the Vallejo Fire Department for an exception to standards to allow a one lane driveway with turnouts at regular intervals, and to allow portions of the on-site circulation system to be base rock surfaced (rather than asphalt).
2. If allowed by the Vallejo Fire Department, construct driveway turnouts at regular intervals (e.g., 400 feet on center).
3. If a one-lane driveway is not allowed by the Vallejo Fire Department, widen the existing driveway and main access road up to the Main House to 20 feet, to facilitate public and emergency vehicle access.
4. Re-seal the existing on-site road system, including localized pothole repairs, following completion of other major construction.

Public Access

To control access to the Ranch, all of the proposed public uses at the project facilities identified above would be by prior arrangement or in conjunction with a scheduled event. Because the proposed uses on the site are stand-alone and do not require access to the surrounding property,⁵ activities proposed in the Master Plan would be restricted to the confines of the McIntyre Ranch.

9. Surrounding Land Uses and Setting:

The McIntyre Ranch property is surrounded by the 905-acre Vallejo Swett Ranch, a property owned by the Solano Land Trust (SLT) (see Figure 1). The central portion of the Vallejo Swett Ranch features significant habitat for the California red-legged frog, and is designated as a public access limitation area to protect the frog, as well as burrowing owl habitat, wetlands and native bunchgrass grassland communities that exist in the flat areas to the east of McIntyre Ranch. The Vallejo Swett Ranch property is planned to be opened to the public on a limited basis in the next two years, including access to a portion of the Bay Area Ridge Trail that will connect from GVRD's nearby 30-acre Blue Rock Springs Regional Park (southwest of the project site) to the McIntyre Ranch property, and north to existing trails in public open space around the Hiddenbrooke residential development (northeast of the project site). Farther northeast of the Vallejo Swett Ranch, other SLT properties include the 1408 acre Eastern Swett Ranch, and the 1617 acre King Ranch. Farther north of the Vallejo Swett Ranch are the

⁵ LandPeople, *McIntyre Ranch Master Plan*, Draft December 22, 2008, p. 29.

Hiddenbrooke Open Space Area (629 acres) and the Northgate Open Space Area (369 acres). Southwest of Blue Rock Springs Park is the Blue Rock Springs Golf Course, straddling Columbus Parkway. South of the Vallejo Swett Ranch are buffer lands and the operating rock quarry owned by Syar Industries.

10. Public Agencies Whose Approval Is Required:

The proposed project would require approval from the following public agencies:

- City of Vallejo: Site Development Permit (which includes Tree Removal Permit)
- City of Vallejo: Grading Permit
- City of Vallejo: Demolition Permit
- City of Vallejo: Building Permit
- County of Solano, Environmental Health Services Division: Septic tank permit
- Regional Water Quality Control Board (RWQCB): Storm Water Pollution Prevention Plan (SWPPP) and Water Quality Certification pursuant to Section 401 of the Clean Water Act where wetlands and other waters may be affected by grading and development
- USFWS consultation regarding elderberry shrubs and California red-legged frog
- (Possibly) California Department of Fish and Game (CDFG): Streambed Alteration Permit

ENVIRONMENTAL FACTORS POTENTIALLY AFFECTED:

The environmental factors checked below would be potentially affected by this project, involving at least one impact that is a "Potentially Significant Impact" as indicated by the checklist on the following pages.

<input type="checkbox"/> Aesthetics	<input type="checkbox"/> Agricultural Resources	<input checked="" type="checkbox"/> Air Quality
<input checked="" type="checkbox"/> Biological Resources	<input checked="" type="checkbox"/> Cultural Resources	<input checked="" type="checkbox"/> Geology/Soils
<input checked="" type="checkbox"/> Hazards & Haz. Materials	<input checked="" type="checkbox"/> Hydrology/Water Quality	<input type="checkbox"/> Land Use/Planning
<input type="checkbox"/> Mineral Resources	<input checked="" type="checkbox"/> Noise	<input type="checkbox"/> Population/Housing
<input type="checkbox"/> Public Services	<input checked="" type="checkbox"/> Recreation	<input checked="" type="checkbox"/> Transportation/Traffic
<input checked="" type="checkbox"/> Utilities/Service Systems	<input checked="" type="checkbox"/> Mandatory Findings of Significance	

DETERMINATION:

On the basis of this initial evaluation:

☐

I find that the proposed project COULD NOT have a significant effect on the environment, and a NEGATIVE DECLARATION will be prepared.

☒

I find that although the proposed project could have a significant effect on the environment, there will not be a significant effect in this case because revisions in the project have been made by or agreed to by the project proponent. A MITIGATED NEGATIVE DECLARATION will be prepared.

☐

I find that the proposed project MAY have a significant effect on the environment, and an ENVIRONMENTAL IMPACT REPORT is required.

☐

I find that the proposed project MAY have a “potentially significant impact” or “potentially significant unless mitigated” impact on the environment, but at least one effect 1) has been adequately analyzed in an earlier document pursuant to applicable legal standards, and 2) has been addressed by mitigation measures based on the earlier analysis as described on the attached sheets. An ENVIRONMENTAL IMPACT REPORT is required, but it must analyze only the effects that remain to be addressed.

☐

I find that although the proposed project could have a significant effect on the environment, because all potentially significant effects (a) have been analyzed adequately in an earlier EIR or NEGATIVE DECLARATION pursuant to applicable standards, and (b) have been avoided or mitigated pursuant to that earlier EIR or NEGATIVE DECLARATION, including revisions or mitigation measures that are imposed upon the proposed project, nothing further is required.

Signature

Shane McAfee

Printed name

Date

Greater Vallejo Recreation
District

For

Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

EVALUATION OF ENVIRONMENTAL IMPACTS:

I. AESTHETICS — Would the project:

a) Have a substantial adverse effect on a scenic vista?

<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
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Explanation: The McIntyre Ranch site is surrounded by the open space of the 905-acre Vallejo Swett Ranch, a property owned by the Solano Land Trust (SLT). The project site is located within a shallow valley running from southeast to northwest. To the southwest is an approximately 750-foot-high ridge separating the site from Columbus Parkway and the urbanized area of the City of Vallejo. To the northeast the topography slopes upward within the Vallejo Swett Ranch open space. The project site, with its various structures and mature trees, has a rural, low-density visual character. Public scenic views encompassing the site are limited by the adjacent topography. Private scenic views are also limited due to the topography, intervening trees, and distance from the nearest private residences.

Construction of the proposed project would create bare areas, stockpiles of construction materials, and partially-constructed buildings on the site that would have a short-term visual impact, which would last until the buildings are completed and replanted vegetation has matured. Due to its short-term nature, and the limited scenic views of the site, the impact of construction on public and private scenic views would be **less than significant**.

After construction and maturation of replanted vegetation, the appearance of the site from nearby vantage points would be altered. The project structures, and renovation of landscaping, removal of invasive species, and planting of native species, would add new or altered visual elements to the site. The project structures would be relatively small, dispersed, and screened by trees and vegetation. The project components, and alterations to the site vegetation, would not substantially alter the overall rural visual character or existing views from nearby vantage points. Views of the site from more distant locations after completion of the project would continue to be screened by mature trees and/or the intervening hills to the southwest and northeast, as discussed above. Views from more distant portions of the Vallejo Swett Ranch open space would not be substantially affected due to the distance from the site, as well as the on-site trees and vegetation. In summary, the proposed project, after construction and maturation of vegetation on the site, would not have a substantial effect on the visual character of the site vicinity, and the effect on public and private scenic vistas would be **less-than-significant**.

b) Substantially damage scenic resources, including but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway?

<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
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Explanation: The site contains a number of native and non-native trees which contribute to the scenic qualities of the area. The project includes a fire safety tree trimming and removal program that incorporates the aesthetic and historic value of the trees (see 8. Description of Project, Fire Service and Safety, above), and replacement of non-native pines in the Pine Grove

Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Area with native oaks and potentially bays (see 8. Description of Project, Pine Grove Area, above). These changes would alter, but not substantially degrade, the overall scenic resource value of the trees on the site. The project site does not contain scenic rock outcroppings, and is not located within a designated scenic highway corridor. As discussed in Item I.a, above, the project would not have a significant adverse effect on scenic vistas. The site contains a number of buildings, but, as discussed in Item V.a, below, none are considered to be historic. For these reasons, the project's impact on scenic resources would be ***less than significant***.

- c) Substantially degrade the existing visual character or quality of the site and its surroundings?

<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
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Explanation: See Items I.a and I.b, above.

- d) Create a new source of substantial light or glare which would adversely affect day or nighttime views in the area?

<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
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Explanation: The new project buildings would add nighttime illumination to the site. The lighting of the existing buildings on the site would not be changed by the proposed project. The new buildings would have exterior security lighting that would be shielded-source and mounted on the undersides of the eaves to minimize glare and off-site visibility. While this lighting would be visible at night from some surrounding vantage points, there are no nearby private residences or public roads, the volume and intensity of the new lighting would be low, and the new lighting would be screened by existing vegetation and trees. The project lighting would not be substantially out of character with the existing lighting of the structures on the site, and would not create a source of substantial light or glare that would adversely affect views in the area. Impacts of the project on light and glare would be ***less than significant***.

II. AGRICULTURAL RESOURCES — In determining whether impacts to agricultural resources are significant environmental effects, lead agencies may refer to the California Land Evaluation and Site Assessment Model (1997) prepared by the California Dept. of Conservation as an optional model to use in assessing impacts on agriculture and farmland. Would the project:

- a) Convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland), as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to non-agricultural use?

<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
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Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Explanation: No agricultural uses are located on the 22.15-acre site, which is surrounded by open space (the Vallejo Swett Ranch, a property owned by the Solano Land Trust) that contains sensitive biological resources. The site contains a number of residential and ranch buildings, stables, and corrals. While the site was used for cattle ranching in the past, the site's current viability for agriculture is limited by its small size, existing buildings, and surrounding sensitive biological resources. There are no agricultural lands on the site identified in the Vallejo General Plan.⁶ No prime farmland exists on the site, and the proposed project would have **no impact** on farmland.

- b) Conflict with existing zoning for agricultural use, or a Williamson Act contract? ☐ ☐ ☐ ☒

Explanation: The site is zoned Public Facility and is not subject to a Williamson Act contract. There would be **no impact** on zoning for agricultural use or Williamson Act contracts.

- c) Involve other changes in the existing environment which, due to their location or nature, could result in conversion of Farmland to non-agricultural use? ☐ ☐ ☐ ☒

Explanation: See Items II.a and II.b, above.

III. AIR QUALITY — Where available, the significance criteria established by the applicable air quality management or air pollution control district may be relied upon to make the following determinations. Would the project:

- a) Conflict with or obstruct implementation of the applicable air quality plan? ☐ ☐ ☒ ☐

Explanation: The San Francisco Bay Area Air Basin is currently non-attainment for ozone (State and federal ambient standards) and PM₁₀ (State ambient standard). While air quality plans exist for ozone, none exists (or is currently required) for PM₁₀. The Revised San Francisco Bay Area Ozone Attainment Plan for the 1-Hour National Ozone Standard is the current ozone air quality plan required under the federal Clean Air Act.⁷ The State-mandated regional air quality plan is the Bay Area 2000 Clean Air Plan.⁸ These plans contain mobile source controls, stationary source controls, and transportation control measures to be

⁶ City of Vallejo, *Vallejo General Plan*, July 1999, H. Agricultural Production, page III-23.

⁷ Bay Area Air Quality Management District, *Revised San Francisco Bay Area Ozone Attainment Plan for the 1-Hour National Ozone Standard*, October 24, 2001.

⁸ Bay Area Air Quality Management District, *Bay Area 2000 Clean Air Plan and Triennial Assessment*, December 20, 2000.

Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

implemented in the region to attain the State and federal ozone standards within the Bay Area Air Basin.

In 2006, California passed the California Global Warming Solutions Act of 2006 (Assembly Bill No. 32; California Health and Safety Code Division 25.5, Sections 38500, et seq., or AB 32), which requires the California Air Resources Board (CARB) to design and implement emission limits, regulations, and other measures, such that feasible and cost-effective statewide greenhouse gas emissions are reduced to 1990 levels by 2020 (representing an approximate 25 percent reduction in emissions). There is currently no adopted threshold, so for this analysis, the project is considered to have a significant impact if it would be in conflict with the AB 32 State goals for reducing greenhouse gas emissions. Due to the project's small size (USGS research/office facility with housing for three to six interns, outdoor education center, demonstration farm and equestrian center, small retreat conference center, and picnic and camping facility), it would not conflict with the State's goals for reducing GHG emissions to 1990 levels by 2020 (Assembly Bill 32), and the project's impact on GHG emissions would be **less than significant**.

A project would be judged to conflict with or obstruct implementation of the regional air quality plan if it would be inconsistent with the growth assumptions, in terms of population, employment, or regional growth in Vehicle Miles Traveled (VMT). The proposed project facilities would not conflict with any of the growth assumptions made in the preparation of these plans nor obstruct implementation of any of the proposed control measures contained in these plans. This impact would be **less than significant**.

- b) Violate any air quality standard or contribute substantially to an existing or projected air quality violation?

<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
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Explanation: Project operation could affect local air quality by increasing the number of vehicles on nearby roads and at the project site, and by introducing stationary emissions to the project site. Transportation sources are the primary source of operational project-related emissions.⁹ Stationary source emissions, generated by combustion of natural gas for space and water heating, would be less-than-significant. The Bay Area Air Quality Management District (BAAQMD) has established thresholds for projects requiring its review for potential air quality impacts. These thresholds are based on the minimum size projects which the District considers capable of producing air quality problems due to vehicular emissions. One of the applicable thresholds is 2,000 new vehicle trips per day. The proposed project, including the USGS Western Ecological Research Center and its 22-space parking area, would generate up to 190 new trips, but these additional trips would be well below the BAAQMD standard. Therefore, the impact on operational air quality would be considered **less than significant**.

Construction of the project would involve demolition, earthmoving, and grading operations, and/or wind blowing over exposed earth. Exhaust emissions and fugitive particulate matter emissions would temporarily affect local air quality. Fine particulate matter (PM₁₀) is the

⁹ Bay Area Air Quality Management District, *BAAQMD CEQA Guidelines, Assessing the Air Quality Impacts of Projects and Plans*, April 1996, Revised December 1999.

Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

pollutant of greatest concern with respect to construction.¹⁰ PM₁₀ emissions can result from a variety of construction activities, including excavation, grading, demolition, vehicle travel on paved and unpaved surfaces, and vehicle and equipment exhaust. Although it is more of a nuisance than a hazard for most people, this dust could affect persons with respiratory diseases, as well as sensitive electronic or communications equipment. Consistent with Bay Area Air Quality Management District (BAAQMD) CEQA Guidelines, construction-period air emissions are considered less than significant if effective control measures are implemented such as those listed in Mitigation Measure III-1, which would require all debris to be covered and to maintain and operate construction equipment so as to minimize exhaust emissions of particulates and other pollutants.

The impact of fugitive dust and vehicle emissions due to construction of the proposed project is a **potentially significant** impact that would be reduced to a **less-than-significant** level by implementation of the following mitigation measure.

Mitigation Measure III-1: *The project sponsor (GVRD) shall reduce the severity of project construction-period dust impacts by requiring implementation of the following dust control measures by contractors during construction:*

- a) *Watering shall be used twice daily to control dust generation at active construction areas, including excavation, grading, and site preparation activities.*
- b) *Cover all trucks and earthmoving equipment hauling debris, soils, sand and other loose materials, or require all trucks and earthmoving equipment to maintain at least two feet of freeboard.*
- c) *Use dust-proof chutes to load debris into trucks whenever feasible.*
- d) *Pave, apply water three times daily, or apply (non-toxic) soil stabilizers on all unpaved access roads, parking areas, and staging areas at construction sites.*
- e) *Sweep daily (with water sweepers) all paved access roads, including affected public roads, parking areas, and staging areas at construction sites.*
- f) *Sweep streets daily (with water sweepers) if visible soil material is carried onto adjacent public streets.*
- g) *Require the project contractor(s) to maintain and operate construction equipment so as to minimize exhaust emissions of particulates and other pollutants, by such means as prohibiting idling motors when equipment is not in use or when trucks are waiting in queues, and implementing specific maintenance programs to reduce emissions for equipment that would be in frequent use for much of the construction period.*
- h) *Hydroseed or apply (non-toxic) soil stabilizers to inactive construction areas (previously graded areas inactive for ten days or more).*
- i) *Enclose, cover, water twice daily, or apply (non-toxic) soil binders to all stockpiles of debris, soil, sand, or other materials that can be blown by the wind.*
- j) *Limit traffic on unpaved roads to 15 mph.*
- k) *Install sandbags or other erosion control measures to prevent silt runoff to public roadways.*

¹⁰ Ibid.

Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

l) *Replant vegetation in disturbed areas as quickly as possible.*

- c) Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable federal or state ambient air quality standard (including releasing emissions which exceed quantitative thresholds for ozone precursors)? ☐ ☒ ☐ ☐

Explanation: See Item III.b, above.

- d) Expose sensitive receptors to substantial pollutant concentrations? ☐ ☒ ☐ ☐

Explanation: See Item III.b, above, for a discussion of construction- and operation-related emissions, and Item IV.a, below, for a discussion of herbicide use.

- e) Create objectionable odors affecting a substantial number of people? ☐ ☐ ☒ ☐

Explanation: The proposed project activities (USGS research/office facility, outdoor education center, demonstration farm and equestrian center, small retreat conference center, and rustic picnic and camping facility) are not anticipated to create objectionable odors. The impact on odors would be ***less than significant***.

IV. BIOLOGICAL RESOURCES — Would the project:

- a) Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Game or U.S. Fish and Wildlife Service? ☐ ☒ ☐ ☐

Explanation: The following discussion is based on a review of background information, field reconnaissance, and report by an independent biological resources consultant.¹¹

¹¹ Jim Martin, Environmental Collaborative, *McIntyre Ranch Master Plan, Appendix B: Biological Constraints Assessment*, Draft 9 April 2008. Refer to this assessment for additional information on biological resources associated with the site.

EXISTING VEGETATION AND WILDLIFE

The McIntyre Ranch site supports a diversity of plant and animal species, and its location in an area of expansive rangeland and permanently protected open space provides important habitat for terrestrial species. Figures 2, 3, 4, and 5 (pages 4 through 7) show the location of important biological features on the site. Sensitive resources include possible jurisdictional waters (wetlands), stands of native grasslands, and potential habitat for special-status species. Past disturbance generally precludes the occurrence of special-status plant species and limits the likelihood of occurrence of any special-status animal species. The mature trees on the site provide suitable nesting habitat for a number of raptors and other birds, although no active nests were encountered during a field survey conducted in April 2007. Both special-status and more common bat species may roost in one or more of the structures on the site. There is a remote potential for individuals of the federally-threatened California red-legged frog to disperse along the drainages on the site and be attracted to the seasonal wetland areas during the winter and early spring months, but permanent breeding habitat is absent on the site. The drainages and seasonal wetlands are potential regulated jurisdictional waters, although the eastern drainage and wetland area is influenced by an artificial water source.

The central portion of the Vallejo Swett Ranch (adjacent to the McIntyre Ranch) features significant habitat for the California red-legged frog. It is designated as a public access limitation area to protect the frog, as well as burrowing owl habitat, wetlands and native bunchgrass grassland communities (which support suitable host plants for the federally-endangered callippe silverspot butterfly) that exist in the hillsides to the south and east of McIntyre Ranch.

SPECIAL-STATUS SPECIES

Special-status species receive varying degrees of legal protection under both the federal and California Endangered Species Acts¹², and the California Environmental Quality Act. The U.S. Fish and Wildlife Service (USFWS), the National Marine Fisheries Service (NMFS), and the California Department of Fish and Game (CDFG) share responsibility for protection and management of natural resources. Special-status species with legal protection often represent a major constraint to development, particularly when these species are wide-ranging or highly sensitive to human disturbance. If a listed species may be affected by proposed development, the lead agency must initiate a consultation with the USFWS, NMFS, and/or CDFG, as required by state or federal law. Without adequate mitigation, habitat modification could result in a "take"¹³ of a listed species.

¹² The Federal Endangered Species Act (FESA) of 1973 declares that all federal departments and agencies shall utilize their authority to conserve endangered and threatened plant and animal species. The California Endangered Species Act (CESA) of 1984 parallels the policies of FESA and pertains to native California species.

¹³ "Take" as defined by the FESA means "to harass, harm, pursue, hunt, shoot, wound, kill, trap, capture or collect" a threatened or endangered species. "Harm" is further defined to include the killing or harming of wildlife due to significant obstruction of essential behavior patterns (i.e., breeding, feeding, or sheltering) through significant habitat modification or degradation. The CDFG also considers the loss of listed species habitat as "take," although this policy lacks statutory authority and case law support under the CESA. Two sections of FESA contain provisions which allow or permit "incidental take." Section 10(a) provides a method by which a State or private action which may result in "take" may be permitted. The applicant must provide the USFWS with an acceptable conservation plan and publish notification for a permit in the Federal Register. Section 7 pertains to a federal agency which proposes to conduct an

There are no known occurrences of special-status species or habitats on the project site as identified in the Vallejo General Plan.¹⁴

Table 1 provides information on the status and typical habitat characteristics of those special-status plant species considered to have the greatest likelihood for occurrence in the site vicinity. Table 2 provides information on the status and typical habitat characteristics of those special-status animal species considered to have the greatest likelihood for occurrence in the site vicinity.

SPECIAL-STATUS PLANT SPECIES AND NATIVE GRASSLANDS

Although considered remote, there remains a potential for occurrence of one or more populations of special-status plant species to occur in the stands of native grassland along the western edge of the site. Supplemental details surveys during the spring and summer flowering period would be necessary to confirm their presence or absence. Due to their rarity, the stands of native grassland are considered a sensitive natural community by the CDFG regardless of whether any special-status plant populations may be encountered during future surveys of the area. As discussed in 8. Description of Project, Central Farm and Equestrian Area, above, the area to the west of the bunkhouse site would be excluded from grazing and cultivation to protect the existing stands of native grassland. As discussed in 8. Description of Project, Public Access, above, activities proposed in the Master Plan would be restricted to the confines of the McIntyre Ranch. This would reduce **potentially significant** impacts to native grasslands on and adjacent to the project site, as well as the remote possibility of occurrence of special-status plant species, to a **less-than-significant** level.

SPECIAL-STATUS ANIMAL SPECIES

Special-status animal species of possible concern on the site include nesting raptors and other bird species considered to be a Species of Special Concern by the CDFG, roosting bats, and possibly the federally-threatened Valley Elderberry Longhorn Beetle (VELB), callippe silverspot butterfly, and California red-legged frog, if individuals are present on the site. As discussed in 8. Description of Project, Public Access, above, activities proposed in the Master Plan would be restricted to the confines of the McIntyre Ranch. Exclusion from the adjacent Vallejo Swett Ranch, which contains habitat for the California red-legged frog and burrowing owl, wetlands, and native bunchgrass grassland communities (potential host plants for the callippe silverspot butterfly), would prevent off-site impacts to these special-status animal species. Potential onsite impacts to each of these species are discussed below.

action which may result in "take," requiring consultation with USFWS and possible issuance of a jeopardy decision. Under the CESA, "take" can be permitted under Section 2081 of the Fish and Game Code. The applicant must enter into a management agreement with the CDFG, which defines the permitted activities and provides adequate mitigation.

¹⁴ City of Vallejo, *Vallejo General Plan*, July 1999, pages XI-1 to XI-4.

TABLE 1: PARTIAL LIST OF SPECIAL-STATUS PLANT SPECIES KNOWN OR SUSPECTED TO OCCUR IN VALLEJO VICINITY

Taxa Name	Status (Fed/State/ CNPS)	Habitat Characteristics	Distribution (Presumed Extirpated)	Flowering Period
<i>Astragalus tener</i> var. <i>tener</i> Alkali milk-vetch	-/-/1B	Valley grassland, vernal pools, and playas	Merced, Solano, Yolo (Alameda, Contra Costa, Monterey, Napa, Santa Barbara, Santa Clara, San Francisco, San Joaquin, Stanislaus)	March-June
<i>Atriplex joaquiniana</i> San Joaquin saltbrush	-/-/1B	Alkaline grassland and scrub	Alameda, Contra Costa, Colusa, Glenn, Merced, Napa, Sacramento, Santa Barbara, Yolo (Santa Clara, San Joaquin, Solano, Tulare)	April- Sept.
<i>Centromadia parryi</i> ssp. <i>Congdonii</i> Soft bird's-beak	-/-/1B	Grasslands	Alameda, Contra Costa, Monterey, Santa Clara, Santa Cruz, San Luis Obispo, Solano	July-Oct.
<i>Downingia pusilla</i> Dwarf downingia	-/-/2	Vernal pools and grassland	Mariposa, Merced, Napa, Placer, Sacramento, Solano, Sonoma, Stanislaus, Tehama, South America	March- May
<i>Fritillaria pluriflora</i> Adobe fritillary	-/-/1B	Chaparral, woodland, grassland on adobe soil	Butte, Colusa, Glenn, Lake, Napa, Plumas, Solano, Tehama, Yolo Mendocino, Monterey, San Benito	February- April
<i>Fritillaria liliacea</i> Fragrant fritillary	-/-/1B	Coastal scrub and grassland often	Alameda, Contra Costa, Monterey, Napa, San Benito, Santa Clara, San Francisco, San Mateo, Solano, Sonoma	February- April
<i>Lasthenia conjugens</i> Contra Costa goldfield	FE/-/1B	Low flats and borders of vernal pools	Napa, Solano, (Alameda, Contra Costa, Mendocino, Santa Barbara,	April- May

Taxa Name	Status (Fed/State/ CNPS)	Habitat Characteristics	Distribution (Presumed Extirpated)	Flowering Period
			Santa Clara)	
<i>Legenere limosa</i> Legenere	-/-1B	Vernal pools	Lake, Napa, Placer, Sacramento, San Mateo, Solano, Tehama (Sonoma, Stanislaus)	May-June
<i>Plagiobothrys hystericulus</i> Bearded popcorn flower knotweed	-/-1A	Grasslands and vernal pools	Solano from Montezuma Hills until recently rediscovered in 2005	April-May
<i>Senecio aphanactis</i> Rayless ragwort	-/-2	Coastal scrub, chaparral, woodland	Alameda, Contra Costa, Fresno, Los Angeles, Merced, Orange, Riverside, Santa Barbara, Santa Clara, elsewhere	Jan-April
<i>Trifolium amoenum</i> Showy Indian clover	FE/-1B	Valley grassland	Sonoma (Alameda, Mendocino, Marin, Napa, Santa Clara, Solano)	April- June

Federal Status:
FE =Listed as "endangered" under the Federal Endangered Species Act.

State Status:
SE = Listed as "endangered" under CESA. Taxa in serious danger of becoming extinct throughout all or significant portion of range due to varying factors.
SR = Listed as "rare" under CESA. Although not presently threatened with extinction, may become endangered if present environmental factors worsen.

CNPS Status:
1A =Plants of highest priority; plants presumed extinct in California.
1B = Plants of highest priority; plants rare and endangered in California and elsewhere.
2 = Plants rare, threatened, or endangered in California; more common elsewhere.

TABLE 2: PARTIAL LIST OF SPECIAL-STATUS ANIMAL SPECIES KNOWN OR SUSPECTED TO OCCUR IN VALLEJO VICINITY

Species	Status Federal/State	Preferred Habitat Type
<u>Invertebrates:</u>		
Callippe silverspot butterfly	FE/-	Open grasslands with golden violet host species
Monarch butterfly	-/-	Overwinters in eucalyptus and cypress stands
California freshwater shrimp	FE/SE	Permanent streams with pools
<u>Amphibians/Reptiles/Fish:</u>		
California tiger salamander	FT/SSC, CP	Vernal pools, ponds, streams and adjacent grassland
California red-legged frog	FT/SSC, CP	Ponds, streams, adjacent riparian and upland
Foothill yellow-legged frog	FT/SSC, CP	Permanent streams with cobbles
Northwestern pond turtle	-/SSC, CP	Pond, rivers, and streams
Steelhead	FT/-	Open water of Bay and Delta, tributary rivers and streams
Winter- run chinook salmon	FE/SE	Open water of Bay and Delta, tributary rivers and streams
<u>Birds:</u>		
White-tailed kite	-/CP	Grassland
Burrowing owl	-/SSC	Grassland
Cooper's hawk	-/SSC	Riparian and grassland
Double-crested cormorant	-/SSC	Bays, rivers and lakes (communal roosts protected)
Golden eagle	-/SSC, CP	Open grassland and savanna
Loggerhead shrike	-/SSC	Grassland
Northern harrier	-/SSC	Grassland
Peregrine falcon	Delisted/SE, CP	Open water and grassland
Prairie falcon	-/SSC	Grassland
Sharp-shinned hawk	-/SSC	Riparian and grassland
Tricolored blackbird	-/SSC	Freshwater marsh and fields
<u>Mammals:</u>		
American badger	-/SSC	Grassland
Pacific western big-eared bat	-/SSC	Roosts in caves, mine shafts, bridges, and abandoned buildings
Pallid bat	-/SSC	Roosts in cliffs, caves, mines, tree cavities, and buildings

Western mastiff bat	-/SSC	Roosts in cliffs, large boulders, caves, and buildings
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Federal Status:

FE =Listed as "endangered" under the FESA.

FT =Listed as "threatened" under the FESA.

C = A candidate species under review for federal listing. Includes species for which the USFWS currently has sufficient biological information to support listing endangered or threatened.

State Status:

SE =Listed as "endangered" under CESA.

ST =Listed as "threatened" under CESA.

CP = California fully protected or protected species; individual may not be possessed or taken at any time.

SSC = Recognized as a "Species of Special Concern" by the CDFG; taxa have no formal legal protection but nest sites and communal roosts are generally recognized as significant biotic features.

Raptors and Other Bird Species of Special Concern

Suitable foraging opportunities are present on the site for burrowing owl, peregrine falcon, golden eagle, and loggerhead shrike, among others, but no evidence of active nests of raptors or other birds considered to be Species of Special Concern by the CDFG was observed during the field reconnaissance. Furthermore, most of these species are not expected from the site vicinity due to the extent of past disturbance and on-going human activity. However, raptors such as barn owls, kestrels, and others may occupy some of the larger structures on the project site, and the mature trees on the site provide suitable roosting and nesting substrate. New nests could be established in the future prior to project implementation. Tree removal, vegetation clearing, building demolition, or disturbance in the immediate vicinity of a nest in active use could result in abandonment of the nest or loss of eggs and young, which would be a violation of the federal Migratory Bird Treaty Act. Pre-construction surveys would be necessary in advance of construction during the nesting season (March through August) to confirm presence or absence of any new nests. This is a **potentially significant** impact that would be reduced to a **less-than-significant** level by implementation of the following mitigation measure.

Mitigation Measure IV-1: *Any active raptor nests or other bird nests protected under the Migratory Bird Treaty Act in the vicinity of proposed grading, building demolition, and vegetation removal shall be avoided until young birds are able to leave the nest (i.e., fledged) and forage on their own. Avoidance may be accomplished either by scheduling initial grading, building demolition, and vegetation removal during the non-nesting period (i.e., September through February), or if this is not feasible, by conducting a pre-construction survey for bird nests. Provisions of the pre-construction survey and nest avoidance, if necessary, shall include the following:*

- *If grading and/or vegetation or structure removal is scheduled during the active nesting period (March through August), a qualified wildlife biologist shall conduct a pre-construction survey of both tree nesting and ground nesting raptors no more than 14 days prior to initiation of these activities to provide confirmation on presence or absence of active nests in the vicinity. This shall include both a daytime visual survey for raptors and other diurnal bird species, and a nighttime survey for nesting owls. Trees that have been surveyed and do not contain any active nests may be removed at any time, as long as they are not within the nest-setback zone of an active nest, in which case they shall remain until the nest tree is removed. An active nest would be indicated by one or more of the following:*

1. *Incubation behavior of adults (e.g., regular periods of "disappearance" into the same location followed by short, secretive flights to forage).*
2. *Extreme distress and alarm calls when in close vicinity of the nest tree.*
3. *Observation of food being carried on the beak or talons to the nest.*

- *If active bird nests are encountered, species-specific measures shall be prepared by a qualified biologist in consultation with the California Department of Fish and Game (CDFG) and implemented to prevent abandonment of the active nest. At a minimum, grading and vegetation/building removal near the nest shall be deferred until the young birds have fledged. A nest-setback zone, based on site conditions and proximity of the nest to existing and proposed development, shall be established within which all construction-related disturbance shall be prohibited. The perimeter*

of the nest-setback zone shall be fenced or adequately demarcated, and construction personnel restricted from the area.

- If permanent avoidance of the nest is not feasible, impacts shall be minimized by prohibiting disturbance within the nest-setback zone until a qualified biologist verifies that the birds have either (a) not begun egg-laying and incubation, or (b) that the juveniles from the nest are foraging independently and capable of independent survival at an earlier date. A survey report by the qualified biologist verifying that the young have fledged shall be submitted to the project sponsor (GVRD) prior to initiation of grading and/or vegetation/building removal in the nest-setback zone.*
- In addition, pre-construction surveys shall be conducted for burrowing owl within 30 days of project-related ground-disturbing activities throughout the year to determine whether any nesting owls are present and to provide for their protection during the active breeding season or passive relocation during the non-breeding season if nests are encountered. The surveys shall be conducted by a qualified wildlife biologist and shall comply with the latest version of the Burrowing Owl Protocol and Mitigation Guidelines.*
- Caretaker(s) and all other tenants at the McIntyre Ranch site shall be prohibited from keeping domestic cats.*

Mitigation Measure IV-2: *Prior to construction, the project sponsor (GVRD) shall develop and implement a management and interpretive program identifying the likelihood for occurrence of nesting raptors and other bird species considered to be a Species of Special Concern by the CDFG, roosting bats, Valley Elderberry Longhorn Beetle (VELB), callippe silverspot butterfly, and California red-legged frog. The interpretive program shall identify their protected status, describe their typical habitat characteristics and the sensitivity of the remaining natural habitat on the site and surrounding open space lands, explain the importance of avoiding sensitive habitat and individuals during critical dispersal or breeding/nesting periods, and require any future users of the site adhere to appropriate access restrictions where they could significantly disturb essential nesting, breeding, and foraging opportunities for special-status wildlife species.*

Bats

The numerous buildings on the site provide suitable roosting habitat for a number of bat species, including several that are recognized as Species of Special Concern by the CDFG, such as greater western mastiff bat, pallid bat, and Pacific western big-eared bat. The likelihood that these sensitive species currently occupy the existing buildings on the site is low given the amount of human activity in the area. However, there remains a possibility that maternity roosts could occur in less accessible areas of existing structures, or that new roosts could be established in the future. This is a **potentially significant** impact that would be reduced to a **less-than-significant** level by implementation of the following mitigation measure.

Mitigation Measure IV-3: *A Bat Mitigation Program shall be prepared and implemented by the project sponsor (GVRD) to avoid potential impacts to any roosting bats that may be present on the site. The Bat Mitigation Program shall be prepared by a qualified biologist and include maternity roost surveys of all structures on the site for both special-status and common bat species. The bat surveys shall be conducted prior to any*

building demolition or major remodeling, and shall include detailed surveys during the pupping period to confirm whether any maternity roosts are present on the site (preferably in June or July). The results of the maternity roost surveys shall be used in refining the following additional provisions of the Bat Mitigation Program.

- If bats are determined to be roosting in a particular structure, building demolition or major remodeling shall occur between February 15 to April 15 or from August 15 to October 15 to minimize the likelihood of disturbance to roosting bats during the winter roosting period when individuals are less active and more difficult to detect, and the critical pupping period (April 16 to August 14) when young cannot disperse.*
- In addition to the maternity roost surveys conducted as part of the Bat Mitigation Program, a pre-construction survey for roosting bats shall be conducted by a qualified biologist within 14 days prior to any building demolition to confirm that no new roosts have become established on the site. To determine presence or absence of bats, the survey shall be conducted by a biologist with experience surveying for bats, focusing on the attic and less accessible areas of structures to be demolished. If no special-status bats are identified during the pre-construction survey(s), then no impacts to these bats would be expected to occur from demolition.*
- If, however, any special-status bats are identified in any of the structure(s) proposed for removal, reproductive status shall be determined, and appropriate measures developed to allow for passive relocation through building exclusions and other methods. Additional recommendations may be made by the qualified bat specialist following the pre-demolition survey, such as opening the roof of the structures, monitoring of demolition, and other measures to avoid take of individual bats.*
- Restrictions on timing of demolition and conduct of the pre-construction survey(s) would prevent direct take of individuals or destruction of any maternity roost locations in active use. No immediate replacement of roosting habitat is currently recommended, unless warranted based on the results of the maternity roost survey recommended above. If a maternity roost or occupied roost is detected during the pre-construction survey(s), California Department of Fish and Game (CDFG) shall be notified and informally consulted to determine if protection measures are adequate and if replacement for loss of occupied habitat is required.*

Callippe silverspot butterfly

The callippe silverspot butterfly is restricted to only three known localities in the San Francisco Bay Area: Joaquin Miller Park (Alameda County), San Bruno Mountain (San Mateo County), and grasslands of Solano County. The distribution of callippe silverspot butterfly in Solano County is not well known, but potential habitat is under increasing threat due to development. This species is federally listed as endangered, but the listing only refers to the Alameda and San Mateo County populations, not the Solano County population. However, this species is assumed to be present in suitable grasslands of Solano County as well where the larval host plant is present. Adults require extensive, rolling grassland habitat, utilizing hilltops for mating

and dispersal, and laying their eggs on golden violet (*Viola pedunculata*), which serves as the primary larval food source.

As discussed in 8. Description of Project, Public Access, above, all of the proposed public uses at the project facilities identified above would be by prior arrangement or in conjunction with a scheduled event. This would allow restriction of users to the McIntyre Ranch site, and exclusion from the adjacent Vallejo Swett Ranch, which contains native bunchgrass grassland communities known to support suitable larval host plants for callippe silverspot butterfly.

No evidence of the larval host plants for callippe silverspot butterfly – golden violet – was observed during the field reconnaissance on the project site when this plant would have been conspicuous. Golden violet was detected on the hillsides just south and southwest of the site, with individuals found within 100 feet of the southern property line. However, the proximity to known essential habitat for this endangered species warrants special consideration in protecting the remaining native grasslands, controlling invasive species, limiting use of herbicides and other management practices that could harm dispersing butterflies, and educating users of the site on the sensitivity of this species and the possibility that individual adult butterflies could occasionally disperse across the site. As discussed in 8. Description of Project, Central Farm and Equestrian Area, above, the area of native grasses to the west of the bunkhouse site would be excluded from grazing and cultivation.

This is **potentially significant** impact on the callippe silverspot butterfly would be reduced to a **less-than-significant** level by protection of native grasses as part of the project and implementation of the following mitigation measures.

Mitigation Measure IV-4: *The project sponsor (GVRD) shall develop and implement a detailed vegetation maintenance and management plan including the following features:*

- a) *Control of invasive species on the site including blue gum eucalyptus, acacia, elms, giant reed, pampas grass, sweet fennel, periwinkle, and cotoneaster, including those identified on Figures 2, 3, 4 and 5. These plants shall be removed as soon as possible and managed to enhance natural habitats on the site and to keep these invasive species from spreading into nearby habitat known to support callippe silverspot butterfly.*
- b) *Minimization of disturbance to the remaining locations of native vegetative cover, including the scattered oaks, the stands of native grasslands along the southern edge of the site, and the natural drainages.*
- c) *Procedures to protect existing native trees larger than 9 inches DBH on the site, as stipulated in Mitigation Measure IV-14.*
- d) *For removal of native trees larger than 9 inches DBH, compensatory replacement as stipulated in Mitigation Measure IV-15.*
- e) *Protection of all elderberry shrubs on the site, as identified in Figures 2, 3, 4, and 5.*
- f) *Planting of native species to enhance areas of remaining native vegetative cover on the site, including the scattered oaks, the stands of native grasslands along the southern edge of the site, and the natural drainages.*
- g) *Coordination with the vegetation management procedures for fire safety set forth in the McIntyre Ranch Master Plan, including removal of flammable brush and shrubs from within 40 feet of existing and proposed structures, and the trimming and removal program.*

- h) *Implementation of the management and interpretive program called for in Mitigation Measure IV-2, which includes appropriate access restrictions away from essential habitat for callippe silverspot butterfly.*

Mitigation Measure IV-5: *All use of herbicides in project construction and operation shall comply with the following restrictions and procedures:*

- a) *Chemical treatment of invasive species shall be carefully controlled according to the California Department of Pesticide Regulations and the Solano County Agricultural Commissioner using Best Management Practices to prevent exposure to facility users, employees, and tenants; avoid sensitive habitat; and utilize the most effective and appropriate products available at the time field work is performed.*
- b) *Trained professionals, with appropriate certification and licensing as a Pest Control Operator for use of non-restricted materials registered for use in Solano County, shall be employed to perform all herbicide applications. Best Management Practices shall be used during all herbicide applications, considering latest standards for products used for target species. Factors to be considered during herbicide application shall include wind and weather conditions, timing of initial and subsequent treatments, specific product and concentrations, and protection of habitat and native cover to be preserved or established on the site.*
- c) *The public shall be notified of treatment areas prior to herbicide application through use of temporary signage posted no less than 24 hours in advance of application, identifying the product to be used, explaining health risks, and including a contact person and phone number to answer any questions. Signs shall be posted at the entrance to the McIntyre Ranch and the perimeter of any treatment area at 50-foot intervals or as necessary to visibly delineate the boundaries of the treatment area.*

Valley Elderberry Longhorn Beetle

Valley elderberry longhorn beetle (VELB) is listed as threatened by the USFWS. Elderberry shrubs are the larval host plant of VELB, which is known from the Central Valley from Redding south to Bakersfield, and from the western foothills of the Sierra Nevada to the eastern foothills of the coast range. Use of elderberry plants by VELB, a wood borer, is rarely apparent. Frequently, the only exterior evidence of the beetle's presence is an exit hole created by the larva just prior to the pupal stage. The U.S. Fish and Wildlife Service typically considers any stand of elderberry within their known range to be potentially suitable habitat for the beetle, and generally requires that existing plants be protected.

No evidence of Valley Elderberry Longhorn Beetle (VELB) was observed in the elderberry shrubs on the site, and the central Solano County area is on the edge of the historic range of this species. The locations of elderberry shrubs are shown in Figures 2, 3, 4, and 5, pages 4 through 7. If VELB is present on the site, there is a possibility that disturbance in the vicinity of the elderberry shrubs could adversely affect VELB. Both the proposed new caretaker's house and the access road would be located within a minimum 100-foot setback distance that the U.S. Fish and Wildlife Service (USFWS) typically calls for to protect this species. This is a **potentially significant** impact on the VELB would be reduced to a **less-than-significant** level by implementation of the following mitigation measures.

Mitigation Measure IV-6: *Implement Mitigation Measures IV-2, IV-4 and IV-5.*

- **Mitigation Measure IV-7:** A Mitigation Program for VELB shall be prepared to provide for the protection, replacement, and management of any habitat shown to be adversely affected by proposed development. Proposed grading and development shall be designed to avoid removal or adverse impacts on elderberry shrubs to provide compliance with the U.S. Fish and Wildlife Service Conservation Guidelines¹⁵ which recommend that a 100-foot buffer be established and maintained around elderberry plants containing stems measuring 1.0 inch or greater in diameter at ground level. Existing roadways may remain within this 100-foot buffer as long as there is no further incursion closer to the elderberry plants identified in Figures 2, 3, 4, and 5. Removal of invasive vegetation, installation of native habitat enhancement plantings, and other management activities shall be designed to avoid adverse impacts on the potential habitat the elderberry shrubs provide for VELB.

California red-legged frog

California red-legged frog is listed as threatened by the U.S. Fish and Wildlife Service and is recognized as a Species of Special Concern by the CDFG. This species typically occurs in aquatic habitat of streams and ponds, but can disperse considerable distances in search of breeding and aestivation areas. This species has been reported from stockponds in the rangelands to the north of the site, with the closest known occurrence approximately 1,500 feet to the north. The site and surrounding lands are contained within the North San Francisco Bay/North Coast (Unit 3) California Red-legged Frog Recovery Unit as designated by the U.S. Fish and Wildlife Service, and the area is considered a core recovery habitat for this species. Recovery areas are identified in recovery plans for listed species and are defined by the federal Endangered Species Act as “essential to the conservation of the species.” However, suitable breeding habitat for this species is absent on the site and the ephemeral drainages provide little protective cover for any individuals that might occasionally be dispersing through the vicinity during the rainy season in search of new breeding locations.

Although the potential for occurrence of California red-legged frog on the project site is remote, this species is known from suitable habitat in the surrounding area and individuals may occasionally disperse up the drainages, particularly during the wet winter months. As discussed in 8. Description of Project, Public Access, above, all of the proposed public uses at the project facilities identified above would be by prior arrangement or in conjunction with a scheduled event. This would allow restriction of users to the McIntyre Ranch site, and exclusion from the adjacent Vallejo Swett Ranch, which contains significant habitat for the California red-legged frog.

Although the potential for occurrence on the site is very remote, there remains a possibility that individuals could occasionally disperse onto the site and could be adversely affected or inadvertently lost. This is **potentially significant** impact on the California red-legged frog, which would be reduced to a **less-than-significant** level by implementation of the following mitigation measures.

Mitigation Measure IV-8: Implement Mitigation Measures IV-2, IV-4 and IV-5, which would provide for appropriate habitat management, construction worker and visitor training, and interpretive programs necessary to protect important habitat areas and any

¹⁵ U.S. Fish and Wildlife Service, 1999, *Conservation Guidelines for Valley Elderberry Longhorn Beetle*, Sacramento, California.

individual California red-legged frogs in the remote instance that they disperse onto the site.

Mitigation Measure IV-9: The project sponsor (GVRD) shall informally consult with the U.S. Fish and Wildlife Service (USFWS) to determine whether the site is considered to be potential habitat for California red-legged frog (CRF), given that the area is contained within one of the Critical Habitat Units for this federally-threatened species. If the USFWS considers the site to be potential habitat for CRF, a Mitigation Program shall be prepared by a qualified wildlife biologist to minimize and mitigate potential impacts on this species. The Mitigation Program shall be prepared in consultation with USFWS, California Department of Fish and Game (CDFG), and the U.S. Army Corps of Engineers (Corps) and shall provide for the protection, replacement, and management of habitat affected by the proposed project. If the USFWS concurs that the site is not potentially occupied habitat, then no additional mitigation for this species would be required unless preconstruction avoidance measures are still required by the USFWS. At minimum, the preconstruction provisions of the Mitigation Program shall include the following components and meet the following standards:

- Preconstruction surveys shall be conducted by a Service-approved biologist prior to any grading or major vegetation clearance to ensure that no individual CRF are lost during construction. The Mitigation Program shall: 1) describe in detail the survey approach and methodology, and 2) specify that grading or vegetation clearance may not occur in any area where individual CRF are located until such time as the individual has either moved out of the disturbance zone or has been physically relocated by a Service-approved biologist legally authorized to handle the species.
- Monitor all vegetation clearing and grading activities within potential habitat for CRF by a Service-approved biologist. The Mitigation Program shall specify the duties of the Service-approved biologist.
- Train all construction personnel in CRF identification, habitat description, legal protective status, construction restrictions, and procedures to avoid unnecessary disturbance to potential habitat or incidental take of these species. The details of the training procedures shall be included as a component of the Mitigation Program.
- Install temporary exclusionary fencing prior to grading or major vegetation clearance where appropriate to keep CRF out of construction areas. The Mitigation Program shall identify where such fencing is to be installed and provide procedures for fence installation, monitoring, and maintenance. The Mitigation Program shall require that the exclusionary fencing be installed under the direct supervision of a Service-approved biologist and shall be inspected and maintained during the course of construction activities on the site.
- Define methods to minimize the potential for harassment or take of CRF and other listed and non-listed species as a result of increased human activity on the site associated with the project. This shall include an educational program for future residents and visitors, exclusionary fencing where necessary to protect any habitat considered essential to CRF and other listed species, and interpretive signage at access points into sensitive habitat areas.

Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
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- *Caretaker(s) and all other tenants at the McIntyre Ranch site shall be prohibited from keeping domestic cats.*

- b) Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations, or by the California Department of Fish and Game or U.S. Fish and Wildlife Service? ☐ ☒ ☐ ☐

Explanation:

SENSITIVE HABITATS

As discussed in Item IV.a, above, the stands of native grassland along the western edge of the site are considered a sensitive natural community, and have a remote potential to support one or more population of special-status plant species. As discussed in 8. Description of Project, Central Farm and Equestrian Area, above, the area to the west of the bunkhouse site would be excluded from grazing and cultivation to protect the existing stand of native grasses. This would reduce potential impacts to native grasses on the project site to a **less-than-significant** level.

Mitigation Measures IV-2, IV-4, IV-5, IV-11, IV-13, IV-14, and IV-14 would serve to avoid and minimize native tree loss, protect native grasslands and potential wetlands, prevent habitat degradation through control of invasive exotic plant species, and control access into the sensitive habitat areas. Nevertheless, the proposed project could adversely affect wildlife habitat resources. This is a potentially significant impact to wildlife habitat resources that would be reduced to a less than significant level by implementation of the following mitigation measure.

Mitigation Measure IV-10: *The project sponsor (GVRD) shall ensure that:*

- *Lighting shall be carefully designed and controlled to prevent unnecessary illumination of natural areas on the site. Lighting shall be restricted to the minimum level necessary to illuminate pathways, parking areas, and other outdoor areas. Lighting shall generally be kept low to the ground, directed downward, and shielded to prevent illumination into adjacent natural areas;*
- *All garbage, recycling, and composting shall be kept in closed containers and latched or locked to prevent wildlife from using the waste as a food source;*
- *Future residents/occupants shall be prohibited from keeping cats and dogs on the site, and all pets visiting the site shall be controlled as required under Vallejo Municipal Code Section 7.24.010.*

Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
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- *Humans and pets shall be restricted outside sensitive habitat areas through installation of wildlife-friendly fencing and interpretive signage, except as required for maintenance and management activities.*

- c) Have a substantial adverse effect on federally protected wetlands as defined by Section 404 of the Clean Water Act (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means? ☐ ☒ ☐ ☐

Explanation: Although definitions vary to some degree, wetlands are generally considered to be areas that are periodically or permanently inundated by surface or ground water, and support vegetation adapted to life in saturated soil. Wetlands are recognized as important features on a regional and national level due to their high inherent value to fish and wildlife, use as storage areas for storm and flood waters, and water recharge, filtration, and purification functions. Technical standards for delineating wetlands have been developed by the US Army Corps of Engineers (Corps) and the USFWS, which generally define wetlands through consideration of three criteria: hydrology, soils, and vegetation.

The CDFG, Corps, and Regional Water Quality Control Board (RWQCB) have jurisdiction over modifications to shorelines, open water, stream channels, river banks, and other water bodies. Jurisdiction of the Corps is established through the provisions of Section 404 of the Clean Water Act, which prohibits the discharge of dredged or fill material into "waters" of the United States without a permit, including wetlands and unvegetated "other waters". All three of the identified technical criteria must be met for an area to be identified as a wetland under Corps jurisdiction, unless the area has been modified by humans. Jurisdictional authority of the CDFG over wetland areas is established under Section 1600 of the Fish and Game Code, which pertains to activities that would disrupt the natural flow or alter the channel, bed, or bank of any lake, river, or stream. Water Quality Certification is required by the RWQCB pursuant to Section 401 of the Clean Water Act where wetlands and other waters may be affected by grading and development.

As discussed in 8. Description of Project, Public Access, above, all of the proposed public uses at the project facilities identified above would be by prior arrangement or in conjunction with a scheduled event. This would allow restriction of users to the McIntyre Ranch site, and exclusion from the adjacent Vallejo Swett Ranch, which contains wetlands. Areas of potential jurisdictional waters on the project site include the three ephemeral drainages in the central and northern portion of the site, and the larger drainage in the eastern portion of the site, as shown in Figures 4 and 5). Plantings with native riparian and upland species along these drainages as part of a detailed vegetation maintenance and management plan (see Mitigation Measure IV-4, above) would enhance the habitat value of these drainages. As discussed in 8. Description of Project, Project Site, above, a drainage located east and northeast of the main house in the southern portion of the site formerly contained accumulated water. After the closure of a leaking

Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
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pipe by GVRD, this area no longer contains water;¹⁶ however, it is part of the natural drainage system and is a potential wetland. The proposed project would not affect this potential wetland area.

As currently proposed, no project improvements appear to be located in areas of potential jurisdictional waters. However, a detailed wetland delineation, verified by the Corps, would be required to confirm that all jurisdictional waters would be avoided and that no direct impacts would occur as a result of new structures and other improvements on the site. In the remote instance that jurisdictional waters are present in the vicinity of proposed improvements, construction activities could result in **potentially significant** impacts to wetlands on the site. This impact would be reduced to a **less-than-significant** level by implementation of the following mitigation measure.

Mitigation Measure IV-11: *Prior to initiation of construction, the project sponsor (GVRD) shall retain a qualified wetland specialist to prepare a draft Wetland Delineation for the project site. The draft Wetland Delineation shall be prepared according to methodology used by the U.S. Army Corps of Engineers (Corps), and shall include an evaluation of the three ephemeral drainages to the west of the main house, and the larger drainage in the eastern portion of the site, as identified in Figures 4 and 5. The draft Wetland Delineation shall be verified by the U.S. Army Corps of Engineers (Corps). If the limits of jurisdictional waters (wetlands) on the project site cannot be completely avoided, all proposed modifications to regulated waters shall receive appropriate authorizations from regulatory agencies. Adequate mitigation shall be provided at a minimum 2:1 replacement ratio (wetlands removed to wetlands replaced), shall be designed to result in a net increase in acreage of waters on the site and improve the habitat functions and values through native enhancement plantings, and shall provide for a minimum of five years of maintenance and monitoring, with annual monitoring reports provided to the regulatory agencies during that period.*

Mitigation Measure IV-12: *Implement Mitigation Measure IV-5.*

Mitigation Measure IV-13: *As stipulated in Mitigation Measure VIII-1, the project sponsor (GVRD) shall develop and implement a Storm Water Pollution Prevention Plan (SWPPP) to control construction-related erosion and sedimentation and, as stipulated in Mitigation Measure VIII-2, the project sponsor (GVRD) shall develop and implement a Stormwater Control Plan to control operational runoff from the project site.*

- d) Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with any established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites? ☐ ☐ ☒ ☐

¹⁶ Randy Anderson, Principal, Alta/LandPeople, email to Michael Kent of Michael Kent & Associates, 19 February 2009.

Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
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Explanation: The project site is surrounded by open space: the 905-acre Vallejo Swett Ranch, a property owned by the Solano Land Trust (SLT). There are no substantial constraints to the movement of terrestrial animals, into or across the site.

Short-term disturbance to wildlife movement could occur during construction of the various project components due to the activity of construction workers and equipment; however, this potential disruption to wildlife movement would be temporary in nature and would not substantially affect long-term movement of wildlife species. These species are already acclimated to human activity in the improved areas of McIntyre Ranch where new construction is proposed. The potential short-term impacts on common wildlife species would be **less than significant**.

After construction, the project site would not include any substantial new barriers to wildlife movement. Clearing non-native trees and vegetation and replacement with native species would enhance the wildlife habitat values of the site. Mitigation Measures IV-1, IV-2, IV-3, IV-4, IV-5, IV-7, IV-9, IV-11, IV-13, IV-14, and IV-15, which include adequate controls on the activities of visitors using the facilities at the site, would ensure that sensitive habitat areas are protected and that impacts on the site's potential for nursery and nesting locations would be reduced to a **less than significant** level.

- e) Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance? ☐ ☒ ☐ ☐

Explanation: The project site contains scattered native oak trees, including two near the proposed site of the USGS Western Ecological Research Center. The proposed project would include removal of non-native, invasive trees, and planting of native trees. While removal of these non-native trees would not constitute a significant impact on biological resources, a tree removal permit, granted by Director of Public Works, may be required for removal of trees from park areas under the Vallejo Municipal Code.¹⁷ Although no native trees are currently proposed for removal, there remains a possibility that some limited removal may be required or that native trees could be inadvertently damaged during construction. Mature oaks and other native trees are susceptible to damage due to disturbance to the root zone from equipment operation, trenching, and changes in surface runoff and irrigation. The proposed project could result in **potentially significant** impacts to native trees on the site, if avoidance is infeasible and removal is necessary. This impact would be reduced to a **less-than-significant** level by implementation of the following mitigation measures.

Mitigation Measure IV-14: To protect native trees on the site, the following mitigation measures shall be implemented:

- All oak trees with trunk diameter larger than nine inches diameter at breast height (DBH) on the project site shall be mapped and preserved to the maximum extent feasible, including the two oaks near the site of the USGS Western Ecological Research Center.

¹⁷ Vallejo Municipal Code, Title 10 Streets and Sidewalks, Chapter 10.12 Trees, Section 10.12.040.

Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
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- No construction activities such as trenching or operation of earth-moving equipment that might cause damage to the root systems of existing native trees to be protected shall be allowed.
- During construction, temporary flagging or staking shall be placed around existing native trees to be protected within 50 feet of proposed project construction. The temporary flagging or staking shall be installed at a distance equal to one-half of the canopy radius measured outward from the edge of the dripline. No disturbance, including grading, placement of fill material, storage of equipment, etc. shall occur within the designated protective zone for the duration of the project.

Mitigation Measure IV-15: Where removal of any native tree larger than nine inches DBH is unavoidable, compensatory tree replacement shall occur at a 2:1 ratio (tree removed: tree replaced), consistent with Chapter 10.12 of the Vallejo Municipal Code.

- Replacement trees shall be at least fifteen gallons in size.
- Species selected for replacement plantings shall be resistant to Sudden Oak Death (SOD), caused by the pathogen *Phytophthora ramorum*. To the extent possible, the species of replacement trees shall correspond to the trees removed.¹⁸
- Replacement trees shall be planted between November and January with nursery stock from local sources acclimated to conditions in Solano County. Replacement plantings shall be spaced adequately to grow without excessive competition for light, water or nutrients. Herbaceous material around the replacement plantings shall be cleared during the first three years as part of routine maintenance. The replacement trees shall be irrigated for three years and protected from browsing herbivores such as deer and cattle for the first three to five years using protective sleeves and fencing. Once the seedlings have reached a height of greater than seven feet, the browse protection shall be removed.
- Annual monitoring of the planted trees shall be conducted for five years from the time of planting. During this period, annual monitoring reports shall be completed and filed with the project sponsor (GVRD).

¹⁸ Despite the wide host range of *P. ramorum*, oaks in the white oak sub-genus of *Quercus*, including blue oak (*Q. douglassii*), valley oak (*Q. lobata*), and Oregon white oak (*Q. garryana*) do not appear to be susceptible to *P. ramorum* and SOD. No species in the white oak group have been found with the disease in the field in California, Oregon, or Europe. As such, it appears that native blue oak, valley oak, and the Oregon white oak may be suitable replacement trees to compensate for the loss of individual coast live oak, black oak, madrone, or California bay laurel trees in *P. ramorum*-infested areas.

Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

- f) Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan? ☐ ☐ ☐ ☒

Explanation: There are no adopted conservation plans encompassing the site. The Solano Habitat Conservation Plan/Natural Community Conservation Plan (HCP/NCCP) is being developed to support the issuance of a Section 10(a)1(B) "incidental take permit" under the federal Endangered Species Act as part of a Biological Opinion between the USFWS and Bureau of Reclamation issued in 1999. The Solano HCP/NCCP is being expanded to comply with the State's Natural Community Conservation Plan (NCCP) Act of 2002 and includes additional voluntary applicants and additional species for incidental take coverage. These additional species include federally-listed fish species under the jurisdiction of NOAA Fisheries and species listed as threatened or endangered under the California Endangered Species Act. The HCP/NCCP further addresses other species of concern (i.e., species recognized by CDFG and the CNPS as having declining or vulnerable populations, but not officially listed as threatened or endangered species). A total of 77 species are currently proposed to be covered under the Solano HCP/NCCP, including all of the special-status species considered to possibly occur on the site. The HCP/NCCP has not yet been adopted and therefore does not yet apply to the site and other areas of Solano County. There would be **no impact**.

V. CULTURAL RESOURCES — Would the project:

- a) Cause a substantial adverse change in the significance of a historical resource as defined in §15064.5? ☐ ☐ ☒ ☐

Explanation: The following discussion is based on an investigation of historical resources at the site by an independent historical resources consultant.¹⁹

HISTORY OF THE SITE

The McIntyre Ranch was once part of the Suscol Rancho, the western-most rancho of the six Mexican-era land grants within Solano County, which was granted to General Mariano Vallejo by the Mexican government in 1844. The first historical use of the site vicinity was cattle ranching, and the site remained in ranch uses as it passed through several owners. William B. Swett purchased several parcels including the project site in 1941. It is likely that he and his family did not live on the property until what is referred to as the Main House was constructed, putting the date of its construction into the mid 1950s. After the death of W.B. Swett, his widow Evelyn granted the site to Thomas M. and Ruth A. McIntyre and Michael E. and Carole L. Steel, on September 9, 1975. On October 4, 1977, the Steels granted their portion of the property to the McIntyres. After the death of Thomas McIntyre, Ruth McIntyre granted the site to the Greater Vallejo Recreation District on July 7, 1986.

¹⁹ Meg Scantlebury, *McIntyre Ranch Master Plan, Appendix D: Historical Resources Report, Greater Vallejo Recreation District*, Draft February 19, 2008.

Currently, the McIntyre Ranch is a rural landscape, containing the following buildings, structures, and landscape features: stone pump house, garage, cabin, barn, tack house, main house and associated landscape, pool area and associated rock walls, stables, arena, paddocks, water tank, palm and pine tree allée (walkway lined with trees or tall shrubs), and picnic area in the pine trees.

SIGNIFICANCE CRITERIA

Significant cultural resources, for the purposes of CEQA, are those resources that are eligible for or are listed in the California Register of Historical Resources (CRHR). Eligibility rests on two factors: significance and integrity. A property must have both significance and integrity to be considered eligible for listing on the California Register. Loss of integrity, if sufficiently great, will overwhelm the historical significance of a resource and render it ineligible. Likewise, a resource can have complete integrity, but if it lacks significance, it must also be considered ineligible. Additionally, if a property is in poor condition, it may nevertheless retain enough of its original character-defining features to be considered to have historic integrity.

A resource must be determined to be significant under one of four criteria, summarized below, in order to be determined eligible.

Criterion 1: Resources associated with important events that have made a significant contribution to the broad patterns of our history. Some events may be brief and specific; others may be activities that spanned long periods of time.

Criterion 2: Resources associated with the lives of persons important to our past.

Criterion 3: Resources that embody the distinctive characteristics of a type, period, or method of construction, or represent the work of a master.

Criterion 4: Resources that have yielded, or may be likely to yield, information important in prehistory or history. This is generally applied to archaeological resources, which are discussed in Item V.b, below.

Integrity is determined through consideration of seven factors: location, design, setting, workmanship, materials, feeling, and association. Integrity is the authenticity of a historical resource's physical identity evidenced by the survival of characteristics that existed during the resource's period of significance. Resources, to be considered historically significant for the purposes of CEQA, must meet one of the above criteria and retain enough of their historic character or appearance to be recognizable as historical resources and to convey the reasons for their significance.

POTENTIAL HISTORICAL RESOURCES

The McIntyre Ranch is associated with three kinds of land use: ranch (cattle, horses), residential, and recreational. Historically, its primary use was ranching, specifically the large-scale raising of cattle. With the subdivision and McIntyre ownership the much smaller property was used for equestrian activities and as a residence. Today, under the ownership of the GVRD, the property is used for both recreation and equestrian activities. Both the equestrian activities and the recreation uses, which replaced the historic land use of cattle ranching, were established within the last fifty years, and are not considered historic. Therefore, the historical

resources investigation did not evaluate the stables, arena, paddocks, the picnic area in the pine trees, and the water tank, for none are greater than fifty years old. The historical significance of the buildings, structures, and landscape elements that are greater than fifty years old (stone pump house, garage, cabin, barn, tack house, main house and associated landscape, pool area and associated rock walls, and the palm and pine tree allée) is discussed individually below.

THE McINTYRE RANCH AS A RURAL HISTORIC LANDSCAPE

For the purposes of this discussion, the main house, tree allée and pool are not considered as potential contributors, for they are inconsistent with the theme of a rural historic landscape, which is evaluated here for its agricultural character. As a potential rural historic landscape, with the theme of agriculture, specifically cattle ranching, the period of historic significance is 1871 to 1965.

Criterion 1 (Events)

Although many features within the established boundary, which includes only the 22.15 acre GVRD-owned property and driveway, contain landscape characteristics related to agricultural land uses and practices, the property does not cogently reflect any specific period of time or agricultural use. Nor does it reflect adaptations such as changes in technology and/or practice over time to allow its continued use as a single type of agricultural property. Therefore the McIntyre Ranch, as a rural landscape, is not significant under criterion 1.

Criterion 2 (Persons)

Archival research did not reveal that any persons important in Vallejo or Solano County history were associated with the property. Therefore the McIntyre Ranch does not appear to be eligible under criterion 2.

Criterion 3 (Distinctive Characteristics)

When evaluating a property as a landscape or district, it may be a distinguishable entity whose components may lack individual distinction in design. However, the components found on the McIntyre Ranch are related to each other primarily through physical proximity; they are thematically and architecturally incongruent. Therefore, the McIntyre Ranch does not appear to be eligible under criterion 3.

Integrity

When a property is found not to be historically significant when considered under criteria 1, 2, or 3, it is generally unnecessary to consider whether or not it has retained historic significance. However, because a rural landscape such as the McIntyre Ranch is a complex property, to further support the finding of ineligibility, it is important to also address its historic integrity.

Integrity of Location and Setting. While the McIntyre Ranch has retained integrity of location, the setting, or physical environment has not. The property is no longer associated with the original surrounding larger-scale ranch, which is a fundamental character defining feature of a cattle ranch. Additionally, the change of use of the property significantly altered the setting. Therefore, although the land itself has retained its integrity of location, the setting no longer has

adequate integrity as an agricultural historic landscape, despite the continued rural setting and current equestrian activities.

Integrity of Design, Material and Workmanship. For a rural historic landscape, design is the composition of natural and cultural elements comprising the form, plan, and spatial organization of a property. The McIntyre Ranch design (plan and spatial organization) is made up of elements that do not clearly relate to each other to make up a cohesive district. The materials associated with the development of the McIntyre Ranch, like the design, do not make up a cohesive collection of elements. Like the design and material, the workmanship of the different built or designed elements found on the ranch are dissimilar and do not create an interrelated collection. Therefore the McIntyre Ranch does not have integrity of design, material or workmanship.

Integrity of Feeling and Association. Feeling, although intangible, is evoked by the presence of physical characteristics that reflect the historic scene. The designed elements found on the McIntyre Ranch, as a group, do not reflect the historic scene. When considering association while measuring the integrity of this kind of property, the property must illustrate a direct link between it and the people or events that shaped it. The McIntyre Ranch, as an interrelated group of elements, does not illustrate any collective direct association with any people or events.

Therefore, because of both lack of historic significance and historic integrity, the McIntyre Ranch as a rural historic landscape, is not a historical resources under CEQA.

GARAGE, STONE PUMP HOUSE, AND THE CABIN, CONSIDERED INDIVIDUALLY

Had the McIntyre Ranch been determined eligible as a rural historic landscape, the garage, stone pump house, and the cabin may have been considered to be contributing resources (buildings, structures, objects, and/or sites that may collectively contribute to the understanding of a larger historic resource, but individually do not have sufficient significance and integrity to be considered to be eligible for the purposes of CEQA). While different from each other, these three buildings are of minor stature and each, when considered individually, is not associated with important events that have made a significant contribution to the broad patterns of history, nor are they associated with the lives of persons important in our past, nor do they embody the distinctive characteristics of a type, period, or method of construction, or represent the work of a master. Therefore they are not individually significant under criteria 1, 2, or 3.

Because none of these buildings have been found to be historically significant when considered under criteria 1, 2, or 3, it is unnecessary to consider whether or not they have retained historical integrity.

Consequently, none of these buildings are considered to be individual historical resources for the purposes of CEQA.

BARN

Portions of the barn may date to very early times in the history of Solano County and, consequently should be considered for eligibility under criterion 3, distinctive characteristics of a type, period, or method of construction. However, it has been altered throughout its history and no longer can be considered of a distinctive type, period, or method of construction. Therefore, the barn, as an individual building, is not a historical resource for the purposes of CEQA.

When a property is found not to be historically significant when considered under criteria 1, 2, or 3, it is generally unnecessary to consider whether or not it has retained historic significance. However, because an argument could possibly be made that the barn is significant on a local level because of its age, it is important to also address its historic integrity. The barn has retained its integrity of location, for it has not been moved. It has also retained its integrity of setting, even though the ranch as a whole has not because the boundaries are now much smaller than they were when it was a cattle ranch. The barn's setting is rural as it was originally. The barn does not have integrity of design, material or workmanship, because it has been significantly altered throughout the years with no apparent attempt to retain a coherent design; materials have been inconsistently applied; and the barn does not express a conscious level of effort or workmanship, nor does it illustrate aesthetic principles. Because the property is still rural, an argument could be made that the barn has retained its integrity of feeling and association, for these are the two most subjective aspects of integrity. However, a property with the barn's loss of integrity of design, material, and workmanship, cannot express the aesthetic or historic sense of a particular period of time. Therefore the barn is not a historic resource for the purposes of CEQA.

TACK HOUSE

As discussed above, the McIntyre Ranch is not significant as a rural historic property for the purposes of CEQA. Consequently, the tack house, one of several buildings, structures, and landscape features, is also not significant within the context of its rural history. However, it is considered for eligibility under the historic context or theme of the minor architectural trend known as rustic style.

Criterion 1 (Events)

The tack house appears to be associated with the minor architectural trend known as rustic style. While the tack house may have been influenced by this style born of a back-to-nature trend, which was popularized on a limited basis during the 1930s, it is not associated with important events that have made a significant contribution to the broad patterns of our history, and does not appear to be eligible under criterion 1.

Criterion 2 (Persons)

Archival research did not reveal that any persons important in Vallejo or Solano County history were associated with the property. Therefore the tack house does not appear to be eligible under criterion 2.

Criterion 3 (Distinctive Characteristics)

The tack house is an example of rustic architecture. Although it has distinctive characteristics of this type, period, and method of construction, there are many better examples of this style. Therefore the tack house does not appear to be eligible under criterion 3.

Although the integrity of the building is high, for it to be considered eligible, the tack house must have both historic significance and integrity. Consequently, because it has been determined not to be historically significant, it is not necessary to evaluate integrity.

MAIN HOUSE, POOL AND ASSOCIATED LANDSCAPING

The house, the pool, and associated landscaping were not included in the evaluation of the McIntyre Ranch as a rural historic landscape. The ranch was evaluated for its potential significance as a former working cattle ranch, which is thematically different than the residence in its present form. The following evaluation considers the house and associated landscape, including the pool area, for significance within the context of mid-century modern residential architecture, specifically the Bay Region Style.

Criterion 1 (Events)

Mid-century modern residential architecture was an important trend internationally, nationally, within California, and, with regional interpretation, in the San Francisco Bay Area, known as the Bay Region style. However, this house and associated landscape features do not exemplify this trend and its significant contribution to the broad patterns of our history. Therefore the main house, pool, and associated landscaping do not appear to be eligible under criterion 1.

Criterion 2 (Persons)

Archival research did not reveal that any persons important in Vallejo or Solano County history were associated with the property. Therefore the main house and its associated landscape does not appear to be eligible under criterion 2.

Criterion 3 (Distinctive Characteristics)

Many exceptional examples of the Bay Region style can still be found throughout the greater San Francisco Bay Area. While design of the main house of the McIntyre Ranch includes many features of this architectural style, it also has features that are inconsistent and incongruent with the openness and simplicity of the style. Therefore this house does not embody the distinctive characteristics of a type, period, or method of construction. Nor does it represent the work of a master. Therefore the main house does not appear to be eligible under criterion 3.

The pool area reflects an important landscape design trend also associated with post-World War II California, known as "California Style" championed by landscape architect Thomas Church. The pool area was apparently designed primarily for living, as an adjunct to the functions of the house, with its extensive outdoor kitchen, which is a character-defining feature of this kind of landscape design. However the design elements are inconsistent in material, scale and feel with the primary façade of the house. Therefore the pool area does not appear to be eligible under criterion 3.

Because the house and its associated landscape have been determined not to be eligible, it is not necessary to evaluate integrity. In any event, it is unlikely that it has retained sufficient integrity of design, materials, or workmanship to communicate historic significance, and the pool area in its present state, particularly with its loss of original species of vegetation, would not have enough integrity to contribute to an associated historic resource.

CONCLUSION

The McIntyre Ranch as a rural landscape, and all of the buildings, structures, objects, and landscape features evaluated as individual resources, are not historically significant, nor have they retained enough historic integrity to be eligible for the California Register. Neither the

Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
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property nor are any of its individual components are historical resources for the purposes of CEQA. The impact on historic resources is **less than significant**.

b) Cause a substantial adverse change in the significance of an archaeological resource pursuant to §15064.5? ☐ ☒ ☐ ☐

Explanation: The following discussion is based on an investigation of archaeological resources at the site by an independent cultural resources consultant.²⁰

An archaeological literature review conducted in 2005 for the adjacent Solano Land Trust properties covered the entire McIntyre Ranch.²¹ No historic or prehistoric cultural resources were recorded inside the McIntyre Ranch borders (the fenced in area). Immediately surrounding the ranch, however, were a number of historic archaeological resources: a rock wall, two mine shaft adits (a type of entrance to an underground mine which is horizontal or nearly horizontal), two smaller rock walls, historic pumps/pipes and recent historic trash, and another rock wall. Blue Rock Springs Park to the south contained remnants of an historic resort.

An archaeological field inspection of the project area was conducted on May 17th, 2007, with particular attention to the former building sites and the ephemeral drainage which is found along the northern fenced border of the property, draining to the northwest. No evidence of historic or prehistoric archaeological deposits was discovered during the course of the survey.

For these reasons, the archaeological investigation concluded that the proposed project would have no effect on prehistoric archaeological resources. However, because of the long history of use of the area, there is a moderate potential that historical archaeological deposits could be uncovered if additional structures are removed, or if areas are cleared of vegetation or graded for future uses. Historical archaeological deposits could exist in the form of dump sites, filled-in wells and possibly privy pits. Disturbance of a previously buried archaeological site or buried human remains would be considered a **potentially significant** impact, which would be reduced to a **less-than-significant** level with implementation of the following mitigation measures.

Mitigation Measure V-1: Plans for all activities at the McIntyre Ranch project site which require building removal, grading and/or trenching, shall be reviewed by a qualified archaeologist. If recommended by the archaeologist based on the location and extent of ground disturbing activities, archaeological monitoring shall be conducted under a written Archaeological Monitoring Agreement. Such an Agreement shall provide for, at a minimum:

²⁰ Miley Paul Holman, Holman & Associates, Letter report to Randy Anderson, LandPeople Re: Cultural Resources Survey of the McIntyre Ranch Property, Appendix C: Cultural Resources Survey, Draft February 19, 2008.

²¹ Miley Paul Holman, Holman & Associates, A Discussion of Preliminary Findings of a Cultural Resources Survey of the Vallejo Swett, Eastern Swett and King Ranch Properties, Solano County, California, 2005. On file, Holman & Associates.

Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
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- a) *Timely notification prior to any excavations;*
- b) *Monitoring during all earth-moving or soil disturbing activities, however minor, until and unless the monitor determines that no impacts to potentially significant archaeological materials will occur;*
- c) *Specific requirements that archaeological monitors be notified immediately if potentially significant archaeological resources are encountered anywhere in the absence of an onsite monitor;*
- d) *Authority of the onsite archaeological monitor to halt excavations if potentially significant archaeological materials or human remains are encountered;*
- e) *Time and space to record, photograph and map, recover, retrieve, and/or remove any archaeological materials and data during the construction process;*
- f) *Time and funding for laboratory cleaning, cataloging, analysis, and preparation for permanent curation of any and all recovered data and materials after onsite monitoring ends; and*
- g) *Time and funding for a Final Report of Findings, to incorporate data developed for this report as appropriate and data developed by monitoring and analysis; additional historical and/or archival research may also be warranted. In addition to reporting to the project sponsor (GVRD), copies of the Final Report must be submitted to the Northwest Information Center of the California Historical Resources Information System for inclusion in the permanent archives, and another copy shall accompany any curated archaeological materials and data. Archaeological data, reports, and recovered materials are and will remain the property of the property owners.*

Archaeological identification, inventory, evaluation, research and mitigation under provisions of CEQA, if any, shall be completely reported in a comprehensive manner, incorporating all methods used and data gained, thorough current scientific analysis of all data, and interpretation of any archaeological resources within a regional archaeological framework. Qualified professional archaeologists shall complete the report to current professional standards, and the data shall be made available to other qualified researchers following completion of the Final Report. Appropriate specialized, focused scientific analytic techniques shall be applied (e.g., radiocarbon dating, obsidian sourcing and hydration, typological studies, geomorphological studies, faunal analysis, etc.). Obtaining, analyzing, interpreting, and reporting archaeological data from the project area would serve as mitigative compensation for any project-related impacts to resources.

Mitigation Measure V-2: *The project sponsor (GVRD) and construction contractors shall be prepared to respond appropriately if heretofore undetected archaeological resources are encountered anywhere in the project area.*

To set up and facilitate both the recommended monitoring and the response procedure required under CEQA, a pre-construction meeting shall be arranged involving

Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
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responsible project personnel, both onsite and managerial supervisory construction personnel, and the archaeological monitors. The purpose of this meeting will be to familiarize all involved parties with the provisions of this plan. Construction contractors shall be prepared to halt and/or relocate work while finds are identified, recorded, evaluated, and if warranted, mitigative activities carried out. In virtually all reasonably foreseeable circumstances, the appropriate mitigation action will be recording and removal of archaeological objects and data from the project area.

Supervisory and construction personnel shall therefore be made aware of the possibility of encountering archaeological materials in this sensitive zone. The most common and recognizable evidence of prehistoric archaeological resources include faunal bone (deer, marine mammals, etc.), usually in a dark fine-grained soil (midden); stone flakes left from manufacturing stone tools, or the tools themselves (mortars, pestles, arrowheads and spear points); and human burials, often as dislocated bones. Historic materials older than 45 years (bottles, artifacts, trash pits, structural remains, etc.) may also have scientific and cultural significance and should be more readily identified. If during the proposed construction project any such evidence is uncovered or encountered, all excavations within 10 meters/30 feet shall be halted long enough to call in the monitoring archaeologists to assess the situation and propose appropriate measures.

Mitigation Measure V-3: The project sponsor (GVRD) and contractors must be prepared to carry out the requirements of California State law with regards to the discovery of human remains during construction. In the event that any human remains are encountered during site disturbance, all ground-disturbing work shall cease immediately and the County coroner shall be notified immediately. If the coroner determines the remains to be Native American, the Native American Heritage Commission shall be contacted within 24 hours. A qualified archaeologist, in consultation with the Native American Heritage Commission, shall recommend subsequent measures for disposition of the remains.

- c) Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature? ☐ ☒ ☐ ☐

Explanation: Due to the previous disturbance of the site, and the fact the project would entail limited subsurface disturbance, consisting primarily of grading for building pads and parking areas, the potential for encountering paleontological resources is considered low. Nonetheless, any destruction of unique paleontological resources would be a significant impact. Implementation of the following mitigation measure would reduce this potential impact to a **less-than-significant** level.

Mitigation Measure V-4: If any paleontological resources are encountered during site grading or other construction activities, all ground disturbance shall be halted until the services of a qualified paleontologist can be retained to identify and evaluate the resource(s) and, if necessary, recommend mitigation measures to document and prevent any significant adverse effects on the resource(s).

Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
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- d) Disturb any human remains, including those interred outside of formal cemeteries? ☐ ☒ ☐ ☐

Explanation: See Item V.b, above.

VI. GEOLOGY AND SOILS — Would the project:

- a) Expose people or structures to potential substantial adverse effects, including the risk of loss, injury, or death involving:
- i) Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault? Refer to Division of Mines and Geology Special Publication 42. ☐ ☐ ☒ ☐

Explanation: The project site is not located within an Alquist-Priolo Earthquake Fault Zone,²² as defined by the California State Department of Conservation, Geological Survey (CGS, formerly known as Division of Mines and Geology), and no active or potentially active faults exist on or in the immediate vicinity of the site.²³ The nearest active faults are the West Napa Fault, located approximately two miles north of the site;²⁴ the Concord-Greenville Fault, located approximately four miles east;²⁵ the Cordelia Fault, located approximately six miles north/northeast; the Hayward Fault, located approximately 14 miles southwest; and the San Andreas fault, located approximately 25 miles west. Because the site is not located on an active or potentially active

²² Alquist-Priolo Zones designate areas most likely to experience fault rupture, although surface fault rupture is not necessarily restricted those specifically zoned areas.

²³ An active fault is defined by the State of California as a fault that has had surface displacement within Holocene time (approximately the last 10,000 years). A potentially active fault is defined as a fault that has shown evidence of surface displacement during the Quaternary (last 1.6 million years), unless direct geologic evidence demonstrates inactivity for all of the Holocene or longer. This definition does not, of course, mean that faults lacking evidence of surface displacement are necessarily inactive. Sufficiently active is also used to describe a fault if there is some evidence that Holocene displacement occurred on one or more of its segments or branches (Hart, 1997).

²⁴ John R. Wesling, California Department of Conservation, Office of Mine Reclamation, and Kathryn L. Hanson, AMEC Geomatrix Consultants, Inc., *Final Technical Report, Mapping of the West Napa Fault Zone for Input Into the Northern California Quaternary Fault Database*, USGS External Award Number 05HQAG0002, undated.

²⁵ *Solano County General Plan*, December 2008, Chapter 5 Public Health and Safety, Figure HS-3.

Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

fault, the potential for surface fault rupture is low and the impact is considered **less than significant**.

ii) Strong seismic ground shaking?

<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
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Explanation: The proposed project site is located in the San Francisco Bay Area, a region of intense seismic activity. Recent studies by the United States Geological Survey (USGS) indicate there is a 62 percent likelihood of a Richter magnitude 6.7 or higher earthquake occurring in the Bay Area in the next 30 years. It is anticipated that the project site will experience one or more major earthquakes (Richter magnitude 7 or greater) generated from the seismically active faults discussed in Item VI.a.i, above, during the project's lifetime. Seismic ground shaking intensity can vary depending on the overall earthquake magnitude, distance to the fault, focus of earthquake energy, and type of geologic material.²⁶ Implementation of Mitigation Measures VI-1 and VI-2 would reduce potential impacts associated with seismic ground shaking to a **less than significant** level.

Mitigation Measure VI-1: All project improvements shall be designed in accordance with current earthquake resistance standards for the area as outlined in the California Building Code.

Mitigation Measure VI-2: The project sponsor (GVRD) shall retain a qualified geotechnical consultant to prepare a geotechnical study for all project structures, incorporating foundation design and engineering that is appropriate for local seismic conditions, expansive soils, and potential liquefaction.

iii) Seismic-related ground failure, including liquefaction?

<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
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Explanation: Seismic shaking can also trigger ground failures caused by liquefaction.²⁷ Liquefaction and associated failures could damage foundations, disrupt utility service, and cause damage to roadways. The potential for liquefaction depends on the duration and intensity of earthquake shaking, particle-size distribution of the soil, density of the soil, and elevation of the groundwater. Areas at risk due to the effects of liquefaction are typified by a high groundwater table and underlying loose to medium-dense granular sediments, particularly younger alluvium and artificial fill. The project site is in an area of "very low" to "moderate" liquefaction potential.²⁸ Construction of the various project structures would create a **potentially**

²⁶ In general, areas that are underlain by bedrock tend to experience less severe ground shaking than those underlain by unconsolidated sediments such as artificial fill. Structural damage resulting from shaking therefore tends to be worse for structures located on unconsolidated deposits.

²⁷ Liquefaction is the process by which saturated, loose, fine-grained, granular, soil, like sand, behaves like a dense fluid when subjected to prolonged shaking during an earthquake.

²⁸ Solano County General Plan, December 2008, Chapter 5 Public Health and Safety, Figure HS-6.

Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
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significant impact associated with liquefaction at the site, which would be reduced to a **less than significant** level by implementation of Mitigation Measure VI-3.

Mitigation Measure VI-3: Implement Mitigation Measures VI-1 and VI-2.

iv) Landslides?

<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
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Explanation: Although the project site includes some sloped areas, none of the proposed project buildings would be constructed on or below steeply-sloped areas. Therefore, the potential for landslides to expose people or structures to substantial risk of loss, injury, or death is **less than significant**.

b) Result in substantial soil erosion or the loss of topsoil?

<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
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Explanation: Soil erosion could occur during construction, especially during site grading and preparation for the structures and parking areas. Soil exposed by grading activities could be subject to erosion if exposed to heavy winds or rain. As discussed in Item VIII.a, below, the project sponsor would be required to create and implement a Storm Water Pollution Prevention Plan (SWPPP) to minimize soil erosion hazard during construction activities, and to create and implement a Stormwater Control Plan to control runoff and erosion during project operation. The project sponsor would also be required by the City of Vallejo to obtain a grading permit prior to the initiation of grading. Soil erosion and/or loss of topsoil during construction and grading activities would be a **potentially significant** impact which would be reduced to a **less-than-significant** level with implementation of the following mitigation measures.

Mitigation Measure VI-4: Implement Mitigation Measure VIII-1.

Mitigation Measure VI-5: Implement Mitigation Measure VIII-2.

Mitigation Measure VI-6: Prior to initiation of grading, the project sponsor (GVRD) shall obtain a grading permit from the City of Vallejo, and shall comply with all requirements of the grading permit.

c) Be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the project, and potentially result in on- or off-site landslide, lateral spreading, subsidence, liquefaction, or collapse?

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Explanation: As discussed in Items VI.a.ii and VI.a.iii, above, the project site is subject to risks including seismic ground shaking and liquefaction. Other geologic hazards include lurching and

Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
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densification.²⁹ The potential for lurch cracking (tension cracking along fill margins, berms, and levees) is nil to low, because the site has no substantial deposits of loose, man-made fill. The potential for densification is also low for the same reason. Lateral spreading is a phenomenon in which surficial soil displaces along a shear zone that has formed within an underlying liquefied layer. Upon reaching mobilization, the surficial blocks are transported downslope or in the direction of a free face by earthquake and gravitational forces. The project site is not subject to lateral spreading because it is not near, or adjacent to, an open face (i.e. the bay shore). Exposure of project structures to geologic risks including seismic ground shaking and liquefaction would be a **potentially significant** impact, which would be reduced to a **less-than-significant** level with implementation of the following mitigation measure.

Mitigation Measure VI-7: Implement Mitigation Measures VI-1 and VI-2.

- d) Be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994), creating substantial risks to life or property? ☐ ☒ ☐ ☐

Explanation: Expansive soils, which possess a “shrink-swell” characteristic, contain large amounts of clay that swell when wet and shrink when dry. These clays will swell despite heavy loads of large structures placed on them. Repetition of this shrink-swell cycle can cause building damage, including cracked foundations. In most cases removing the top layer of soil and/or preconstruction design and engineering are enough to prevent the costly problems associated with these soils. The project site is located in or near an area of high shrink-swell potential.³⁰ The presence of expansive soils on the project site would be a **potentially significant** impact, which would be reduced to a **less-than-significant** level with implementation of the following mitigation measure.

Mitigation Measure VI-8: Implement Mitigation Measure VI-2.

- e) Have soils incapable of adequately supporting the use of septic tanks or alternative wastewater disposal systems where sewers are not available for the disposal of wastewater? ☐ ☒ ☐ ☐

Explanation: As discussed in 8. Description of Project, Sewage System, above, a new septic system is proposed as part of the project. The project site is within the City of Vallejo, but Solano County environmental health standards may apply to the septic system.³¹ The Sewage Standards of the Solano County Code³² require that the project site has an area with surface

²⁹ Soil compaction, or cyclic densification, is a phenomenon in which non-saturated, cohesionless soil is densified by earthquake vibrations, causing settlement.

³⁰ Solano County General Plan, December 2008, Chapter 5 Public Health and Safety, Figure HS-7.

³¹ LandPeople, McIntyre Ranch Master Plan, Draft December 22, 2008.

³² Solano County Code, Chapter 6.4, Sewage Standards.

Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
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and subsurface characteristics suitable for the installation of an on-site sewage disposal system complying with County standards, to be demonstrated through a site evaluation including a detailed soil evaluation. The installation of a septic system on the project site would be a **potentially significant** impact on site soils, which would be reduced to a **less-than-significant** level with implementation of the following mitigation measure.

Mitigation Measure VI-9: *The project sponsor (GVRD) shall ensure that the project's septic system complies with all requirements of Chapter 6.4 Sewage Standards of the Solano County Code. If required by the Solano County Environmental Health Services Division to maintain the proper functioning of the disposal field in accordance with Section 6.4-80(g) of the Solano County Code, paddock uses shall be excluded from the area above the disposal field(s).*

VII. HAZARDS AND HAZARDOUS MATERIALS — *Would the project:*

- a) Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials? ☐ ☐ ☒ ☐

Explanation: The proposed project uses (research/office facility, outdoor education center, demonstration farm and equestrian center, small retreat conference center, and rustic picnic and camping facility for organized groups) would require relatively small quantities of hazardous materials for routine maintenance and housekeeping purposes. The project would likely handle common types of hazardous materials, such as paints, cleaners, toners, solvents, and disinfectants. These commercial products are labeled to inform users of potential risks and to instruct them in appropriate handling and disposal procedures. Most of the materials are consumed through use, resulting in relatively little waste. Businesses are required by law to ensure employee safety by identifying hazardous materials, and adequately training workers. Therefore, the hazards to the public would be minimized and the proposed project would not pose a significant hazard to the public or environment, and this impact would be **less than significant**.

- b) Create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment? ☐ ☒ ☐ ☐

Explanation:

HAZARDOUS MATERIALS USED IN CONSTRUCTION

Construction activities would require the use of certain hazardous materials such as fuels, oils, solvents, and glues. Inadvertent release of large quantities of these materials into the environment could adversely impact soil, surface waters, or groundwater quality. On-site storage and/or use of large quantities of materials capable of impacting soil and groundwater would not typically be required for a project of the size and type proposed. However, the

Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
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potentially significant risk associated with hazardous materials used during construction would be reduced to a **less-than-significant** level with implementation of the following mitigation measure.

Mitigation Measure VII-1: Implement Mitigation Measure VIII-1.

HERBICIDES

The project may involve the use of herbicides on the site for gardening, removal of invasive plant species, or other vegetation management. Improper use of herbicides would pose a threat to both humans and animals on the site. This is a **potentially significant** impact, which would be reduced to a **less-than-significant** level by implementation of the following mitigation measure.

Mitigation Measure VII-2: Implement Mitigation Measure IV-5.

UNDERGROUND STORAGE TANK

An old glass bottle-type gasoline pump is located on the site north of the barn, which indicates the presence of an underground storage tank (UST). USTs used for storage of fuel may result or have resulted in soil and/or groundwater contamination. This would represent a **potentially significant** impact unless properly remediated. Implementation of the following mitigation measure would reduce this impact to a **less than significant** level.

Mitigation Measure VII-3: The project sponsor (GVRD) shall retain a qualified consultant to perform a Phase I Environmental Site Assessment (ESA) for the site. The Phase I ESA shall include, but not be limited to, determination of the presence of an underground storage tank (UST) associated with the old glass bottle-type gasoline pump is located north of the barn, and lead contamination in soils.

If the Phase I ESA determines that there is or may be an underground storage tank or tanks on the site, the project sponsor (GVRD) shall comply with the recommendations of the Phase I ESA regarding additional investigation, such as a Phase II Environmental Site Assessment, and/or disposition of the underground storage tank(s).

If an underground storage tank or tanks are located on the site, the project sponsor (GVRD), in coordination with the Solano County Department of Environmental Management, shall determine an appropriate disposition for the UST(s) (removal or abandonment in place). If required by the Solano County Department of Environmental Management, the project sponsor (GVRD) also shall retain a qualified environmental professional to assess the presence and extent of soil and/or groundwater contamination related to the underground storage tank (UST), in conformance with state and local guidelines and regulations.

If sampling identifies surface and/or subsurface contamination, the area shall be remediated in accordance with the standards, regulations, and determinations of local, state, and federal regulatory agencies. All earth-disturbing activities conducted during remediation shall comply with Mitigation Measures V-1 (which requires monitoring by a qualified archaeologist), V-2, V-3, and V-4. The project sponsor (GVRD) shall

Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
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coordinate with the Solano County Department of Environmental Management and any other applicable regulatory agencies to adopt contaminant-specific remediation target levels. The excavated soil shall be removed and disposed of at an approved disposal facility.

If required by the Solano County Department of Environmental Management, the project sponsor (GVRD) shall prepare and implement a site-specific health and safety plan to mitigate potential hazards to construction workers and the general public during remediation. The health and safety plan shall meet the requirements of federal, state, and local environmental and worker safety laws. Specific information to be provided in the plan shall include identification of contaminants, potential hazards, material handling procedures, dust suppression methods, personal protection clothing and devices, controlled access to the site, health and safety training requirements, monitoring equipment to be used during remediation to verify health and safety of the workers and the public, measures to protect public health and safety, and emergency response procedures.

All reports and plans prepared in accordance with this mitigation measure shall be provided to the Solano County Department of Environmental Management and to any other appropriate agencies identified by the Solano County Department of Environmental Management. If the UST and/or contaminated soil is removed from the site, the project sponsor (GVRD) shall, after all hazardous materials have been removed and soil and groundwater analysis and other activities have been completed as appropriate, submit to the Solano County Department of Environmental Management (and any other agencies identified by the Solano County Department of Environmental Management) a report stating that the mitigation measure has been implemented. The report shall describe the steps taken to comply with the mitigation measure and include all verifying documentation. The report shall be certified by an REA or similarly qualified individual who states that the mitigation measure has been implemented, and specifying the actions that have been implemented.

LEAD CONTAMINATION IN SOIL

Although the past uses of the site (ranching, recreation, and residential) are generally not associated with significant levels of lead contamination in the soil, the possibility exists that the site soils may contain hazardous levels of lead, which could pose health risks to future McIntyre Ranch visitors, construction workers, and nearby residents. This is a **potentially significant** impact, which would be reduced to a **less-than-significant** level by implementation of the following mitigation measure.

Mitigation Measure VII-4: Implement Mitigation Measure VII-3.

LEAD-BASED PAINT AND ASBESTOS

Most of the existing structures on the site date from an era when lead-based paint and asbestos were used in construction, and may contain either or both of these hazardous materials. Project work including demolition of the main house and restoration and/or repair of the tack house and cabin, could expose workers and the public to lead-based paint and asbestos. This is a

Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
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potentially significant impact, which would be reduced to a **less-than-significant** level by implementation of the following mitigation measure.

Mitigation Measure VII-5: *Prior to demolition, renovation, or repair of any structure on the site, the structure(s) shall be assessed for the presence of any lead and asbestos containing materials by a qualified consultant. If present, these materials shall be removed by a qualified contractor, in compliance with all applicable laws and regulations.*

Implementation of this mitigation measure, plus conformance with applicable laws and regulations that govern the abatement and handling of asbestos and lead-based paint, would reduce the potential impacts of lead-based paint and asbestos in structures on the site to a **less than significant** level.

- c) Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school? ☐ ☒ ☐ ☐

Explanation: The nearest school is more than one-quarter mile from the project site. As discussed in Item VII.b, above, the construction of the proposed project would involve potentially hazardous construction materials and herbicides, as well as the potential for movement of contaminated soil. This would be a **potentially significant** impact, which would be reduced to a **less-than-significant** level by implementation of the following mitigation measure.

Mitigation Measure VII-6: *Implement Mitigation Measures VII-1, VII-2, VII-3, and VII-5.*

- d) Be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, would it create a significant hazard to the public or the environment? ☐ ☐ ☐ ☒

Explanation: The project site is not on the list of hazardous materials sites compiled pursuant to Government Code Section 65962.5, commonly called the "Cortese List." There would be **no impact**.

- e) For a project within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project result in a safety hazard for people residing or working in the project area? ☐ ☐ ☐ ☒

Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
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Explanation: The project site is not located within two miles of a public use airport. The Napa County Airport is located approximately seven miles northwest of the site, and Buchanan Field in Concord is approximately eleven miles southeast of the site. There would be **no impact**.

- f) For a project within the vicinity of a private airstrip, would the project result in a safety hazard for people residing or working in the project area? ☐ ☐ ☐ ☒

Explanation: The project site is not located within the vicinity of a private airstrip. There would be **no impact**.

- g) Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan? ☐ ☐ ☐ ☒

Explanation: The project would not interfere with any roadways or other emergency accessways. Therefore, it would not establish any barrier that would interfere with any adopted emergency response or evacuation plan. There would be **no impact**.

- h) Expose people or structures to significant risk of loss, injury, or death involving wildland fires, including where wildlands are adjacent to urbanized areas or where residences are intermixed with wildlands? ☐ ☐ ☒ ☐

Explanation: The project site is surrounded by undeveloped open space. It is in a wildland interface area surrounded by grasslands, with many fire-prone non-native trees (pines and eucalyptus) on the property and around the structures. The project could expose people and structures to risks associated with wildland fires. As discussed in 8. Description of Project, Fire Service and Safety, and On-Site roads, above, the project would include the following fire safety procedures:

1. Complete an engineering study and design for on-site water supply and delivery for fire and drinking water, to determine if the existing tanks can be used, and/or any improvements or replacement needed.
2. Install fire hydrants near the USGS Research Center, in the central agricultural area, and near the proposed Nature Center.
3. Install water lines meeting fire flow standards from the existing water tank and/or the unused second tank, connecting to the above fire hydrants.
4. Remove flammable brush and shrubs from within 40 feet of existing and proposed structures.

Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
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5. Design and implement a tree trimming and removal program, incorporating both the safety benefits of clearance to meet California Department of Forestry and Fire Protection (CDF) standards and the aesthetic and historic value of the trees.
6. Apply to the Vallejo Fire Department for an exception to standards to allow a one-lane driveway with turnouts at regular intervals, and to allow portions of the on-site circulation system to be base rock surfaced (rather than asphalt).
7. If allowed by the Vallejo Fire Department, construct driveway turnouts at regular intervals (e.g., 400 feet on center).
8. If a one-lane driveway is not allowed by the Vallejo Fire Department, widen the existing driveway and main access road up to the Main House to 20 feet, to facilitate public and emergency vehicle access.

These procedures, proposed as part of the project, would reduce the impact of wildland fires to a ***less than significant*** level.

VIII. HYDROLOGY AND WATER QUALITY — Would the project:

- a) Violate any water quality standards or waste discharge requirements? ☐ ☒ ☐ ☐

Explanation: Construction of the project would involve earthmoving activities such as grading and soil stockpiling. Project construction could result in soil erosion and subsequent discharge of suspended sediment to Carquinez Strait and Suisun Bay that could eventually impact water quality in San Pablo and San Francisco Bays. Sedimentation to the waterway could degrade water quality for beneficial uses by increasing channel sedimentation and suspended sediment levels (turbidity), and adversely affecting aquatic and riparian habitats. Without mitigation, these impacts would be considered ***potentially significant***.

Because the area that would be disturbed by the project exceeds one acre in size, storm water discharge originating from the project site during construction activities is subject to regulation under the United States Environmental Protection Agency's (US EPA) National Pollutant Discharge Elimination System (NPDES) program. As required by NPDES regulations, the project sponsor would apply for coverage under the State Water Resources Control Board (SWRCB) General Construction Permit, and subsequently prepare and implement a Storm Water Pollution Prevention Plan (SWPPP), as described in Mitigation Measure VIII-1, below. The objectives of a SWPPP are to identify pollutant sources that may affect the quality of storm water discharge and implement best management practices (BMPs) to reduce and potentially eliminate pollutants carried by storm water runoff. The SWPPP therefore contains specific actions for handling and storage of construction materials and equipment, site grading activities, soil stabilization and post-construction runoff, monitoring, and reporting activities at the project site. SWPPP measures are especially important during construction phases requiring grading and during periods of heavy precipitation. Implementation of a SWPPP, as required by

Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
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Mitigation Measure VIII-1, would reduce potential water quality impacts associated with construction of the proposed project to a ***less-than-significant*** level.

Mitigation Measure VIII-1: *The project sponsor (GVRD) shall develop and implement a SWPPP for construction of the proposed project, as required by the SWRCB and San Francisco Bay Regional Water Quality Control Board (RWQCB). The SWPPP shall include, at a minimum, the following elements:*

- *Source identification;*
- *Preparation of a site map;*
- *Description of construction materials, practices, and equipment storage and maintenance;*
- *List of pollutants likely to contact storm water*
- *Estimate of the construction site area and percent impervious area;*
- *Erosion and sedimentation control practices, including soils stabilization, revegetation, and runoff control to limit increases in sediment in storm water runoff, such as detention basins, straw bales, silt fences, check dams, geofabrics, drainage swales, and sandbag dikes;*
- *Proposed construction dewatering plans;*
- *List of provisions to eliminate or reduce discharge of materials to storm water;*
- *Description of waste management practices; and*
- *Maintenance and training practices.*

Following the completion of construction activities and revegetation of the site, the proposed project could result in increased pollutants from equestrian activities, parking-lot runoff and the use of herbicides associated with farming/gardening and control of invasive species (removal and ongoing maintenance). These activities could result in long-term degradation of storm water runoff originating from the project site, and impact Carquinez Strait and San Pablo, Suisun, and San Francisco Bays, due to increased levels of horse manure, petroleum hydrocarbons, oil, grease, and/or herbicides compared to existing site conditions.

In addition to the construction-related requirements discussed above, the project would need to comply with the Regional Water Quality Control Board (RWQCB) C.3 regulations governing operational discharges. These regulations, implementing Section C.3 of the RWQCB's NPDES permit governing discharges from the municipal storm drain systems of Solano County and its cities and towns, were phased in from 2004 through 2006. The requirements, which pertain to storm water generated by project operation, are separate from, and in addition to, requirements for erosion and sediment control and for pollution prevention during construction (i.e., SWPPP). On August 15, 2006, the threshold for preparation of a Stormwater Control Plan was reduced to all sites creating or replacing over 10,000 square feet of impervious area. For sites that have been previously developed, if the new project results in an increase of, or replacement of, 50

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percent or more of the previously existing impervious surface, and the existing development was not subject to stormwater treatment measures, then the entire project must be included in the treatment measure design. If less than 50 percent of the previously impervious surface is to be affected, only that portion must be included in the treatment measure design.

The Stormwater Control Plan is intended to address operational (as opposed to construction) runoff from the project. It will last the life of the project and must indicate how the project would minimize the area of new roofs and paving and substitute pervious surfaces to allow runoff to reach the underlying soil. Most (approximately 80 percent) runoff from impervious areas must be captured and treated. Because a large portion of average annual runoff is produced by small storms that occur many times a year, treatment BMPs can be designed to bypass larger storms. The 80 percent criterion means that BMPs will be bypassed, on average, every one to two years. The permit specifies acceptable ways to calculate the capacity of treatment devices.³³

Potential water quality impacts associated with operation of the proposed project, including stormwater runoff from the parking area, equestrian activities, and use of herbicides, would be a **potentially significant impact**, which would be reduced to a **less-than-significant** level by implementation of the following mitigation measures.

Mitigation Measure VIII-2: *The project sponsor (GVRD) shall develop and implement a Stormwater Control Plan for the proposed project as required by applicable regulations, in compliance with Section C.3 of the RWQCB's NPDES permit governing discharges from the municipal storm drain systems. The Stormwater Control Plan shall include, at a minimum, the following elements:*

- *Description of site features and conditions that constrain, or provide opportunities for, stormwater control.*
- *Description of site design characteristics that protect natural resources.*
- *Description of site design characteristics, building features, and pavement selections that reduce imperviousness of the site.*
- *Tabulation of pervious and impervious area, showing self-retaining areas and areas tributary to each infiltration, treatment, or hydrograph modification BMP (Best Management Practice).*
- *Preliminary designs for each treatment or hydrograph modification management BMP.*
- *Identified pollutant source areas, including, but not limited to, equestrian activities producing manure and gardening/farming activities using biocides, and for each, the source control measure(s) used to reduce pollutants to the maximum extent practicable.*
- *Identification of any conflicts with codes or requirements or other anticipated obstacles to implementing the Stormwater Control Plan.*

³³ Contra Costa Clean Water Program, *Stormwater C.3 Regulations Fact Sheet*, November 2004.

Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
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- General description of maintenance needs for treatment/hydrograph modification BMPs.
- Means by which BMP maintenance will be financed and implemented in perpetuity.
- Statement accepting responsibility for operation and maintenance of treatment BMPs.

Mitigation Measure VIII-3: Implement Mitigation Measure IV-5.

Mitigation Measure VIII-4: Implement the following Best Management Practices (BMPs) for manure management. If GVRD, the Solano Land Trust, and Pacific Gas and Electric Company enter into a cooperative management agreement, these BMPs shall be incorporated into that agreement.

1. Remove manure regularly (daily is best) or keep manure under cover such that runoff does not come into contact with manure stockpiles.
 - a. Stalls, corrals and wash areas shall be cleaned and manure removed on a daily basis.
 - b. Paddocks shall be cleaned according to the following schedules:
 - i. During the summer dry season (April 15 to October 14): at least once per week.
 - ii. During the winter rainy season (October 15 to April 14): at least twice per week.
2. Provide temporary storage for manure that cannot be disposed of daily – about 15 cubic feet of storage per horse per week. Manure shall not be stored for more than one week on site.
3. Grade the area surrounding the manure storage area to prevent surface water from reaching the storage area.
4. Store horse waste on an impervious surface (a concrete pad or plastic tarp) and under cover (a roof or tarp) during rains to prevent leaching or runoff of pollutants.
5. Locate buildings, covered areas, high-use arenas, horse wash racks, and manure storage areas away from waterways and separated by buffer strips of vegetation to filter sediments and absorb nutrients in runoff.
6. Do not dump horse waste on the edge of, or directly into waterways.
7. Consider composting if conditions are suitable.

- b) Substantially deplete groundwater supplies or interfere substantially with groundwater recharge such that there would be a net deficit in aquifer volume or a lowering of the local groundwater table level (e.g., the production rate of pre-existing nearby wells would drop to a level that would not support existing land uses or planned uses for which permits have been granted)?

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Explanation: Most of the project site is undeveloped, with vegetated, pervious surfaces. Impervious surfaces on the site include the existing structures and paved road. The project

Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
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would demolish the main house and construct new structures and parking areas, which would result in a net increase in impervious surfaces on the site. However, the net new impervious surface would be relatively small, and the new impervious surfaces would be isolated and adjacent to larger pervious areas. The creation of additional impervious surface area by the project would therefore only minimally reduce the existing rate of surface water infiltration and groundwater recharge, and the project would not interfere substantially with groundwater recharge.

The project would generate additional demand for water. Although the amount would not be substantial in terms of regional water use, water for the project would be supplied by an onsite well, and the project could affect local groundwater. As discussed in 8. Description of Project, Water Supply and System, above, the project includes an engineering study and design for on-site water supply and delivery for fire and drinking water to determine, among other factors, the potential impact on and sustainability of the ground water supply. In the event that onsite sources do not provide an adequate water supply, water would be supplied to the project via a connection to City water. For these reasons, the proposed project would not cause a significant lowering of an aquifer or groundwater table, or inhibit recharge of an aquifer, and this impact would be **less than significant**.

- c) Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, in a manner which would result in substantial erosion or siltation on- or off-site? ☐ ☒ ☐ ☐

Explanation: The project site is located within a shallow valley oriented southeast-northwest. The site, which has no formal storm drainage facilities, generally drains to the northeast, toward a pond in the central portion of the Vallejo Swett Ranch. There are a series of ephemeral streams on the property, as indicated on Figures 4 and 5. Some of these drainages are not well defined, and wander through the pastures, creating seasonally swampy areas. As part of the project, poorly-defined drainage routes in the vicinity of the former barn site and at the north end of the paddocks would be relocated and/or improved to prevent wet conditions.

The proposed project, after completion of construction and improvement of these drainages, would not substantially alter the drainage pattern of the site or vicinity. Stormwater would continue to flow toward the pond in the central portion of the Vallejo Swett Ranch, while the site's drainage would be improved due to the relocation and/or improvement of poorly-defined drainage routes. After vegetation has been re-established, the project would not increase the likelihood of erosion from the site. The **potentially significant** impacts associated with construction erosion and alteration of drainages would be reduced to a **less-than-significant** level with implementation of the following mitigation measure.

Mitigation Measure VIII-5: Implement Mitigation Measures IV-13 and VIII-1.

- d) Substantially alter the existing drainage pattern of the site or area, including through the alteration of ☐ ☐ ☒ ☐

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the course of a stream or river, or substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or off-site?

Explanation: As discussed in Item VIII.c, above, stormwater from the project site drains to the pond in the central portion of the Vallejo Swett Ranch, via a series of ephemeral streams on the site. The project would create an improved drainage pattern on the site, but would not alter the course of any stream or river, substantially or adversely affect existing drainage patterns, or substantially increase the area of impervious surfaces on the site. Therefore, the project would not substantially affect the potential for flooding on- or off-site, and this impact is **less-than-significant**.

- e) Create or contribute runoff water that would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff? ☐ ☒ ☐ ☐

Explanation: As described in Items VIII.a, VIII.c, and VIII.d, above, the project, with implementation of mitigation measures, would not generate substantial additional quantities of runoff water, or substantial additional sources of polluted runoff. Stormwater would continue to flow from the site to the pond in the central portion of the Vallejo Swett Ranch; there would be no substantial effect on downstream stormwater drainage systems. The project's impact on storm water drainage and water quality, with implementation of Mitigation Measures VIII-1, VIII-2, VIII-3, and VIII-4, would be **less than significant**.

- f) Otherwise substantially degrade water quality? ☐ ☒ ☐ ☐

Explanation: Effects on water quality from surface contaminants are a **potentially significant** impact that would be reduced to a **less-than-significant** level with implementation of Mitigation Measures VIII-1, VIII-2, VIII-3, and VIII-4.

- g) Place housing within a 100-year flood hazard area as mapped on a federal Flood Hazard Boundary or Flood Insurance Rate Map or other flood hazard delineation map? ☐ ☐ ☐ ☒

Explanation: The project would remove the main house, and construct an Intern Housing building, 18 tent cabins, and a staff/caretaker residence. However, the project site is located outside of the mapped 100-year floodplain.³⁴ There would be **no impact**.

³⁴ Solano County General Plan, December 2008, Chapter 5 Public Health and Safety, Figure HS-1.

Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
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- h) Place within a 100-year flood hazard area structures which would impede or redirect flood flows? ☐ ☐ ☐ ☒

Explanation: The project site is located outside of the mapped 100-year floodplain³⁵, and the project would not include any substantial structures that could impede or redirect flood flows. There would be **no impact**.

- i) Expose people or structures to a significant risk of loss, injury, or death involving flooding, including flooding as a result of the failure of a levee or dam? ☐ ☐ ☐ ☒

Explanation: There are no levees in the project area, and the project site is not within a dam failure inundation area.³⁶ There would be **no impact**.

- j) Inundation by seiche, tsunami, or mudflow? ☐ ☐ ☒ ☐

Explanation: Tsunamis (seismic sea waves) are long-period waves that are typically caused by underwater disturbances (landslides), volcanic eruptions, or seismic events. A seiche is a free or standing wave oscillation(s) of the surface of water in an enclosed or semi-enclosed basin, such as San Francisco Bay, that may be initiated by an earthquake.³⁷ Due to the lack of upstream reservoirs and the site's distance from San Francisco Bay, the hazard of tsunami and seiche waves at the project site is negligible. Although the project site includes some sloped areas, none of the proposed project buildings would be constructed on or below steeply-sloped areas. Therefore, the project is not anticipated to substantially increase the risk of large-scale mudflow. For these reasons, the risk of inundation by seiche, tsunami, or mudflow would be **less than significant**.

IX. LAND USE AND PLANNING — Would the project:

- a) Physically divide an established community? ☐ ☐ ☒ ☐

Explanation: The project site is surrounded on all sides by open space. The proposed project would be constructed within the existing pattern of roads, and would not interfere with

³⁵ Ibid.

³⁶ Association of Bay Area Governments, Dam Failure Inundation Hazard Maps: City of Vallejo, <http://www.abag.ca.gov/cgi-bin/pickdamx.pl>, viewed 30 April 2009.

³⁷ The 'sloshing' produced by seiches within enclosed water bodies commonly occurs during earthquakes on a small scale in swimming pools.

Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
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surrounding open space land use. The proposed project would not introduce any constraints to movement in the area, or otherwise divide the established low-density rural residential community in the vicinity. The project would introduce relatively low-intensity recreational uses to the site, but these uses would be compatible with the surrounding open space uses, and are not anticipated to have any substantial adverse land use effects on the nearest residential uses. (Traffic impacts are discussed in Item XV. Transportation/Traffic, below.) This impact would be ***less than significant***.

- b) Conflict with any applicable land use plan, policy, or regulation of an agency with jurisdiction over the project (including, but not limited to, the general plan, specific plan, local coastal program, or zoning ordinance) adopted for the purpose of avoiding or mitigating an environmental effect? ☐ ☐ ☒ ☐

Explanation:

CITY OF VALLEJO GENERAL PLAN LAND USE DESIGNATION AND ZONING

The project site is designated as Open Space/Conservation in the City of Vallejo General Plan, and is zoned as PF (Public and Quasi-Public Facilities). The 1999 General Plan identifies Public Facility as a “clearly compatible” zoning district in the Open Space land use categories.³⁸ A wide range of principally permitted uses are allowed in the PF zoning district: city corporation yards, community centers, community colleges, community theaters, courthouses, fairgrounds, fire stations, golf courses and related retail uses, libraries, marinas and related retail uses, museums, parks and botanical gardens and related retail uses, park and ride lots, police stations, post offices, public administrative offices, public playgrounds and playing fields, public kindergarten, elementary, junior high and high schools, pumping stations (sewage or water), reservoirs and water tanks, state colleges and universities, telecommunications facility, and water tanks.³⁹ Permitted uses subject to limitations include eating and drinking establishments and food and beverage retail sales when an accessory use to cultural exhibits and library services, essential services, or major impact services and utilities. Uses allowed subject to a major use permit are: airports, amphitheaters, amusement parks, animal pounds, aquariums, cemeteries, communication equipment installation and exchanges, community antenna TV systems, detention facilities, electric transmission lines, electrical substations, exhibition halls, gas substations, heliports, municipal bus stations, participant sports (bingo), public utility service yards, radio transmission facilities, religious assembly, sewage treatment facilities, stadiums and arenas (civic), telephone exchange or switching facilities, television transmission facilities, theme parks, water treatment facilities, and zoological gardens. The principally permitted use “parks and botanical gardens and related retail uses” would permit the equestrian, agricultural, nature center, and camping proposed by Master Plan. The proposed USGS Western Ecological Research Center could be considered a “public administrative office”, another principally permitted use, but none of the permitted uses listed above include housing; thus, the intern

³⁸ City of Vallejo, *Vallejo General Plan*, July 1999, pages III-28 and III-29.

³⁹ City of Vallejo, *Vallejo Municipal Code*, Chapter 16.30, Public and Quasi-Public Facilities District.

Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
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housing associated with the USGS facility is not consistent with the PF zoning of the site. The project would require an exception from the PF zoning requirements, without this approval, the intern housing component of the project would need to be modified to maintain consistency with the applicable zoning.

The compatibility of the project with plans and policies, such as the zoning ordinance, that were not specifically adopted for the purpose of avoiding or mitigating an environmental effect will be considered by decision-makers as part of their decision whether to approve or disapprove the proposed project, but any potential conflicts identified as part of that process would not alter the physical environmental effects of the proposed project which are evaluated in this IS/MND.

TRI-CITY AND COUNTY COOPERATIVE PLAN FOR AGRICULTURE AND OPEN SPACE PRESERVATION

The Tri-City and County Cooperative Planning Group is a Joint Powers Agreement (JPA) of the cities of Benicia, Vallejo, Fairfield, and Solano County to plan and implement open space preservation in the south county region. The Tri-City and County Cooperative Plan for Agriculture and Open Space Preservation,⁴⁰ adopted in 1994, contains general concepts for open space protection and low-intensity recreational use. The Plan was adopted by each member agency as part of their respective General Plans. The Group has a Governing Board of appointed officials of the agencies, as well as a Citizen's Advisory Committee, and meets quarterly to coordinate efforts and monitor progress, most of which pertains to the accomplishments of the Solano Land Trust.

The Plan sets forth a Recreation Guideline for the McIntyre Ranch/Orchard area, which includes the McIntyre Ranch and a larger area to the west of the Vallejo Swett Ranch. The Recreation Guideline identifies a set of possible McIntyre Ranch uses: picnicking, interpretive center, conference center, day camp, amphitheater, overnight camping, trail use, animal petting farm, equestrian rental, administrative offices, maintenance area, food concession, and ranger residence. Because these uses do not include a government research station with intern housing such as the proposed USGS Western Ecological Research Center, the USGS facility could be considered inconsistent with the Plan; however, it is not prohibited by the plan. The Plan identifies "trail use" as a possible use for the site, but does specify whether any trailhead parking/staging areas should be publicly accessible (not requiring reservation or event) or limited access (as is proposed under the project).

CONCLUSION

A variety of additional regulations may apply to the project. A more detailed review of the project's consistency with all applicable development standards will be performed as part of the development review process. No conflicts with applicable plans or policies adopted for the purpose of avoiding or mitigating an environmental effect, other than those discussed above, were identified during the course of this environmental review. Impacts on plans and policies would be ***less than significant***.

⁴⁰ Tri-City and County Cooperative Planning Group, *Tri-City and County Cooperative Plan for Agriculture and Open Space Preservation, Concept Plan and Policy Program Report*, March 31, 1994, amended October 20, 1994.

Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
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- c) Conflict with any applicable habitat conservation plan or natural community conservation plan? ☐ ☐ ☐ ☒

Explanation: See Item IV.f, above.

X. MINERAL RESOURCES — Would the project:

- a) Result in the loss of availability of a known mineral resource that would be of value to the region and the residents of the state? ☐ ☐ ☐ ☒

Explanation: There are no mineral resources on the site as identified in the Natural Resources Element of the Vallejo General Plan.⁴¹ The proposed project would not result in the loss of availability of known mineral resources, and there would **no impact**.

- b) Result in the loss of availability of a locally-important mineral resource recovery site delineated on a local general plan, specific plan, or other land use plan? ☐ ☐ ☐ ☒

Explanation: As discussed in Item X.a, above, there are no identified mineral resources at the site. The proposed project would not involve substantial development at the site that could reduce or preclude the availability of any undiscovered mineral resources on the site. There would be **no impact**.

XI. NOISE — Would the project result in:

- a) Exposure of persons to or generation of noise levels in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies? ☐ ☐ ☒ ☐

Explanation: The project site contains an uninhabitable residence, two barns, a tack house, and other outbuildings. These facilities are in various states of disrepair. Surrounding development consists of open spaces, and, farther away, low-density residential. There are no generators of substantial noise in the vicinity such as heavily-traveled arterial streets, and the site and vicinity have relatively low levels of ambient noise. The proposed project would introduce relatively low-intensity recreational uses to the site. With the exception of short-term construction noise, which is discussed in Item XI.d, below, the project would not introduce any substantial noise generators to the site. The project could result in new visitors to the site, but the additional

⁴¹ City of Vallejo, *Vallejo General Plan*, July 1999, XI.D. Mineral Resources, page XI-5.

Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
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vehicle trips generated would not perceptibly or substantially change existing noise levels. This impact would be **less than significant**.

- b) Exposure of persons to or generation of excessive groundborne vibration or groundborne noise levels? ☐ ☐ ☒ ☐

Explanation: There are no existing sources of substantial vibration in the project vicinity. The project, which would introduce relatively low-intensity recreational uses to the site, would not introduce any new sources of significant vibration, with the possible exception of short-term construction vibration. Any vibration that may be generated during construction would be limited in duration and is anticipated to be below the level that could damage adjacent structures. For these reasons, possible construction-generated vibration would not be considered significant. The impact of the project on vibration would be **less than significant**.

- c) A substantial permanent increase in ambient noise levels in the project vicinity above levels existing without the project? ☐ ☐ ☒ ☐

Explanation: As discussed in Item XI.a, above, the proposed project would not generate a substantial permanent increase in ambient noise levels in the project vicinity above the existing levels. This impact would be **less than significant**.

- d) A substantial temporary or periodic increase in ambient noise levels in the project vicinity above levels existing without the project? ☐ ☒ ☐ ☐

Explanation: Project construction may result in substantial temporary increases in noise in the project vicinity. City of Vallejo Municipal Code (§7.84.010 General prohibition--Loud unnecessary and unusual noise) regulates construction noise as follows:

"7.84.010 General prohibition--Loud unnecessary and unusual noise.

Notwithstanding any other provisions of the Vallejo Municipal Code and in addition thereto, it shall be unlawful for any person to willfully make or continue, or cause to be made or continued, any loud, unnecessary, and unusual noise which disturbs the peace or quiet of any neighborhood or which causes discomfort or annoyance to any reasonable person of normal sensitiveness residing in the area. The standard which may be considered in determining whether a violation of the provisions of this chapter exists may include, but not be limited to, the following:

- A. The level of noise;*
- B. Whether the nature of the noise is usual or unusual;*
- C. Whether the origin of the noise is natural or unnatural;*
- D. The level and intensity of the background noise, if any;*
- E. The proximity of the noise to residential sleeping facilities;*
- F. The nature and zoning of the area within which the noise emanates;*

Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
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- G. The density of the inhabitation of the area within which the noise emanates;
H. The time of the day and night the noise occurs;
I. The duration of the noise;
J. Whether the noise is recurrent, intermittent, or constant; and
K. Whether the noise is produced by a commercial or noncommercial activity.”

Project compliance with these existing code requirements and implementation of the following mitigation measure would reduce the impacts associated with construction noise to a **less-than-significant** level.

Mitigation Measure XI-1: The project sponsor (GVRD) shall require the construction contractor(s) to:

- Use noise shielding and muffling devices on construction equipment that comply with all applicable standards and regulations; and
- Limit construction activity to the hours between 7 a.m. and 8 p.m., Monday through Friday.

- e) For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project expose people residing or working in the project area to excessive noise levels? ☐ ☐ ☐ ☒

Explanation: The project is not located within an airport land plan or within two miles of an airport. There would be **no impact**.

- f) For a project within the vicinity of a private airstrip, would the project expose people residing or working in the project area to excessive noise levels? ☐ ☐ ☐ ☒

Explanation: The project is not within the vicinity of a private airstrip. There would be **no impact**.

XII. POPULATION AND HOUSING — Would the project:

- a) Induce substantial population growth in an area, either directly (for example, by proposing new homes and businesses) or indirectly (for example, through extension of roads or other infrastructure)? ☐ ☐ ☒ ☐

Explanation: The proposed project site would construct 18 tent cabins, a staff/caretaker residence, an approximately 5,000-square-foot USGS Western Ecological Research Center,

Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
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and a USGS Intern Housing building for three to six interns. The project would also include a 22-space parking lot, 24 additional parking spaces south of the Nature/Activity Center, and parking space for approximately 50 regular vehicles, or approximately sixteen truck-horse trailer rigs plus approximately eight regular vehicles, in the central barn area. The project would introduce relatively low-intensity recreation, and the USGS Western Ecological Research Center with housing for three to six interns, to the site, and improve the existing onsite water system and add a septic system. These improvements would incrementally increase intensity of use on the site, but would not create substantial new housing or employment, or substantially alter the existing roadway network. For these reasons, and because the project site is surrounded by open space of the Solano Land Trust, the new uses and minor infrastructure improvements on the site would not have substantial growth-inducing effects, and the growth-inducing impacts of the proposed project would be **less than significant**.

- b) Displace substantial numbers of existing housing, necessitating the construction of replacement housing elsewhere? ☐ ☐ ☒ ☐

Explanation: The existing main house is unoccupied and in uninhabitable condition. Currently a caretaker's recreational vehicle (RV) is parked behind the main house. Under the proposed project, this location would be used for parking for the Nature/Conference/Activity Center, but a staff/caretaker residence would be constructed elsewhere on the site (at the former Foreman's House site). The project would demolish the unoccupied main house. Demolition of this unoccupied, uninhabitable dwelling unit would not constitute a substantial loss of housing, and the impact of the project on existing housing would be **less-than-significant**.

- c) Displace substantial numbers of people, necessitating the construction of replacement housing elsewhere? ☐ ☐ ☒ ☐

Explanation: The main house on the site that would be demolished is unoccupied. The Master Plan calls for a caretaker's residence to be constructed, to provide for the caretaker that currently occupies a RV elsewhere on the site. The project would not displace any residents or necessitate the construction of substantial amounts of replacement housing. This impact would be **less-than-significant**.

XIII. PUBLIC SERVICES: Would the project result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times, or other performance objectives for any of the following public services:

Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

a) Fire protection?

<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
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Explanation: The Vallejo Fire Department would continue to provide fire protection and emergency medical service to the proposed project. The Fire Department is currently staffed by 123 employees in seven divisions. The nearest fire station to the project site is Station 7 located at 1585 Ascot Court. Paramedics assigned to each station provide Advanced Life Support for each resident within four to five minutes.

The proposed project would introduce the USGS Western Ecological Research Center and relatively low-intensity recreational uses to the site, which is in a wildland interface area surrounded by grasslands, with many fire-prone non-native trees (pines and eucalyptus) on the property and around the structures. As discussed in 8. Description of Project, Fire Service and Safety, and On-Site roads, above, the project would include the following fire safety measures:

1. Complete an engineering study and design for on-site water supply and delivery for fire and drinking water, to determine if the existing tanks can be used, and/or any improvements or replacement needed.
2. Install fire hydrants near the USGS Research Center, in the central agricultural area, and near the proposed Nature Center.
3. Install water lines meeting fire flow standards from the existing water tank and/or the unused second tank, connecting to the above fire hydrants.
4. Remove flammable brush and shrubs from within 40 feet of existing and proposed structures.
5. Design and implement a tree trimming and removal program, incorporating both the safety benefits of clearance to meet California Department of Forestry and Fire Protection (CDF) standards and the aesthetic and historic value of the trees.
6. Apply to the Vallejo Fire Department for an exception to standards to allow a one lane driveway with turnouts at regular intervals, and to allow portions of the on-site circulation system to be base rock surfaced (rather than asphalt).
7. If allowed by the Vallejo Fire Department, construct driveway turnouts at regular intervals (e.g., 400 feet on center).
8. If a one-lane driveway is not allowed by the Vallejo Fire Department, widen the existing driveway and main access road up to the Main House to 20 feet, to facilitate public and emergency vehicle access.

As discussed in Item VII.h, above, these fire safety measures would reduce the impact of wildland fires to a **less than significant** level. As a consequence, it is anticipated that there would be no substantial change in the number and type of fire protection and emergency medical service calls due to the proposed project, and no new or altered fire protection facilities

Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
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would be required. The impact of the proposed project on fire protection would be ***less than significant***.

b) Police protection?

<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
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Explanation: Police protection is provided to the site by the Vallejo Police Department. The proposed project would introduce the USGS Western Ecological Research Center and relatively low-intensity recreational uses to the site. It is anticipated that there would be no substantial change in the number and type of police protection calls due to the uses of the proposed project, and no new or altered police protection facilities would be required. The impact of the proposed project on police protection would be ***less than significant***.

c) Schools?

<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
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Explanation: A caretaker may reside at the site and could potentially have up to several school-age children. Several additional students, distributed among different grade levels, would not be substantial in relation to existing enrollments at nearby public schools, and the impact on schools would be ***less than significant***.

d) Parks?

<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
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Explanation: The Greater Vallejo Recreation District (GVRD) is a special service district that began operations in 1945 to serve the community of Vallejo with recreation programs, parks, open space, and facilities. GVRD operates four community parks and 19 neighborhood parks located throughout the city; providing park and recreation services to over 121,000 people. The McIntyre Ranch site was purchased in 1986 by GVRD using park dedication funds. Current use of the property is at a minimum, with very limited access opportunity for the average resident of the District. The proposed McIntyre Ranch Master Plan project, which would provide an outdoor education center, a demonstration farm and equestrian center, a small retreat conference center, and a rustic picnic and camping facility for organized groups, would enhance the recreational opportunities available to Vallejo residents. This would be a beneficial impact on park services; there would be ***no adverse impact***.

e) Other public facilities?

<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
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Explanation: Neither the construction nor the operation of the proposed project would significantly affect government services other than those discussed in Items XIII.a through XIII.d, above.

Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
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XIV. RECREATION —

- a) Would the project increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated? ☐ ☐ ☒ ☐

Explanation: The project would enhance recreational opportunities at the site, and would increase usage at the McIntyre Ranch site above the current low levels; but would not substantially increase usage at other nearby parks and recreational facilities. Therefore, no substantial physical deterioration of existing offsite recreation facilities is anticipated. This impact would be ***less than significant***.

Impacts on the McIntyre Ranch site itself are discussed in Item XIV.b, below.

- b) Does the project include recreational facilities or require the construction or expansion of recreational facilities which might have an adverse physical effect on the environment? ☐ ☒ ☐ ☐

Explanation: The proposed project would provide an outdoor education center, a demonstration farm and equestrian center, a small retreat conference center, and a rustic picnic and camping facility for organized groups. Although construction and operation of the recreational facilities could have adverse physical impacts on the environment, as discussed in Items I through XVI of this Initial Study, implementation of Mitigation Measures III-1 through XVI-5 would reduce all potential impacts to a ***less than significant*** level.

XV. TRANSPORTATION/TRAFFIC — Would the project:

- a) Cause an increase in traffic which is substantial in relation to the existing traffic load and capacity of the street system (i.e., result in a substantial increase in either the number of vehicle trips, the volume-to-capacity ratio on roads, or congestion at intersections? ☐ ☒ ☐ ☐

Explanation: The following discussion is based on a review of the traffic information presented in the Master Plan, traffic counts, and report by an independent transportation consultant.⁴²

EXISTING ACCESS AND TRAFFIC VOLUMES

⁴² Parisi Associates Transportation Consulting, *McIntyre Ranch Master Plan Traffic Study*, March 30, 2009.

Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
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The project site is located within a rural area. Vehicle access to the site is via St. Johns Mine Road, a winding road that traverses approximately 1.25 miles between Columbus Parkway and the gate to the McIntyre Ranch. Six residences are located along the road. St. Johns Mine Road is two lanes between Columbus Parkway and the last residence before the ranch, at which point the road narrows to essentially a one-lane driveway to and through the McIntyre Ranch. The Solano County road classification most applicable to St. Johns Mine Road is a local road with capacity of 250 vehicles per day.

The existing residences on St. Johns Mine Road generate an estimated 60 vehicle trips per day and the existing uses at McIntyre Ranch historically generated approximately 40 to 50 trips per day, for a total of up to 110 trips per day on St. Johns Mine Road. Thus, historical traffic volumes are slightly less than 50 percent of the carrying capacity of St. Johns Mine Road.

All day traffic counts were taken on St. Johns Mine Road near Columbus Parkway on Friday, March 6 and Saturday, March 7, 2009, when the weather was good and attendance for the activities at the ranch was typical. Fridays and Saturdays have the highest number of vehicles going to and from McIntyre Ranch. The traffic counts were 112 vehicles on Friday and 124 vehicles on Saturday. These indicate that existing activities generate similar traffic volumes as the historical activities on at the ranch.

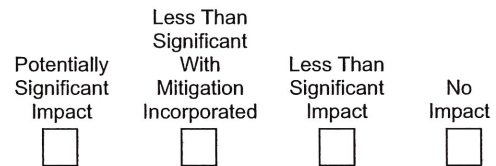
CONSTRUCTION TRAFFIC IMPACTS

Project construction would temporarily generate vehicle traffic transporting workers, materials, and supplies during the construction period. Construction workers' vehicle trips would be concentrated during the a.m. and p.m. peak periods, but the number of vehicles would be relatively small. Trucks delivering materials and supplies would be distributed throughout the day. For these reasons, and because of the temporary nature of the impact and the relatively light levels of traffic on nearby streets, the impact of construction workers' vehicles and construction-related trucks would be ***less than significant***.

OPERATION TRAFFIC IMPACTS

The proposed project would include four primary traffic-generating activities: an equestrian program, a Nature/Conference Center, a USGS Western Ecological Research Center, and an overnight environmental youth camp.

The equestrian program, with 12 horses on site, includes lessons and occasional "Ranch Day" opportunities for the public to visit. Group lessons, which are scheduled four or five days a week, have an instructor and a maximum of six adult and/or youth students. The Friday afternoon lesson, from 4:00 PM to 6:00 PM, is comprised of only youths and has the highest potential trip generation of any of the classes. If none of the parents carpool or stay for the lesson, this one lesson could generate up to 26 vehicle trips. The other primary equestrian activity is the family therapy sessions which usually occur on Monday afternoon and most of Wednesday. Each session lasts about an hour. These sessions produce low trip generation rates because each family generally carpools to the site. Based on these activities and the traffic counts discussed in Existing Access and Traffic Volumes, above, the transportation report assumed that 56 vehicle trips are associated with the equestrian program.



A variety of potential activities could occur at the Nature/Conference Center. As shown in the Master Plan⁴³, these activities would generate an estimated 14 vehicle trips per day, although trip generation on individual days would depend on the activities occurring that day.

The USGS facility could employ up to 21 people and house up to six interns in the summer, and a few government vehicles and boats would be located on site to be used in research projects. It is assumed that 60 vehicle trips per day are associated with the research facility, although trip generation could be lower if the facility employs fewer full-time employees and/or some of the employees reside in the proposed intern housing on site.

The fourth proposed activity on the site is an overnight environmental youth camp. Based on similar camps, the Master Plan estimated that the site could accommodate about 40 youth campers and 10 staff people. For security reasons, the equestrian program and other activities at the Nature/Conference Center would not be permitted to coincide with camping activities. Activities at the overnight youth camp and the USGS facility could occur concurrently because they are located at opposite ends of the property. Because the campers and staff would stay up to a week at a time, the average daily traffic would be less than the vehicle trips generated by the combined programs for the equestrian activities and the Nature/Conference Center.

As noted in Existing Access and Traffic Volumes, above, St. Johns Mine Road has a capacity of 250 vehicles per day. The existing six residences generate an average of approximately 60 trips per day, which leaves capacity for 190 vehicle trips for activities at McIntyre Ranch. The equestrian program would generate approximately 56 vehicle trips per day, and the USGS facility would generate approximately 60 vehicle trips per day, accounting for 116 of the 190 trips. The remaining 74 trips could be assigned to the various activities at the Nature/Conference Center and overnight environmental youth camp. As noted above, the average trip rate for the Nature/Conference Center is estimated to be approximately 14 trips per day. In addition to the 14 Nature/Conference Center trips, the Master Plan estimates that approximately 18 trips would be generated by the caretaker residence, staff and volunteers.⁴⁴ The combined 32 trips are still less than half the remaining 74 trips available within St. Johns Mine Road's design capacity. Since GVRD's intent is to schedule and manage project activities so as to limit the number of daily trips, it would be feasible to limit daily traffic volumes to an acceptable level. Nevertheless, the impact of operational traffic generation by the four proposed activities of the proposed project (equestrian program, a Nature/Conference Center, USGS facility, and overnight environmental youth camp) is a **potentially significant** impact that would be reduced to a **less-than-significant** level by implementation of the following mitigation measure.

Mitigation Measure XV-1: *The project sponsor (GVRD) shall develop and maintain a matrix of scheduled activities at McIntyre Ranch to ensure that a cumulative trip rate of 190 vehicle trips per day is not exceeded. Records of actual trips shall be maintained as project activities are implemented. The scheduling matrix shall be regularly reviewed, and updated at least annually with records of actual trips, to maintain its effectiveness as a means of managing trips to the McIntyre Ranch.*

⁴³ LandPeople, *McIntyre Ranch Master Plan*, Draft December 22, 2008, Tables 3.1 and 3.2, pages 33 and 37.

⁴⁴ LandPeople, *McIntyre Ranch Master Plan*, Draft December 22, 2008, page 38.

Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
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- b) Exceed, either individually or cumulatively, a level of service standard established by the county congestion management agency for designated roads or highways? ☐ ☒ ☐ ☐

Explanation: See Item XV.a, above.

- c) Result in a change in air traffic patterns, including either an increase in traffic levels or a change in location that results in substantial safety risks? ☐ ☐ ☐ ☒

Explanation: The proposed project would not affect air traffic patterns. There would be **no impact**.

- d) Substantially increase hazards due to a design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)? ☐ ☒ ☐ ☐

Explanation: As mentioned in Item XV.a, Existing Access and Traffic Volumes, above, St. Johns Mine Road is two lanes in width between Columbus Parkway and the last residence before the ranch, at which point the road narrows to essentially a one-lane driveway to and through the McIntyre Ranch.

As described in 8. Description of Project, St. Johns Mine Road Improvements, above, the Master Plan includes the following improvements to St. Johns Mine Road:

1. Trim vegetation and grade an embankment back slightly for sight distance.
2. Stripe or re-stripe the road to add white stripes on each side and a yellow centerline.
3. Re-pave and stripe the driveway access to the Ranch across the private property north of the project site.
4. Improve a base rock-surfaced carpool parking area approximately 20 feet by 120 feet on the south side of the road outside the first cattle guard near the intersection of St. Johns Mine Road and Columbus Parkway.

In addition to the St. Johns Mine Road improvements listed above, the transportation study made the following additional recommendations:

- For improvement No. 2 (Stripe or re-stripe the road to add white stripes on each side and a yellow centerline), a yellow centerline should be added in locations where the roadway width is a minimum of twenty-feet. Dirt and vegetation encroaching on the roadway should be cleared to the edge of the asphalt. If white edge lines are installed, the roadway should be maintained clear of dirt and vegetation so that the edge lines are visible.

Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

- For improvement No. 3 (Re-pave and stripe the driveway access to the Ranch across the private property north of the project site), a yellow centerline should only be installed if the roadway width is a minimum of twenty feet.
- For improvement No. 4 (Improve a base rock-surfaced carpool parking area), the area should be signed "Permit Parking for McIntyre Ranch Only – all other vehicles will be towed."
- 25 MPH pavement markings should be installed between the two cattle gates.
- Install a sign "No Thru Traffic to Hiddenbrooke". (Some online maps indicate that Hiddenbrooke can be reached via St. Johns Mine Road, even though there is no public access.)

As described in 8. Description of Project, On-Site Roads, above, the Master Plan includes the following improvements to on-site roads:

1. Apply to the Vallejo Fire Department for an exception to standards to allow a one lane driveway with turnouts at regular intervals, and to allow portions of the on-site circulation system to be base rock surfaced (rather than asphalt).
2. If allowed by the Vallejo Fire Department, construct driveway turnouts at regular intervals (e.g., 400 feet on center).
3. If a one-lane driveway is not allowed by the Vallejo Fire Department, widen the existing driveway and main access road up to the Main House to 20 feet, to facilitate public and emergency vehicle access.
4. Re-seal the existing on-site road system, including localized pothole repairs, following completion of other major construction.

In addition to the on-site road improvements listed above, the transportation study made the following additional recommendation:

- Install 15 MPH signs and pavement markings.

The impact of the proposed project on transportation safety is a **potentially significant** impact that would be reduced to a **less-than-significant** level by implementation of the following mitigation measure.

Mitigation Measure XV-2: *The project sponsor (GVRD) shall implement the following improvements to St. Johns Mine Road and onsite roads:*

- *On St. Johns Mine Road, a yellow centerline shall be added in locations where the roadway width is a minimum of twenty-feet. Dirt and vegetation encroaching on the roadway shall be cleared to the edge of the asphalt. If white edge lines are installed, the roadway shall be maintained clear of dirt and vegetation so that the edge lines are visible.*

Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

- *At the proposed base rock-surfaced carpool parking area feet on the south side of the road outside the first cattle guard near the intersection of St. Johns Mine Road and Columbus Parkway, install a sign "Permit Parking for McIntyre Ranch Only – all other vehicles will be towed."*
- *Install 25 MPH pavement markings on St. Johns Mine Road between the two cattle gates.*
- *Install a sign stating "No Thru Traffic to Hiddenbrooke" on St. Johns Mine Road.*
- *Install 15 MPH signs and pavement markings on onsite roads.*

e) Result in inadequate emergency access?

<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
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Explanation: As discussed in Items XV.a and XV.d, above, the proposed project, with mitigation, would not substantially affect local intersection operations, roadway operations, or transportation safety. Therefore, impacts on emergency access would be **less than significant**.

f) Result in inadequate parking capacity?

<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
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Explanation: The proposed project would construct 22 parking spaces at the USGS facility; a parking lot at the central farm and equestrian area with spaces for 50 regular vehicles, or approximately eight regular vehicles plus approximately sixteen truck-horse trailer rigs; and 24 parking spaces near the Nature/Activity Center. These parking facilities were sized and located to serve the anticipated levels of use that would be generated by the project. Therefore, the impact on parking would be **less than significant**.

g) Conflict with adopted policies, plans, or programs supporting alternative transportation (e.g., bus turnouts, bicycle racks)?

<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
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Explanation: The proposed project would not conflict with bus or bicycle transportation, or with any policies, plans, or programs supporting alternative transportation. There would be **no impact**.

XVI. UTILITIES AND SERVICE SYSTEMS —

Would the project:

Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

- a) Exceed wastewater treatment requirements of the applicable Regional Water Quality Control Board? ☐ ☐ ☒ ☐

Explanation: Wastewater treatment for the project site would be provided by a new septic system, as discussed in 8. Description of Project, Sewage System, above. Wastewater generated by McIntyre Ranch users, resident(s) of the caretaker's residence, and the USGS Western Ecological research Center, would consist of typical domestic wastewater that is not anticipated to exceed the RWQCB wastewater treatment requirements. The impact on wastewater treatment requirements would be **less than significant**.

- b) Require or result in the construction of new water or wastewater treatment facilities or expansion of existing facilities, the construction of which could cause significant environmental effects? ☐ ☒ ☐ ☐

Explanation: As discussed in 8. Description of Project, Water Supply and System, and Item VIII.b, above, water service to the project site would be provided either by the existing well on the site, or by a connection to the City of Vallejo water system. The project includes an engineering study and design for on-site water supply and delivery for fire and drinking water, to determine, among other factors, the potential impact on and sustainability of the ground water supply. In the event that onsite sources do not provide an adequate water supply, water would be supplied to the project via a connection to City water. Therefore, onsite water would only be used if it did not adversely affect the local aquifer.

If connection to City water is required, a new meter and water service lateral from the existing water main in St. Johns Mine Road would be installed along the existing access road to the project site. Because the pressure in the line would only be adequate to serve areas up to 460 feet in elevation, and the proposed facilities at McIntyre Ranch are at elevations from 500 to 600 feet, the City water would have to be pumped to the existing tank to provide adequate pressure.⁴⁵ The water demand of the project would not be substantial in relation to the supplies available to the City, and no new or expanded water supply facilities would be required other than extension of a lateral from St. Johns Mine Road to the project site. The project is below the minimum size for which a Water Supply Assessment (WSA), as defined in Senate Bill 610 (Chapter 643, Statutes of 2001), is required.

As described in 8. Description of Project, above, the project would include six or more gardens or pastures; a greenhouse; a new low-flow automatic irrigation system and new native, drought-tolerant planting around the Nature/Conference Center; and clearing and replacement of the non-native pines in the Pine Grove Area with native oaks and potentially bays. The drought-tolerant native plants would not require irrigation after they become established, and in any case the low-flow automatic irrigation system at the Nature/Conference Center would not constitute a significant use of water. However, the additional water use of the project, including potential gardens and irrigated pasture, is a **potentially significant** impact on the local aquifer or city water supplies, which would be reduced to a **less than significant** level by implementation of the following mitigation measure:

⁴⁵ LandPeople, *McIntyre Ranch Master Plan*, Draft December 22, 2008, pages 51-52.

Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Mitigation Measure XVI-1: The project sponsor (GVRD) shall implement the following:

- Prepare an engineering study and design for on-site water supply and delivery for fire and drinking water, as described in 3.8 Utilities, Infrastructure and Services, B. Water Supply and System of the McIntyre Ranch Master Plan. The engineering study and design shall determine, but not be limited to, the potential impact of the proposed project, including potential pasture irrigation, on the ground water supply, and the sustainability of the groundwater supply incorporating the effect of drought years;
- All gardens shall employ water-efficient irrigation systems; and
- Irrigation of pastures shall be limited to a level that will not adversely affect the local aquifer, as determined by the engineering study and design for on-site water supply described in 3.8 Utilities, Infrastructure and Services, B. Water Supply and System of the McIntyre Ranch Master Plan.

As discussed in 8. Description of Project, Sewage System, above, wastewater treatment for the project site would be provided by a new septic system. No other construction or expansion of public collection or treatment facilities would be required. The potential environmental impacts of the onsite septic system are evaluated in this IS/MND as part of the proposed project.

The proposed project would have a **less than significant** impact on wastewater treatment facilities.

- c) Require or result in the construction of new stormwater drainage facilities or expansion of existing facilities, the construction of which could cause significant environmental effects? ☐ ☐ ☒ ☐

Explanation: As discussed in Items VIII.c and VIII.d, above, the proposed project would not substantially or adversely alter the drainage pattern in the project area, and therefore would not require new or expanded drainage facilities. The project would have a **less than significant** impact.

- d) Have sufficient water supplies available to serve the project from existing entitlements and resources, or are new or expanded entitlements needed? ☐ ☒ ☐ ☐

Explanation: See Item XVI.b, above.

- e) Result in a determination by the wastewater treatment provider which serves or may serve the ☐ ☐ ☒ ☐

Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

project that it has adequate capacity to serve the project's projected demand in addition to the provider's existing commitments?

Explanation: See Items XVI.a and XVI.b, above.

- f) Be served by a landfill with sufficient permitted capacity to accommodate the project's solid waste disposal needs? ☐ ☒ ☐ ☐

Explanation: Solid waste from Vallejo is hauled to the Devlin Road Transfer Station, located at 889 Devlin Road in American Canyon, where it is processed and then hauled to the Keller Canyon Landfill near Pittsburg in Contra Costa County. The Keller Canyon Landfill currently has an estimated 21 years of remaining capacity (closure date 2030).⁴⁶ Although solid waste generated by the construction and operation of the proposed project would be small in comparison to the total quantities disposed, landfill disposal capacity is a diminishing resource that is difficult and expensive to expand or develop at new sites, and project-generated waste would contribute to the exhaustion of the capacity of the Keller Canyon Landfill. Furthermore, the City of Vallejo, as are all jurisdictions in California, is legally obligated to divert 50 percent of the waste stream from disposal. This would be a **potentially significant** impact on landfill capacity, which would be reduced to a **less-than-significant** level by implementation of the following mitigation measures.

Mitigation Measure XVI-2: Prior to the initiation of project construction, the project sponsor (GVRD) shall prepare a recycling plan to cover all phases of project construction. The recycling plan shall identify a strategy for handling all waste materials that will be generated during construction and demolition, in order to divert a minimum of 50 percent by weight. The project sponsor (GVRD) shall provide summary report of the diversion to the City.

Mitigation Measure XVI-3: The trash receptacles provided with the project's picnic tables shall include separate containers for collection of recyclable materials such as glass, paper, plastic, and metal cans, and shall provide for the regular collection of these materials from the project site throughout the life of the project.

- g) Comply with federal, state, and local statutes and regulations related to solid waste? ☐ ☒ ☐ ☐

Explanation: The proposed project would be required to comply with all laws and regulations pertaining to solid waste. The project's effect on landfill capacity is a **potentially significant** impact, which would be reduced to a **less-than-significant** level by implementation of the following mitigation measures.

⁴⁶ California Integrated Waste Management Board, online Solid Waste Information System (SWIS), <http://www.ciwmb.ca.gov/SWIS/07-AA-0032/Detail/>, accessed 11 May 2009.

Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Mitigation Measure XVI-4: Implement Mitigation Measure XVI-2.

Mitigation Measure XVI-5: Implement Mitigation Measure XVI-3.

XVII. MANDATORY FINDINGS OF SIGNIFICANCE —

- a) Does the project have the potential to degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, reduce the number or restrict the range of a rare or endangered plant or animal or eliminate important examples of the major periods of California history or prehistory? ☐ ☒ ☐ ☐

Explanation: As discussed in Items III, IV, V, VI, VII, VIII, XI, and XVI, construction and/or operation of the proposed project could have adverse effects in the areas of air quality, biological resources, cultural resources, geology and soils, hazards and hazardous materials, hydrology and water quality, noise, and utilities and service systems. Mitigation Measures identified in Items III, IV, V, VI, VII, VIII, XI, and XVI would reduce all these potential impacts to less-than-significant levels.

- b) Does the project have impacts that are individually limited but cumulatively considerable? ("Cumulatively considerable" means that the incremental effects of a project are considerable when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of probable future projects.) ☐ ☐ ☒ ☐

Explanation: Neither construction nor operation of the proposed project would have cumulatively considerable impacts.

- c) Does the project have environmental effects that will cause substantial adverse effects on human beings, either directly or indirectly? ☐ ☒ ☐ ☐

Explanation: Potential impacts on people are identified in this document in the discussions on air quality, geology and soils, hazards and hazardous materials, hydrology and water quality, noise, and transportation/traffic (Items III, VI, VII, VIII, XI, and XV, respectively). Implementation Measures contained in this Initial Study and Mitigated Negative Declaration would reduce all these potential impacts to less-than-significant levels.

REPORT PREPARATION

This Initial Study and Mitigated Negative Declaration was prepared by Michael Kent & Associates, with biological analysis by the Environmental Collaborative, cultural resources analysis by Holman & Associates, historical resources analysis by Meg Scantlebury, and Traffic Analysis by Parisi Associates.

SUMMARY OF MITIGATION MEASURES

The following mitigation measures have been identified in this document to reduce potentially significant impacts to less-than-significant levels.

Air Quality:

Mitigation Measure III-1: *The project sponsor (GVRD) shall reduce the severity of project construction-period dust impacts by requiring implementation of the following dust control measures by contractors during construction:*

- a) Watering shall be used twice daily to control dust generation at active construction areas, including excavation, grading, and site preparation activities.*
- b) Cover all trucks and earthmoving equipment hauling debris, soils, sand and other loose materials, or require all trucks and earthmoving equipment to maintain at least two feet of freeboard.*
- c) Use dust-proof chutes to load debris into trucks whenever feasible.*
- d) Pave, apply water three times daily, or apply (non-toxic) soil stabilizers on all unpaved access roads, parking areas, and staging areas at construction sites.*
- e) Sweep daily (with water sweepers) all paved access roads, including affected public roads, parking areas, and staging areas at construction sites.*
- f) Sweep streets daily (with water sweepers) if visible soil material is carried onto adjacent public streets.*
- g) Require the project contractor(s) to maintain and operate construction equipment so as to minimize exhaust emissions of particulates and other pollutants, by such means as prohibiting idling motors when equipment is not in use or when trucks are waiting in queues, and implementing specific maintenance programs to reduce emissions for equipment that would be in frequent use for much of the construction period.*
- h) Hydroseed or apply (non-toxic) soil stabilizers to inactive construction areas (previously graded areas inactive for ten days or more).*
- i) Enclose, cover, water twice daily, or apply (non-toxic) soil binders to all stockpiles of debris, soil, sand, or other materials that can be blown by the wind.*
- j) Limit traffic on unpaved roads to 15 mph.*
- k) Install sandbags or other erosion control measures to prevent silt runoff to public roadways.*
- l) Replant vegetation in disturbed areas as quickly as possible.*

Biological Resources:

Mitigation Measure IV-1: Any active raptor nests or other bird nests protected under the Migratory Bird Treaty Act in the vicinity of proposed grading, building demolition, and vegetation removal shall be avoided until young birds are able to leave the nest (i.e., fledged) and forage on their own. Avoidance may be accomplished either by scheduling initial grading, building demolition, and vegetation removal during the non-nesting period (i.e., September through February), or if this is not feasible, by conducting a pre-construction survey for bird nests. Provisions of the pre-construction survey and nest avoidance, if necessary, shall include the following:

- If grading and/or vegetation or structure removal is scheduled during the active nesting period (March through August), a qualified wildlife biologist shall conduct a pre-construction survey of both tree nesting and ground nesting raptors no more than 14 days prior to initiation of these activities to provide confirmation on presence or absence of active nests in the vicinity. This shall include both a daytime visual survey for raptors and other diurnal bird species, and a nighttime survey for nesting owls. Trees that have been surveyed and do not contain any active nests may be removed at any time, as long as they are not within the nest-setback zone of an active nest, in which case they shall remain until the nest tree is removed. An active nest would be indicated by one or more of the following:

1. Incubation behavior of adults (e.g., regular periods of "disappearance" into the same location followed by short, secretive flights to forage).
2. Extreme distress and alarm calls when in close vicinity of the nest tree.
3. Observation of food being carried on the beak or talons to the nest.

- If active bird nests are encountered, species-specific measures shall be prepared by a qualified biologist in consultation with the California Department of Fish and Game (CDFG) and implemented to prevent abandonment of the active nest. At a minimum, grading and vegetation/building removal near the nest shall be deferred until the young birds have fledged. A nest-setback zone, based on site conditions and proximity of the nest to existing and proposed development, shall be established within which all construction-related disturbance shall be prohibited. The perimeter of the nest-setback zone shall be fenced or adequately demarcated, and construction personnel restricted from the area.

- If permanent avoidance of the nest is not feasible, impacts shall be minimized by prohibiting disturbance within the nest-setback zone until a qualified biologist verifies that the birds have either (a) not begun egg-laying and incubation, or (b) that the juveniles from the nest are foraging independently and capable of independent survival at an earlier date. A survey report by the qualified biologist verifying that the young have fledged shall be submitted to the project sponsor (GVRD) prior to initiation of grading and/or vegetation/building removal in the nest-setback zone.

- In addition, pre-construction surveys shall be conducted for burrowing owl within 30 days of project-related ground-disturbing activities throughout the year to determine whether any nesting owls are present and to provide for their protection during the active breeding season or passive relocation during the non-breeding

season if nests are encountered. The surveys shall be conducted by a qualified wildlife biologist and shall comply with the latest version of the Burrowing Owl Protocol and Mitigation Guidelines.

- Caretaker(s) and all other tenants at the McIntyre Ranch site shall be prohibited from keeping domestic cats.

Mitigation Measure IV-2: Prior to construction, the project sponsor (GVRD) shall develop and implement a management and interpretive program identifying the likelihood for occurrence of nesting raptors and other bird species considered to be a Species of Special Concern by the CDFG, roosting bats, Valley Elderberry Longhorn Beetle (VELB), callippe silverspot butterfly, and California red-legged frog. The interpretive program shall identify their protected status, describe their typical habitat characteristics and the sensitivity of the remaining natural habitat on the site and surrounding open space lands, explain the importance of avoiding sensitive habitat and individuals during critical dispersal or breeding/nesting periods, and require any future users of the site adhere to appropriate access restrictions where they could significantly disturb essential nesting, breeding, and foraging opportunities for special-status wildlife species.

Mitigation Measure IV-3: A Bat Mitigation Program shall be prepared and implemented by the project sponsor (GVRD) to avoid potential impacts to any roosting bats that may be present on the site. The Bat Mitigation Program shall be prepared by a qualified biologist and include maternity roost surveys of all structures on the site for both special-status and common bat species. The bat surveys shall be conducted prior to any building demolition or major remodeling, and shall include detailed surveys during the pupping period to confirm whether any maternity roosts are present on the site (preferably in June or July). The results of the maternity roost surveys shall be used in refining the following additional provisions of the Bat Mitigation Program.

- If bats are determined to be roosting in a particular structure, building demolition or major remodeling shall occur between February 15 to April 15 or from August 15 to October 15 to minimize the likelihood of disturbance to roosting bats during the winter roosting period when individuals are less active and more difficult to detect, and the critical pupping period (April 16 to August 14) when young cannot disperse.
- In addition to the maternity roost surveys conducted as part of the Bat Mitigation Program, a pre-construction survey for roosting bats shall be conducted by a qualified biologist within 14 days prior to any building demolition to confirm that no new roosts have become established on the site. To determine presence or absence of bats, the survey shall be conducted by a biologist with experience surveying for bats, focusing on the attic and less accessible areas of structures to be demolished. If no special-status bats are identified during the pre-construction survey(s), then no impacts to these bats would be expected to occur from demolition.
- If, however, any special-status bats are identified in any of the structure(s) proposed for removal, reproductive status shall be determined, and appropriate measures developed to allow for passive relocation through building exclusions and other methods. Additional recommendations may be made by the qualified

bat specialist following the pre-demolition survey, such as opening the roof of the structures, monitoring of demolition, and other measures to avoid take of individual bats.

- Restrictions on timing of demolition and conduct of the pre-construction survey(s) would prevent direct take of individuals or destruction of any maternity roost locations in active use. No immediate replacement of roosting habitat is currently recommended, unless warranted based on the results of the maternity roost survey recommended above. If a maternity roost or occupied roost is detected during the pre-construction survey(s), California Department of Fish and Game (CDFG) shall be notified and informally consulted to determine if protection measures are adequate and if replacement for loss of occupied habitat is required.

Mitigation Measure IV-4: The project sponsor (GVRD) shall develop and implement a detailed vegetation maintenance and management plan including the following features:

- a) Control of invasive species on the site including blue gum eucalyptus, acacia, elms, giant reed, pampas grass, sweet fennel, periwinkle, and cotoneaster, including those identified on Figures 2, 3, 4 and 5. These plants shall be removed as soon as possible and managed to enhance natural habitats on the site and to keep these invasive species from spreading into nearby habitat known to support callippe silverspot butterfly.
- b) Minimization of disturbance to the remaining locations of native vegetative cover, including the scattered oaks, the stands of native grasslands along the southern edge of the site, and the natural drainages.
- c) Procedures to protect existing native trees larger than 9 inches DBH on the site, as stipulated in Mitigation Measure IV-14.
- d) For removal of native trees larger than 9 inches DBH, compensatory replacement as stipulated in Mitigation Measure IV-15.
- e) Protection of all elderberry shrubs on the site, as identified in Figures 2, 3, 4, and 5.
- f) Planting of native species to enhance areas of remaining native vegetative cover on the site, including the scattered oaks, the stands of native grasslands along the southern edge of the site, and the natural drainages.
- i) Coordination with the vegetation management procedures for fire safety set forth in the McIntyre Ranch Master Plan, including removal of flammable brush and shrubs from within 40 feet of existing and proposed structures, and the trimming and removal program.
- j) Implementation of the management and interpretive program called for in Mitigation Measure IV-2, which includes appropriate access restrictions away from essential habitat for callippe silverspot butterfly.

Mitigation Measure IV-5: All use of herbicides in project construction and operation shall comply with the following restrictions and procedures:

- a) Chemical treatment of invasive species shall be carefully controlled according to the California Department of Pesticide Regulations and the Solano County Agricultural Commissioner using Best Management Practices to prevent exposure to facility users, employees, and tenants; avoid sensitive habitat; and utilize the most effective and appropriate products available at the time field work is performed.

- b) *Trained professionals, with appropriate certification and licensing as a Pest Control Operator for use of non-restricted materials registered for use in Solano County, shall be employed to perform all herbicide applications. Best Management Practices shall be used during all herbicide applications, considering latest standards for products used for target species. Factors to be considered during herbicide application shall include wind and weather conditions, timing of initial and subsequent treatments, specific product and concentrations, and protection of habitat and native cover to be preserved or established on the site.*
- c) *The public shall be notified of treatment areas prior to herbicide application through use of temporary signage posted no less than 24 hours in advance of application, identifying the product to be used, explaining health risks, and including a contact person and phone number to answer any questions. Signs shall be posted at the entrance to the McIntyre Ranch and the perimeter of any treatment area at 50-foot intervals or as necessary to visibly delineate the boundaries of the treatment area.*

Mitigation Measure IV-6: *Implement Mitigation Measures IV-2, IV-4 and IV-5.*

- **Mitigation Measure IV-7:** *A Mitigation Program for VELB shall be prepared to provide for the protection, replacement, and management of any habitat shown to be adversely affected by proposed development. Proposed grading and development shall be designed to avoid removal or adverse impacts on elderberry shrubs to provide compliance with the U.S. Fish and Wildlife Service Conservation Guidelines which recommend that a 100-foot buffer be established and maintained around elderberry plants containing stems measuring 1.0 inch or greater in diameter at ground level. Existing roadways may remain within this 100-foot buffer as long as there is no further incursion closer to the elderberry plants identified in Figures 2, 3, 4, and 5. Removal of invasive vegetation, installation of native habitat enhancement plantings, and other management activities shall be designed to avoid adverse impacts on the potential habitat the elderberry shrubs provide for VELB.*

Mitigation Measure IV-8: *Implement Mitigation Measures IV-2, IV-4 and IV-5, which would provide for appropriate habitat management, construction worker and visitor training, and interpretive programs necessary to protect important habitat areas and any individual California red-legged frogs in the remote instance that they disperse onto the site.*

Mitigation Measure IV-9: *The project sponsor (GVRD) shall informally consult with the U.S. Fish and Wildlife Service (USFWS) to determine whether the site is considered to be potential habitat for California red-legged frog (CRF), given that the area is contained within one of the Critical Habitat Units for this federally-threatened species. If the USFWS considers the site to be potential habitat for CRF, a Mitigation Program shall be prepared by a qualified wildlife biologist to minimize and mitigate potential impacts on this species. The Mitigation Program shall be prepared in consultation with USFWS, California Department of Fish and Game (CDFG), and the U.S. Army Corps of Engineers (Corps) and shall provide for the protection, replacement, and management of habitat affected by the proposed project. If the USFWS concurs that the site is not potentially occupied habitat, then no additional mitigation for this species would be required unless preconstruction avoidance measures are still required by the USFWS.*

At minimum, the preconstruction provisions of the Mitigation Program shall include the following components and meet the following standards:

- Preconstruction surveys shall be conducted by a Service-approved biologist prior to any grading or major vegetation clearance to ensure that no individual CRF are lost during construction. The Mitigation Program shall: 1) describe in detail the survey approach and methodology, and 2) specify that grading or vegetation clearance may not occur in any area where individual CRF are located until such time as the individual has either moved out of the disturbance zone or has been physically relocated by a Service-approved biologist legally authorized to handle the species.*
- Monitor all vegetation clearing and grading activities within potential habitat for CRF by a Service-approved biologist. The Mitigation Program shall specify the duties of the Service-approved biologist.*
- Train all construction personnel in CRF identification, habitat description, legal protective status, construction restrictions, and procedures to avoid unnecessary disturbance to potential habitat or incidental take of these species. The details of the training procedures shall be included as a component of the Mitigation Program.*
- Install temporary exclusionary fencing prior to grading or major vegetation clearance where appropriate to keep CRF out of construction areas. The Mitigation Program shall identify where such fencing is to be installed and provide procedures for fence installation, monitoring, and maintenance. The Mitigation Program shall require that the exclusionary fencing be installed under the direct supervision of a Service-approved biologist and shall be inspected and maintained during the course of construction activities on the site.*
- Define methods to minimize the potential for harassment or take of CRF and other listed and non-listed species as a result of increased human activity on the site associated with the project. This shall include an educational program for future residents and visitors, exclusionary fencing where necessary to protect any habitat considered essential to CRF and other listed species, and interpretive signage at access points into sensitive habitat areas.*
- Caretaker(s) and all other tenants at the McIntyre Ranch site shall be prohibited from keeping domestic cats.*

Mitigation Measure IV-10: *The project sponsor (GVRD) shall ensure that:*

- Lighting shall be carefully designed and controlled to prevent unnecessary illumination of natural areas on the site. Lighting shall be restricted to the minimum level necessary to illuminate pathways, parking areas, and other outdoor areas. Lighting shall generally be kept low to the ground, directed downward, and shielded to prevent illumination into adjacent natural areas;*
- All garbage, recycling, and composting shall be kept in closed containers and latched or locked to prevent wildlife from using the waste as a food source;*

- *Future residents/occupants shall be prohibited from keeping cats and dogs on the site, and all pets visiting the site shall be controlled as required under Vallejo Municipal Code Section 7.24.010.*
- *Humans and pets shall be restricted outside sensitive habitat areas through installation of wildlife-friendly fencing and interpretive signage, except as required for maintenance and management activities.*

Mitigation Measure IV-11: *Prior to initiation of construction, the project sponsor (GVRD) shall retain a qualified wetland specialist to prepare a draft Wetland Delineation for the project site. The draft Wetland Delineation shall be prepared according to methodology used by the U.S. Army Corps of Engineers (Corps), and shall include an evaluation of the three ephemeral drainages to the west of the main house, and the larger drainage in the eastern portion of the site, as identified in Figures 4 and 5. The draft Wetland Delineation shall be verified by the U.S. Army Corps of Engineers (Corps). If the limits of jurisdictional waters (wetlands) on the project site cannot be completely avoided, all proposed modifications to regulated waters shall receive appropriate authorizations from regulatory agencies. Adequate mitigation shall be provided at a minimum 2:1 replacement ratio (wetlands removed to wetlands replaced), shall be designed to result in a net increase in acreage of waters on the site and improve the habitat functions and values through native enhancement plantings, and shall provide for a minimum of five years of maintenance and monitoring, with annual monitoring reports provided to the regulatory agencies during that period.*

Mitigation Measure IV-12: *Implement Mitigation Measure IV-5.*

Mitigation Measure IV-13: *As stipulated in Mitigation Measure VIII-1, the project sponsor (GVRD) shall develop and implement a Storm Water Pollution Prevention Plan (SWPPP) to control construction-related erosion and sedimentation and, as stipulated in Mitigation Measure VIII-2, the project sponsor (GVRD) shall develop and implement a Stormwater Control Plan to control operational runoff from the project site.*

Mitigation Measure IV-14: *To protect native trees on the site, the following mitigation measures shall be implemented:*

- *All oak trees with trunk diameter larger than nine inches diameter at breast height (DBH) on the project site shall be mapped and preserved to the maximum extent feasible, including the two oaks near the site of the USGS Western Ecological Research Center.*
- *No construction activities such as trenching or operation of earth-moving equipment that might cause damage to the root systems of existing native trees to be protected shall be allowed.*
- *During construction, temporary flagging or staking shall be placed around existing native trees to be protected within 50 feet of proposed project construction. The temporary flagging or staking shall be installed at a distance equal to one-half of the canopy radius measured outward from the edge of the dripline. No disturbance, including grading, placement of fill material, storage of*

equipment, etc. shall occur within the designated protective zone for the duration of the project.

Mitigation Measure IV-15: Where removal of any native tree larger than nine inches DBH is unavoidable, compensatory tree replacement shall occur at a 2:1 ratio (tree removed: tree replaced), consistent with Chapter 10.12 of the Vallejo Municipal Code.

- Replacement trees shall be at least fifteen gallons in size.
- Species selected for replacement plantings shall be resistant to Sudden Oak Death (SOD), caused by the pathogen *Phytophthora ramorum*. To the extent possible, the species of replacement trees shall correspond to the trees removed.
- Replacement trees shall be planted between November and January with nursery stock from local sources acclimated to conditions in Solano County. Replacement plantings shall be spaced adequately to grow without excessive competition for light, water or nutrients. Herbaceous material around the replacement plantings shall be cleared during the first three years as part of routine maintenance. The replacement trees shall be irrigated for three years and protected from browsing herbivores such as deer and cattle for the first three to five years using protective sleeves and fencing. Once the seedlings have reached a height of greater than seven feet, the browse protection shall be removed.
- Annual monitoring of the planted trees shall be conducted for five years from the time of planting. During this period, annual monitoring reports shall be completed and filed with the project sponsor (GVRD).

Cultural Resources:

Mitigation Measure V-1: Plans for all activities at the McIntyre Ranch project site which require building removal, grading and/or trenching, shall be reviewed by a qualified archaeologist. If recommended by the archaeologist based on the location and extent of ground disturbing activities, archaeological monitoring shall be conducted under a written Archaeological Monitoring Agreement. Such an Agreement shall provide for, at a minimum:

- a) Timely notification prior to any excavations;
- b) Monitoring during all earth-moving or soil disturbing activities, however minor, until and unless the monitor determines that no impacts to potentially significant archaeological materials will occur;
- c) Specific requirements that archaeological monitors be notified immediately if potentially significant archaeological resources are encountered anywhere in the absence of an onsite monitor;
- d) Authority of the onsite archaeological monitor to halt excavations if potentially significant archaeological materials or human remains are encountered;

- e) Time and space to record, photograph and map, recover, retrieve, and/or remove any archaeological materials and data during the construction process;
- f) Time and funding for laboratory cleaning, cataloging, analysis, and preparation for permanent curation of any and all recovered data and materials after onsite monitoring ends; and
- g) Time and funding for a Final Report of Findings, to incorporate data developed for this report as appropriate and data developed by monitoring and analysis; additional historical and/or archival research may also be warranted. In addition to reporting to the project sponsor (GVRD), copies of the Final Report must be submitted to the Northwest Information Center of the California Historical Resources Information System for inclusion in the permanent archives, and another copy shall accompany any curated archaeological materials and data. Archaeological data, reports, and recovered materials are and will remain the property of the property owners.

Archaeological identification, inventory, evaluation, research and mitigation under provisions of CEQA, if any, shall be completely reported in a comprehensive manner, incorporating all methods used and data gained, thorough current scientific analysis of all data, and interpretation of any archaeological resources within a regional archaeological framework. Qualified professional archaeologists shall complete the report to current professional standards, and the data shall be made available to other qualified researchers following completion of the Final Report. Appropriate specialized, focused scientific analytic techniques shall be applied (e.g., radiocarbon dating, obsidian sourcing and hydration, typological studies, geomorphological studies, faunal analysis, etc.). Obtaining, analyzing, interpreting, and reporting archaeological data from the project area would serve as mitigative compensation for any project-related impacts to resources.

Mitigation Measure V-2: The project sponsor (GVRD) and construction contractors shall be prepared to respond appropriately if heretofore undetected archaeological resources are encountered anywhere in the project area.

To set up and facilitate both the recommended monitoring and the response procedure required under CEQA, a pre-construction meeting shall be arranged involving responsible project personnel, both onsite and managerial supervisory construction personnel, and the archaeological monitors. The purpose of this meeting will be to familiarize all involved parties with the provisions of this plan. Construction contractors shall be prepared to halt and/or relocate work while finds are identified, recorded, evaluated, and if warranted, mitigative activities carried out. In virtually all reasonably foreseeable circumstances, the appropriate mitigation action will be recording and removal of archaeological objects and data from the project area.

Supervisory and construction personnel shall therefore be made aware of the possibility of encountering archaeological materials in this sensitive zone. The most common and recognizable evidence of prehistoric archaeological resources include faunal bone (deer, marine mammals, etc.), usually in a dark fine-grained soil (midden); stone flakes left from manufacturing stone tools, or the tools themselves (mortars, pestles, arrowheads and spear points); and human burials, often as dislocated bones. Historic materials

older than 45 years (bottles, artifacts, trash pits, structural remains, etc.) may also have scientific and cultural significance and should be more readily identified. If during the proposed construction project any such evidence is uncovered or encountered, all excavations within 10 meters/30 feet shall be halted long enough to call in the monitoring archaeologists to assess the situation and propose appropriate measures.

Mitigation Measure V-3: The project sponsor (GVRD) and contractors must be prepared to carry out the requirements of California State law with regards to the discovery of human remains during construction. In the event that any human remains are encountered during site disturbance, all ground-disturbing work shall cease immediately and the County coroner shall be notified immediately. If the coroner determines the remains to be Native American, the Native American Heritage Commission shall be contacted within 24 hours. A qualified archaeologist, in consultation with the Native American Heritage Commission, shall recommend subsequent measures for disposition of the remains.

Mitigation Measure V-4: If any paleontological resources are encountered during site grading or other construction activities, all ground disturbance shall be halted until the services of a qualified paleontologist can be retained to identify and evaluate the resource(s) and, if necessary, recommend mitigation measures to document and prevent any significant adverse effects on the resource(s).

Geology and Soils:

Mitigation Measure VI-1: All project improvements shall be designed in accordance with current earthquake resistance standards for the area as outlined in the California Building Code.

Mitigation Measure VI-2: The project sponsor (GVRD) shall retain a qualified geotechnical consultant to prepare a geotechnical study for all project structures, incorporating foundation design and engineering that is appropriate for local seismic conditions, expansive soils, and potential liquefaction.

Mitigation Measure VI-3: Implement Mitigation Measures VI-1 and VI-2.

Mitigation Measure VI-4: Implement Mitigation Measure VIII-1.

Mitigation Measure VI-5: Implement Mitigation Measure VIII-2.

Mitigation Measure VI-6: Prior to initiation of grading, the project sponsor (GVRD) shall obtain a grading permit from the City of Vallejo, and shall comply with all requirements of the grading permit.

Mitigation Measure VI-7: Implement Mitigation Measures VI-1 and VI-2.

Mitigation Measure VI-8: Implement Mitigation Measure VI-2.

Mitigation Measure VI-9: The project sponsor (GVRD) shall ensure that the project's septic system complies with all requirements of Chapter 6.4 Sewage Standards of the Solano County Code. If required by the Solano County Environmental Health Services Division to maintain the proper functioning of the disposal field in accordance with

Section 6.4-80(g) of the Solano County Code, paddock uses shall be excluded from the area above the disposal field(s).

Hazardous Materials:

Mitigation Measure VII-1: Implement Mitigation Measure VIII-1.

Mitigation Measure VII-2: Implement Mitigation Measure IV-5.

Mitigation Measure VII-3: The project sponsor (GVRD) shall retain a qualified consultant to perform a Phase I Environmental Site Assessment (ESA) for the site. The Phase I ESA shall include, but not be limited to, determination of the presence of an underground storage tank (UST) associated with the old glass bottle-type gasoline pump is located north of the barn, and lead contamination in soils.

If the Phase I ESA determines that there is or may be an underground storage tank or tanks on the site, the project sponsor (GVRD) shall comply with the recommendations of the Phase I ESA regarding additional investigation, such as a Phase II Environmental Site Assessment, and/or disposition of the underground storage tank(s).

If an underground storage tank or tanks are located on the site, the project sponsor (GVRD), in coordination with the Solano County Department of Environmental Management, shall determine an appropriate disposition for the UST(s) (removal or abandonment in place). If required by the Solano County Department of Environmental Management, the project sponsor (GVRD) also shall retain a qualified environmental professional to assess the presence and extent of soil and/or groundwater contamination related to the underground storage tank (UST), in conformance with state and local guidelines and regulations.

If sampling identifies surface and/or subsurface contamination, the area shall be remediated in accordance with the standards, regulations, and determinations of local, state, and federal regulatory agencies. All earth-disturbing activities conducted during remediation shall comply with Mitigation Measures V-1 (which requires monitoring by a qualified archaeologist), V-2, V-3, and V-4. The project sponsor (GVRD) shall coordinate with the Solano County Department of Environmental Management and any other applicable regulatory agencies to adopt contaminant-specific remediation target levels. The excavated soil shall be removed and disposed of at an approved disposal facility.

If required by the Solano County Department of Environmental Management, the project sponsor (GVRD) shall prepare and implement a site-specific health and safety plan to mitigate potential hazards to construction workers and the general public during remediation. The health and safety plan shall meet the requirements of federal, state, and local environmental and worker safety laws. Specific information to be provided in the plan shall include identification of contaminants, potential hazards, material handling procedures, dust suppression methods, personal protection clothing and devices, controlled access to the site, health and safety training requirements, monitoring equipment to be used during remediation to verify health and safety of the workers and the public, measures to protect public health and safety, and emergency response procedures.

All reports and plans prepared in accordance with this mitigation measure shall be provided to the Solano County Department of Environmental Management and to any other appropriate agencies identified by the Solano County Department of Environmental Management. If the UST and/or contaminated soil is removed from the site, the project sponsor (GVRD) shall, after all hazardous materials have been removed and soil and groundwater analysis and other activities have been completed as appropriate, submit to the Solano County Department of Environmental Management (and any other agencies identified by the Solano County Department of Environmental Management) a report stating that the mitigation measure has been implemented. The report shall describe the steps taken to comply with the mitigation measure and include all verifying documentation. The report shall be certified by an REA or similarly qualified individual who states that the mitigation measure has been implemented, and specifying the actions that have been implemented.

Mitigation Measure VII-4: Implement Mitigation Measure VII-3.

Mitigation Measure VII-5: Prior to demolition, renovation, or repair of any structure on the site, the structure(s) shall be assessed for the presence of any lead and asbestos containing materials by a qualified consultant. If present, these materials shall be removed by a qualified contractor, in compliance with all applicable laws and regulations.

Mitigation Measure VII-6: Implement Mitigation Measures VII-1, VII-2, VII-3, and VII-5.

Hydrology and Water Quality:

Mitigation Measure VIII-1: The project sponsor (GVRD) shall develop and implement a SWPPP for construction of the proposed project, as required by the SWRCB and San Francisco Bay Regional Water Quality Control Board (RWQCB). The SWPPP shall include, at a minimum, the following elements:

- Source identification;
- Preparation of a site map;
- Description of construction materials, practices, and equipment storage and maintenance;
- List of pollutants likely to contact storm water
- Estimate of the construction site area and percent impervious area;
- Erosion and sedimentation control practices, including soils stabilization, revegetation, and runoff control to limit increases in sediment in storm water runoff, such as detention basins, straw bales, silt fences, check dams, geofabrics, drainage swales, and sandbag dikes;
- Proposed construction dewatering plans;
- List of provisions to eliminate or reduce discharge of materials to storm water;
- Description of waste management practices; and

- *Maintenance and training practices.*

Mitigation Measure VIII-2: *The project sponsor (GVRD) shall develop and implement a Stormwater Control Plan for the proposed project as required by applicable regulations, in compliance with Section C.3 of the RWQCB's NPDES permit governing discharges from the municipal storm drain systems. The Stormwater Control Plan shall include, at a minimum, the following elements:*

- *Description of site features and conditions that constrain, or provide opportunities for, stormwater control.*
- *Description of site design characteristics that protect natural resources.*
- *Description of site design characteristics, building features, and pavement selections that reduce imperviousness of the site.*
- *Tabulation of pervious and impervious area, showing self-retaining areas and areas tributary to each infiltration, treatment, or hydrograph modification BMP (Best Management Practice).*
- *Preliminary designs for each treatment or hydrograph modification management BMP.*
- *Identified pollutant source areas, including, but not limited to, equestrian activities producing manure and gardening/farming activities using biocides, and for each, the source control measure(s) used to reduce pollutants to the maximum extent practicable.*
- *Identification of any conflicts with codes or requirements or other anticipated obstacles to implementing the Stormwater Control Plan.*
- *General description of maintenance needs for treatment/hydrograph modification BMPs.*
- *Means by which BMP maintenance will be financed and implemented in perpetuity.*
- *Statement accepting responsibility for operation and maintenance of treatment BMPs.*

Mitigation Measure VIII-3: *Implement Mitigation Measure IV-5.*

Mitigation Measure VIII-4: *Implement the following Best Management Practices (BMPs) for manure management. If GVRD, the Solano Land Trust, and Pacific Gas and Electric Company enter into a cooperative management agreement, these BMPs shall be incorporated into that agreement.*

1. *Remove manure regularly (daily is best) or keep manure under cover such that runoff does not come into contact with manure stockpiles.*
 - a. *Stalls, corrals and wash areas shall be cleaned and manure removed on a daily basis.*
 - b. *Paddocks shall be cleaned according to the following schedules:*
 - i. *During the summer dry season (April 15 to October 14): at least once per week.*

- ii. During the winter rainy season (October 15 to April 14): at least twice per week.
2. Provide temporary storage for manure that cannot be disposed of daily – about 15 cubic feet of storage per horse per week. Manure shall not be stored for more than one week on site.
3. Grade the area surrounding the manure storage area to prevent surface water from reaching the storage area.
4. Store horse waste on an impervious surface (a concrete pad or plastic tarp) and under cover (a roof or tarp) during rains to prevent leaching or runoff of pollutants.
5. Locate buildings, covered areas, high-use arenas, horse wash racks, and manure storage areas away from waterways and separated by buffer strips of vegetation to filter sediments and absorb nutrients in runoff.
6. Do not dump horse waste on the edge of, or directly into waterways.
7. Consider composting if conditions are suitable.

Mitigation Measure VIII-5: Implement Mitigation Measures IV-13 and VIII-1.

Noise

Mitigation Measure XI-1: The project sponsor (GVRD) shall require the construction contractor(s) to:

- Use noise shielding and muffling devices on construction equipment that comply with all applicable standards and regulations; and
- Limit construction activity to the hours between 7 a.m. and 8 p.m., Monday through Friday.

Transportation/Traffic

Mitigation Measure XV-1: The project sponsor (GVRD) shall develop and maintain a matrix of scheduled activities at McIntyre Ranch to ensure that a cumulative trip rate of 190 vehicle trips per day is not exceeded. Records of actual trips shall be maintained as project activities are implemented. The scheduling matrix shall be regularly reviewed, and updated at least annually with records of actual trips, to maintain its effectiveness as a means of managing trips to the McIntyre Ranch.

Mitigation Measure XV-2: The project sponsor (GVRD) shall implement the following improvements to St. Johns Mine Road and onsite roads:

- On St. Johns Mine Road, a yellow centerline shall be added in locations where the roadway width is a minimum of twenty-feet. Dirt and vegetation encroaching on the roadway shall be cleared to the edge of the asphalt. If white edge lines are installed, the roadway shall be maintained clear of dirt and vegetation so that the edge lines are visible.
- At the proposed base rock-surfaced carpool parking area feet on the south side of the road outside the first cattle guard near the intersection of St. Johns Mine Road and Columbus Parkway, install a sign "Permit Parking for McIntyre Ranch Only – all other vehicles will be towed."

- *Install 25 MPH pavement markings on St. Johns Mine Road between the two cattle gates.*
- *Install a sign stating “No Thru Traffic to Hiddenbrooke” on St. Johns Mine Road.*
- *Install 15 MPH signs and pavement markings on onsite roads.*

Utilities and Service Systems:

Mitigation Measure XVI-1: *The project sponsor (GVRD) shall implement the following:*

- *Prepare an engineering study and design for on-site water supply and delivery for fire and drinking water, as described in 3.8 Utilities, Infrastructure and Services, B. Water Supply and System of the McIntyre Ranch Master Plan. The engineering study and design shall determine, but not be limited to, the potential impact of the proposed project, including potential pasture irrigation, on the ground water supply, and the sustainability of the groundwater supply incorporating the effect of drought years;*
- *All gardens shall employ water-efficient irrigation systems; and*
- *Irrigation of pastures shall be limited to a level that will not adversely affect the local aquifer, as determined by the engineering study and design for on-site water supply described in 3.8 Utilities, Infrastructure and Services, B. Water Supply and System of the McIntyre Ranch Master Plan.*

Mitigation Measure XVI-2: *Prior to the initiation of project construction, the project sponsor (GVRD) shall prepare a recycling plan to cover all phases of project construction. The recycling plan shall identify a strategy for handling all waste materials that will be generated during construction and demolition, in order to divert a minimum of 50 percent by weight. The project sponsor (GVRD) shall provide summary report of the diversion to the City.*

Mitigation Measure XVI-3: *The trash receptacles provided with the project’s picnic tables shall include separate containers for collection of recyclable materials such as glass, paper, plastic, and metal cans, and shall provide for the regular collection of these materials from the project site throughout the life of the project.*

Mitigation Measure XVI-4: *Implement Mitigation Measure XVI-2.*

Mitigation Measure XVI-5: *Implement Mitigation Measure XVI-3.*

APPENDIX A

Mitigation Monitoring and Reporting Program

DRAFT MITIGATION MONITORING AND REPORTING PROGRAM –MCINTYRE RANCH MASTER PLAN

Identified Impact	Related Mitigation Measure	MONITORING			VERIFICATION	
		Implementation Entity	Monitoring and Verification Entity	Timing Requirements	Signature	Date
AIR QUALITY Project Construction-Period Dust and Diesel Exhaust Impacts	<p>Mitigation Measure III-1: The project sponsor (GVRD) shall reduce the severity of project construction-period dust impacts by requiring implementation of the following dust control measures by contractors during construction:</p> <ul style="list-style-type: none"> • Watering shall be used twice daily to control dust generation at active construction areas, including excavation, grading, and site preparation activities. • Cover all trucks and earthmoving equipment hauling debris, soils, sand and other loose materials, or require all trucks and earthmoving equipment to maintain at least two feet of freeboard. • Use dust-proof chutes to load debris into trucks whenever feasible. • Pave, apply water three times daily, or apply (non-toxic) soil stabilizers on all unpaved access roads, parking areas, and staging areas at construction sites. • Sweep daily (with water sweepers) all paved access roads, including affected public roads, parking areas, and staging areas at construction sites. • Sweep streets daily (with water sweepers) if visible soil material is carried onto adjacent public streets. • Require the project contractor(s) to maintain and operate construction equipment so as to minimize exhaust emissions of particulates and other pollutants, by such means as prohibiting idling motors when equipment is not in use or when trucks are waiting in queues, and implementing specific maintenance programs to reduce emissions for equipment that would be in frequent use for much of the construction period. • Hydroseed or apply (non-toxic) soil stabilizers to inactive construction areas (previously graded areas inactive for ten days or more). • Enclose, cover, water twice daily, or apply (non-toxic) soil binders to all stockpiles of debris, soil, sand, or other materials that can be blown by the wind. • Limit traffic on unpaved roads to 15 mph. • Install sandbags or other erosion control measures to prevent silt runoff to public 	Greater Vallejo Recreation District	City of Vallejo	Condition of grading permit approval; field verify implementation during grading and construction		

Identified Impact	Related Mitigation Measure	MONITORING			VERIFICATION	
		Implementation Entity	Monitoring and Verification Entity	Timing Requirements	Signature	Date

	<p>roadways.</p> <ul style="list-style-type: none"> ● Replant vegetation in disturbed areas as quickly as possible. 					
BIOLOGICAL RESOURCES						
Raptors and Other Bird Species of Special Concern	<p>Mitigation Measure IV-1: Any active raptor nests or other bird nests protected under the Migratory Bird Treaty Act in the vicinity of proposed grading, building demolition, and vegetation removal shall be avoided until young birds are able to leave the nest (i.e., fledged) and forage on their own. Avoidance may be accomplished either by scheduling initial grading, building demolition, and vegetation removal during the non-nesting period (i.e., September through February), or if this is not feasible, by conducting a pre-construction survey for bird nests. Provisions of the pre-construction survey and nest avoidance, if necessary, shall include the following:</p> <ul style="list-style-type: none"> ● If grading and/or vegetation or structure removal is scheduled during the active nesting period (March through August), a qualified wildlife biologist shall conduct a pre-construction survey of both tree nesting and ground nesting raptors no more than 14 days prior to initiation of these activities to provide confirmation on presence or absence of active nests in the vicinity. This shall include both a daytime visual survey for raptors and other diurnal bird species, and a nighttime survey for nesting owls. Trees that have been surveyed and do not contain any active nests may be removed at any time, as long as they are not within the nest-setback zone of an active nest, in which case they shall remain until the nest tree is removed. An active nest would be indicated by one or more of the following: <ol style="list-style-type: none"> 1. Incubation behavior of adults (e.g., regular periods of "disappearance" into the same location followed by short, secretive flights to forage). 2. Extreme distress and alarm calls when in close vicinity of the nest tree. 3. Observation of food being carried on the beak or talons to the nest. ● If active bird nests are encountered, species- 	Greater Vallejo Recreation District	City of Vallejo	<p>Condition of Site Development Permit (which includes Tree Removal Permit)</p> <p>Pre-construction survey for nests: Within 14 days prior to the initiation of any grading, building demolition, or vegetation removal that occurs during March through August</p> <p>Nest avoidance: As determined by biologist in consultation with CDFG</p> <p>Pre-construction survey for burrowing owl: Within 30 days of project-related ground-disturbing activities throughout the year</p> <p>Ranch tenants prohibited from keeping cats: Ongoing during project operation</p>		

Identified Impact	Related Mitigation Measure	MONITORING			VERIFICATION	
		Implementation Entity	Monitoring and Verification Entity	Timing Requirements	Signature	Date
	<p>specific measures shall be prepared by a qualified biologist in consultation with the California Department of Fish and Game (CDFG) and implemented to prevent abandonment of the active nest. At a minimum, grading and vegetation/building removal near the nest shall be deferred until the young birds have fledged. A nest-setback zone, based on site conditions and proximity of the nest to existing and proposed development, shall be established within which all construction-related disturbance shall be prohibited. The perimeter of the nest-setback zone shall be fenced or adequately demarcated, and construction personnel restricted from the area.</p> <ul style="list-style-type: none"> • If permanent avoidance of the nest is not feasible, impacts shall be minimized by prohibiting disturbance within the nest-setback zone until a qualified biologist verifies that the birds have either (a) not begun egg-laying and incubation, or (b) that the juveniles from the nest are foraging independently and capable of independent survival at an earlier date. A survey report by the qualified biologist verifying that the young have fledged shall be submitted to the project sponsor (GVRD) prior to initiation of grading and/or vegetation/building removal in the nest-setback zone. • In addition, pre-construction surveys shall be conducted for burrowing owl within 30 days of project-related ground-disturbing activities throughout the year to determine whether any nesting owls are present and to provide for their protection during the active breeding season or passive relocation during the non-breeding season if nests are encountered. The surveys shall be conducted by a qualified wildlife biologist and shall comply with the latest version of the <i>Burrowing Owl Protocol and Mitigation Guidelines</i>. • Caretaker(s) and all other tenants at the McIntyre Ranch site shall be prohibited from keeping domestic cats. 					
	<p>Mitigation Measure IV-2: Prior to construction, the project sponsor (GVRD) shall develop and implement a management and interpretive program identifying the likelihood for occurrence of nesting raptors and other bird species considered to be a Species of Special Concern by the CDFG, roosting</p>	Greater Vallejo Recreation District	City of Vallejo	<p>Preparation of Plan: Prior to construction</p> <p>Implementation of Plan: Ongoing during project operation</p>		

Identified Impact	Related Mitigation Measure	MONITORING			VERIFICATION	
		Implementation Entity	Monitoring and Verification Entity	Timing Requirements	Signature	Date
Bats	<p>bats, Valley Elderberry Longhorn Beetle (VELB), callippe silverspot butterfly, and California red-legged frog. The interpretive program shall identify their protected status, describe their typical habitat characteristics and the sensitivity of the remaining natural habitat on the site and surrounding open space lands, explain the importance of avoiding sensitive habitat and individuals during critical dispersal or breeding/nesting periods, and require any future users of the site adhere to appropriate access restrictions where they could significantly disturb essential nesting, breeding, and foraging opportunities for special-status wildlife species.</p>					
	<p>Mitigation Measure IV-3: A Bat Mitigation Program shall be prepared and implemented by the project sponsor (GVRD) to avoid potential impacts to any roosting bats that may be present on the site. The Bat Mitigation Program shall be prepared by a qualified biologist and include maternity roost surveys of all structures on the site for both special-status and common bat species. The bat surveys shall be conducted prior to any building demolition or major remodeling, and shall include detailed surveys during the pupping period to confirm whether any maternity roosts are present on the site (preferably in June or July). The results of the maternity roost surveys shall be used in refining the following additional provisions of the Bat Mitigation Program.</p> <ul style="list-style-type: none"> If bats are determined to be roosting in a particular structure, building demolition or major remodeling shall occur between February 15 to April 15 or from August 15 to October 15 to minimize the likelihood of disturbance to roosting bats during the winter roosting period when individuals are less active and more difficult to detect, and the critical pupping period (April 16 to August 14) when young cannot disperse. In addition to the maternity roost surveys conducted as part of the Bat Mitigation Program, a pre-construction survey for roosting bats shall be conducted by a qualified biologist within 14 days prior to any building demolition to confirm that no new roosts have become established on the site. To determine presence or absence of bats, the survey shall be conducted by a biologist with 	Greater Vallejo Recreation District	City of Vallejo	<p>Preparation of Bat Mitigation Program: Prior to building demolition or remodeling</p> <p>Maternity Roost Survey: Prior to building demolition and major remodeling</p> <p>(If bats are roosting) Building remodeling and demolition: Between February 15 and April 15, or from August 15 to October 15</p> <p>Pre-construction survey for roosting bats: Within 14 days prior to building demolition</p> <p>(If required) Passive relocation: As determined by pre-demolition survey</p> <p>(If required) Notification of CDFG: Prior to construction</p>		

Identified Impact	Related Mitigation Measure	MONITORING			VERIFICATION	
		Implementation Entity	Monitoring and Verification Entity	Timing Requirements	Signature	Date
	<p>experience surveying for bats, focusing on the attic and less accessible areas of structures to be demolished. If no special-status bats are identified during the pre-construction survey(s), then no impacts to these bats would be expected to occur from demolition.</p> <ul style="list-style-type: none"> If, however, any special-status bats are identified in any of the structure(s) proposed for removal, reproductive status shall be determined, and appropriate measures developed to allow for passive relocation through building exclusions and other methods. Additional recommendations may be made by the qualified bat specialist following the pre-demolition survey, such as opening the roof of the structures, monitoring of demolition, and other measures to avoid take of individual bats. Restrictions on timing of demolition and conduct of the pre-construction survey(s) would prevent direct take of individuals or destruction of any maternity roost locations in active use. No immediate replacement of roosting habitat is currently recommended, unless warranted based on the results of the maternity roost survey recommended above. If a maternity roost or occupied roost is detected during the pre-construction survey(s), California Department of Fish and Game (CDFG) shall be notified and informally consulted to determine if protection measures are adequate and if replacement for loss of occupied habitat is required. 					
Callippe silverspot butterfly	<p>Mitigation Measure IV-4: The project sponsor (GVRD) shall develop and implement a detailed vegetation maintenance and management plan including the following features:</p> <p>a) Control of invasive species on the site including blue gum eucalyptus, acacia, elms, giant reed, pampas grass, sweet fennel, periwinkle, and cotoneaster, including those identified on Figures 2, 3, 4 and 5. These plants shall be removed as soon as possible and managed to enhance natural habitats on the site and to keep these invasive species from spreading into nearby habitat known to support callippe silverspot butterfly.</p> <p>b) Minimization of disturbance to the remaining locations of native vegetative cover, including the scattered oaks, the stands of native grasslands along the southern edge of the site, and the natural</p>	Greater Vallejo Recreation District	City of Vallejo	<p>Preparation of Plan: Prior to construction</p> <p>Implementation of Plan: Ongoing during project operation</p> <p>Protection and replacement of native trees: see Mitigation Measures IV-16 and IV-17</p>		

Identified Impact	Related Mitigation Measure	MONITORING			VERIFICATION	
		Implementation Entity	Monitoring and Verification Entity	Timing Requirements	Signature	Date

	<p>drainages.</p> <p>c) Procedures to protect existing native trees larger than 9 inches DBH on the site, as stipulated in Mitigation Measure IV-14.</p> <p>d) For removal of native trees larger than 9 inches DBH, compensatory replacement as stipulated in Mitigation Measure IV-15.</p> <p>e) Protection of all elderberry shrubs on the site, as identified in Figures 2, 3, 4, and 5.</p> <p>f) Planting of native species to enhance areas of remaining native vegetative cover on the site, including the scattered oaks, the stands of native grasslands along the southern edge of the site, and the natural drainages.</p> <p>g) Coordination with the vegetation management procedures for fire safety set forth in the McIntyre Ranch Master Plan, including removal of flammable brush and shrubs from within 40 feet of existing and proposed structures, and the trimming and removal program.</p> <p>h) Implementation of the management and interpretive program called for in Mitigation Measure IV-2, which includes appropriate access restrictions away from essential habitat for callippe silverspot butterfly.</p>					
	<p>Mitigation Measure IV-5: All use of herbicides in project construction and operation shall comply with the following restrictions and procedures:</p> <p>a) Chemical treatment of invasive species shall be carefully controlled according to the California Department of Pesticide Regulations and the Solano County Agricultural Commissioner using Best Management Practices to prevent exposure to facility users, employees, and tenants; avoid sensitive habitat; and utilize the most effective and appropriate products available at the time field work is performed.</p> <p>b) Trained professionals, with appropriate certification and licensing as a Pest Control Operator for use of non-restricted materials registered for use in Solano County, shall be employed to perform all herbicide applications. Best Management Practices shall be used during all herbicide applications, considering latest standards for products used for target species. Factors to be considered during herbicide application shall include wind and weather conditions, timing of initial and subsequent</p>	Greater Vallejo Recreation District	City of Vallejo	<p>Condition of Site Development Permit</p> <p>Herbicide use during construction: Field verify during construction</p> <p>Herbicide use during operation: Ongoing during project operation</p>		

Identified Impact	Related Mitigation Measure	MONITORING			VERIFICATION	
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	<p>treatments, specific product and concentrations, and protection of habitat and native cover to be preserved or established on the site.</p> <p>c) The public shall be notified of treatment areas prior to herbicide application through use of temporary signage posted no less than 24 hours in advance of application, identifying the product to be used, explaining health risks, and including a contact person and phone number to answer any questions. Signs shall be posted at the entrance to the McIntyre Ranch and the perimeter of any treatment area at 50-foot intervals or as necessary to visibly delineate the boundaries of the treatment area.</p>					
Valley Elderberry Longhorn Beetle	<p>Mitigation Measure IV-6: Implement Mitigation Measures IV-2, IV-4 and IV-5.</p> <p>Mitigation Measure IV-7: A Mitigation Program for VELB shall be prepared to provide for the protection, replacement, and management of any habitat shown to be adversely affected by proposed development. Proposed grading and development shall be designed to avoid removal or adverse impacts on elderberry shrubs to provide compliance with the <i>U.S. Fish and Wildlife Service Conservation Guidelines</i>,¹ which recommend that a 100-foot buffer be established and maintained around elderberry plants containing stems measuring 1.0 inch or greater in diameter at ground level. Existing roadways may remain within this 100-foot buffer as long as there is no further incursion closer to the elderberry plants identified in Figures 2, 3, 4, and 5. Removal of invasive vegetation, installation of native habitat enhancement plantings, and other management activities shall be designed to avoid adverse impacts on the potential habitat the elderberry shrubs provide for VELB.</p> <p>Mitigation Measure IV-8: Implement Mitigation Measures IV-2, IV-4 and IV-5, which would provide for appropriate habitat management, construction worker and visitor training, and interpretive programs necessary to protect important habitat areas and any individual California red-legged frogs in the remote instance that they disperse onto the site.</p>	See Mitigation Measures IV-2, IV-4 and IV-5 Greater Vallejo Recreation District	See Mitigation Measures IV-2, IV-4 and IV-5 City of Vallejo	See Mitigation Measures IV-2, IV-4 and IV-5 Preparation of Mitigation Program: Prior to construction Implementation of Mitigation Program: Field verify during construction		
California red-legged frog		See Mitigation Measures IV-2, IV-4, and IV-5	See Mitigation Measures IV-2, IV-4, and IV-5	See Mitigation Measures IV-2, IV-4, and IV-5		

¹ U.S. Fish and Wildlife Service, 1999, *Conservation Guidelines for Valley Elderberry Longhorn Beetle*, Sacramento, California.

Identified Impact	Related Mitigation Measure	MONITORING			VERIFICATION	
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	<p>Mitigation Measure IV-9: The project sponsor (GVRD) shall informally consult with the U.S. Fish and Wildlife Service (USFWS) to determine whether the site is considered to be potential habitat for California red-legged frog (CRF), given that the area is contained within one of the Critical Habitat Units for this federally-threatened species. If the USFWS considers the site to be potential habitat for CRF, a Mitigation Program shall be prepared by a qualified wildlife biologist to minimize and mitigate potential impacts on this species. The Mitigation Program shall be prepared in consultation with USFWS, California Department of Fish and Game (CDFG), and the U.S. Army Corps of Engineers (Corps) and shall provide for the protection, replacement, and management of habitat affected by the proposed project. If the USFWS concurs that the site is not potentially occupied habitat, then no additional mitigation for this species would be required unless preconstruction avoidance measures are still required by the USFWS. At minimum, the preconstruction provisions of the Mitigation Program shall include the following components and meet the following standards:</p> <ul style="list-style-type: none"> • Preconstruction surveys shall be conducted by a Service-approved biologist prior to any grading or major vegetation clearance to ensure that no individual CRF are lost during construction. The Mitigation Program shall: 1) describe in detail the survey approach and methodology, and 2) specify that grading or vegetation clearance may not occur in any area where individual CRF are located until such time as the individual has either moved out of the disturbance zone or has been physically relocated by a Service-approved biologist legally authorized to handle the species. • Monitor all vegetation clearing and grading activities within potential habitat for CRF by a Service-approved biologist. The Mitigation Program shall specify the duties of the Service-approved biologist. • Train all construction personnel in CRF identification, habitat description, legal protective status, construction restrictions, and procedures to avoid unnecessary disturbance to potential habitat or incidental take of these species. The details of 	Greater Vallejo Recreation District	City of Vallejo	<p>Agency consultation, (if required) preparation of Mitigation Program: Condition of Site Development Permit and prior to construction</p> <p>(If required) Pre-construction surveys, construction personnel training, and temporary fencing: Prior to construction</p> <p>(If required) Monitoring: during construction</p> <p>(If required) Methods to minimize harassment or take of listed and non-listed species during project operation, and ranch tenants prohibited from keeping cats: Ongoing during project operation</p>		

Identified Impact	Related Mitigation Measure	MONITORING			VERIFICATION	
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	<p>the training procedures shall be included as a component of the Mitigation Program.</p> <ul style="list-style-type: none"> • Install temporary exclusionary fencing prior to grading or major vegetation clearance where appropriate to keep CRF out of construction areas. The Mitigation Program shall identify where such fencing is to be installed and provide procedures for fence installation, monitoring, and maintenance. The Mitigation Program shall require that the exclusionary fencing be installed under the direct supervision of a Service-approved biologist and shall be inspected and maintained during the course of construction activities on the site. • Define methods to minimize the potential for harassment or take of CRF and other listed and non-listed species as a result of increased human activity on the site associated with the project. This shall include an educational program for future residents and visitors, exclusionary fencing where necessary to protect any habitat considered essential to CRF and other listed species, and interpretive signage at access points into sensitive habitat areas. • Caretaker(s) and all other tenants at the McIntyre Ranch site shall be prohibited from keeping domestic cats. 					
Sensitive Habitats	<p>Mitigation Measure IV-10: The project sponsor (GVRD) shall ensure that:</p> <ul style="list-style-type: none"> • Lighting shall be carefully designed and controlled to prevent unnecessary illumination of natural areas on the site. Lighting shall be restricted to the minimum level necessary to illuminate pathways, parking areas, and other outdoor areas. Lighting shall generally be kept low to the ground, directed downward, and shielded to prevent illumination into adjacent natural areas; • All garbage, recycling, and composting shall be kept in closed containers and latched or locked to prevent wildlife from using the waste as a food source; • Future residents/occupants shall be prohibited from keeping cats and dogs on the site, and all pets 	Greater Vallejo Recreation District	City of Vallejo	<p>Lighting design: Condition of Site Development Permit and building permit; field verify during construction</p> <p>Pet management, solid waste maintained in closed containers: Ongoing during project operation</p> <p>Fencing and signage for habitat: Prior to construction</p>		

Identified Impact	Related Mitigation Measure	MONITORING			VERIFICATION	
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	visiting the site shall be controlled as required under Vallejo Municipal Code Section 7.24.010. <ul style="list-style-type: none"> Humans and pets shall be restricted outside sensitive habitat areas through installation of wildlife-friendly fencing and interpretive signage, except as required for maintenance and management activities. 					
Wetlands	<p>Mitigation Measure IV-11: Prior to initiation of construction, the project sponsor (GVRD) shall retain a qualified wetland specialist to prepare a draft Wetland Delineation for the project site. The draft Wetland Delineation shall be prepared according to methodology used by the U.S. Army Corps of Engineers (Corps), and shall include an evaluation of the three ephemeral drainages to the west of the main house, and the larger drainage in the eastern portion of the site, as identified in Figures 4 and 5. The draft Wetland Delineation shall be verified by the U.S. Army Corps of Engineers (Corps). If the limits of jurisdictional waters (wetlands) on the project site cannot be completely avoided, all proposed modifications to regulated waters shall receive appropriate authorizations from regulatory agencies. Adequate mitigation shall be provided at a minimum 2:1 replacement ratio (wetlands removed to wetlands replaced), shall be designed to result in a net increase in acreage of waters on the site and improve the habitat functions and values through native enhancement plantings, and shall provide for a minimum of five years of maintenance and monitoring, with annual monitoring reports provided to the regulatory agencies during that period.</p>	Greater Vallejo Recreation District	U.S. Army Corps of Engineers	<p>Wetland Delineation: Prior to construction (If required) Authorization for modification of regulated waters: Prior to construction (If required) Wetland replacement: Prior to issuance of certificate of occupancy (If required) Monitoring of replacement wetlands and reports to regulatory agencies: Annually for five years</p>		
	Mitigation Measure IV-12: Implement Mitigation Measure IV-5.	See Mitigation Measure IV-5	See Mitigation Measure IV-5	See Mitigation Measure IV-5		
	Mitigation Measure IV-13: As stipulated in Mitigation Measure VIII-1, the project sponsor (GVRD) shall develop and implement a Storm Water Pollution Prevention Plan (SWPPP) to control construction-related erosion and sedimentation and, as stipulated in Mitigation Measure VIII-2, the project sponsor (GVRD) shall develop and implement a Stormwater Control Plan to control operational runoff from the project site.	See Mitigation Measures VIII-1 and VIII-2	See Mitigation Measures VIII-1 and VIII-2	See Mitigation Measures VIII-1 and VIII-2		

Identified Impact	Related Mitigation Measure	MONITORING			VERIFICATION	
		Implementation Entity	Monitoring and Verification Entity	Timing Requirements	Signature	Date
Native Trees	<p>Mitigation Measure IV-14: To protect native trees on the site, the following mitigation measures shall be implemented:</p> <ul style="list-style-type: none"> All oak trees with trunk diameter larger than nine inches diameter at breast height (DBH) on the project site shall be mapped and preserved to the maximum extent feasible, including the two oaks near the site of the USGS Western Ecological Research Center. No construction activities such as trenching or operation of earth-moving equipment that might cause damage to the root systems of existing native trees to be protected shall be allowed. During construction, temporary flagging or staking shall be placed around existing native trees to be protected within 50 feet of proposed project construction. The temporary flagging or staking shall be installed at a distance equal to one-half of the canopy radius measured outward from the edge of the dripline. No disturbance, including grading, placement of fill material, storage of equipment, etc. shall occur within the designated protective zone for the duration of the project. 	Greater Vallejo Recreation District	City of Vallejo	Condition of grading and building permits; field verify during construction		
	<p>Mitigation Measure IV-15: Where removal of any native tree larger than nine inches DBH is unavoidable, compensatory tree replacement shall occur at a 2:1 ratio (tree removed: tree replaced), consistent with Chapter 10.12 of the Vallejo Municipal Code.</p> <ul style="list-style-type: none"> Replacement trees shall be at least fifteen gallons in size. Species selected for replacement plantings shall be resistant to Sudden Oak Death (SOD), caused by the pathogen <i>Phytophthora ramorum</i>. To the extent possible, the species of replacement trees shall correspond to the trees removed.² Replacement trees shall be planted between November and January with nursery stock from local sources acclimated to conditions in Solano 	Greater Vallejo Recreation District	City of Vallejo	Condition of grading and building permits; field verify during construction Tree planting: November through January Monitoring: Annually for five years after planting		

² Despite the wide host range of *P. ramorum*, oaks in the white oak sub-genus of *Quercus*, including blue oak (*Q. douglasii*), valley oak (*Q. lobata*), and Oregon white oak (*Q. garryana*) do not appear to be susceptible to *P. ramorum* and SOD. No species in the white oak group have been found with the disease in the field in California, Oregon, or Europe. As such, it appears that native blue oak, valley oak, and the Oregon white oak may be suitable replacement trees to compensate for the loss of individual coast live oak, black oak, madrone, or California bay laurel trees in *P. ramorum*-infested areas.

Identified Impact	Related Mitigation Measure	MONITORING			VERIFICATION	
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	<p>County. Replacement plantings shall be spaced adequately to grow without excessive competition for light, water or nutrients. Herbaceous material around the replacement plantings shall be cleared during the first three years as part of routine maintenance. The replacement trees shall be irrigated for three years and protected from browsing herbivores such as deer and cattle for the first three to five years using protective sleeves and fencing. Once the seedlings have reached a height of greater than seven feet, the browse protection shall be removed.</p> <ul style="list-style-type: none"> Annual monitoring of the planted trees shall be conducted for five years from the time of planting. During this period, annual monitoring reports shall be completed and filed with the project sponsor (GVRD). 					
CULTURAL RESOURCES						
Buried Archaeological Resources and Human Remains	<p>Mitigation Measure V-1: Plans for all activities at the McIntyre Ranch project site which require building removal, grading and/or trenching, shall be reviewed by a qualified archaeologist. If recommended by the archaeologist based on the location and extent of ground disturbing activities, archaeological monitoring shall be conducted under a written Archaeological Monitoring Agreement. Such an Agreement shall provide for, at a minimum:</p> <ul style="list-style-type: none"> a) Timely notification prior to any excavations; b) Monitoring during all earth-moving or soil disturbing activities, however minor, until and unless the monitor determines that no impacts to potentially significant archaeological materials will occur; c) Specific requirements that archaeological monitors be notified immediately if potentially significant archaeological resources are encountered anywhere in the absence of an onsite monitor; d) Authority of the onsite archaeological monitor to halt excavations if potentially significant archaeological materials or human remains are encountered; 	Greater Vallejo Recreation District	City of Vallejo	Condition of grading permit approval; field verify during grading and construction		

Identified Impact	Related Mitigation Measure	MONITORING			VERIFICATION	
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	<p>e) Time and space to record, photograph and map, recover, retrieve, and/or remove any archaeological materials and data during the construction process;</p> <p>f) Time and funding for laboratory cleaning, cataloging, analysis, and preparation for permanent curation of any and all recovered data and materials after onsite monitoring ends; and</p> <p>g) Time and funding for a Final Report of findings, to incorporate data developed for this report as appropriate and data developed by monitoring and analysis; additional historical and/or archival research may also be warranted. In addition to reporting to the project sponsor (GVRD), copies of the Final Report must be submitted to the Northwest Information Center of the California Historical Resources Information System for inclusion in the permanent archives, and another copy shall accompany any curated archaeological materials and data. Archaeological data, reports, and recovered materials are and will remain the property of the property owners.</p> <p>Archaeological identification, inventory, evaluation, research and mitigation under provisions of CEQA, if any, shall be completely reported in a comprehensive manner, incorporating all methods used and data gained, thorough current scientific analysis of all data, and interpretation of any archaeological resources within a regional archaeological framework. Qualified professional archaeologists shall complete the report to current professional standards, and the data shall be made available to other qualified researchers following completion of the Final Report. Appropriate specialized, focused scientific analytic techniques shall be applied (e.g., radiocarbon dating, obsidian sourcing and hydration, typological studies, geomorphological studies, faunal analysis, etc.). Obtaining, analyzing, interpreting, and reporting archaeological data from the project area would serve as mitigative compensation for any project-related impacts to resources.</p>					

Identified Impact	Related Mitigation Measure	MONITORING		VERIFICATION	
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	<p>Mitigation Measure V-2: The project sponsor (GVRD) and construction contractors shall be prepared to respond appropriately if heretofore undetected archaeological resources are encountered anywhere in the project area.</p> <p>To set up and facilitate both the recommended monitoring and the response procedure required under CEQA, a pre-construction meeting shall be arranged involving responsible project personnel, both onsite and managerial supervisory construction personnel, and the archaeological monitors. The purpose of this meeting will be to familiarize all involved parties with the provisions of this plan. Construction contractors shall be prepared to halt and/or relocate work while finds are identified, recorded, evaluated, and if warranted, mitigative activities carried out. In virtually all reasonably foreseeable circumstances, the appropriate mitigation action will be recording and removal of archaeological objects and data from the project area.</p> <p>Supervisory and construction personnel shall therefore be made aware of the possibility of encountering archaeological materials in this sensitive zone. The most common and recognizable evidence of prehistoric archaeological resources include faunal bone (deer, marine mammals, etc.), usually in a dark fine-grained soil (midden); stone flakes left from manufacturing stone tools, or the tools themselves (mortars, pestles, arrowheads and spear points); and human burials, often as dislocated bones. Historic materials older than 45 years (bottles, artifacts, trash pits, structural remains, etc.) may also have scientific and cultural significance and should be more readily identified. If during the proposed construction project any such evidence is uncovered or encountered, all excavations within 10 meters/30 feet shall be halted long enough to call in the monitoring archaeologists to assess the situation and propose appropriate measures.</p>	Greater Vallejo Recreation District	City of Vallejo	Pre-Construction Meeting: Prior to initiation of construction Monitoring: Condition of grading permit approval; field verify during grading and construction	

Identified Impact	Related Mitigation Measure	MONITORING			VERIFICATION	
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	<p>Mitigation Measure V-3: The project sponsor (GVRD) and contractors must be prepared to carry out the requirements of California State law with regards to the discovery of human remains during construction. In the event that any human remains are encountered during site disturbance, all ground-disturbing work shall cease immediately and the County coroner shall be notified immediately. If the coroner determines the remains to be Native American, the Native American Heritage Commission shall be contacted within 24 hours. A qualified archaeologist, in consultation with the Native American Heritage Commission, shall recommend subsequent measures for disposition of the remains.</p> <p>Mitigation Measure V-4: If any paleontological resources are encountered during site grading or other construction activities, all ground disturbance shall be halted until the services of a qualified paleontologist can be retained to identify and evaluate the resource(s) and, if necessary, recommend mitigation measures to document and prevent any significant adverse effects on the resource(s).</p>	Greater Vallejo Recreation District	City of Vallejo	Condition of grading permit approval; field verify during grading and construction		
Disturbance of Paleontological Resources		Greater Vallejo Recreation District	City of Vallejo	Condition of grading permit approval; field verify during grading and construction		
<i>GEOLOGY AND SOILS</i>						
Strong seismic ground shaking	<p>Mitigation Measure VI-1: All project improvements shall be designed in accordance with current earthquake resistance standards for the area as outlined in the California Building Code.</p>	Greater Vallejo Recreation District	City of Vallejo	Condition of building permit approval		
	<p>Mitigation Measure VI-2: The project sponsor (GVRD) shall retain a qualified geotechnical consultant to prepare a geotechnical study for all project structures, incorporating foundation design and engineering that is appropriate for local seismic conditions, expansive soils, and potential liquefaction.</p>	Greater Vallejo Recreation District	City of Vallejo	Condition of building permit approval		
Seismic-related ground failure	<p>Mitigation Measure VI-3: Implement Mitigation Measures VI-1 and VI-2.</p>	See Mitigation Measures VI-1 and VI-2	See Mitigation Measures VI-1 and VI-2	See Mitigation Measures VI-1 and VI-2		
Erosion	<p>Mitigation Measure VI-4: Implement Mitigation Measure VIII-1.</p>	See Mitigation Measure VIII-1	See Mitigation Measure VIII-1	See Mitigation Measure VIII-1		
	<p>Mitigation Measure VI-5: Implement Mitigation Measure VIII-2.</p>	See Mitigation Measure VIII-2	See Mitigation Measure VIII-2	See Mitigation Measure VIII-2		

Identified Impact	Related Mitigation Measure	MONITORING			VERIFICATION	
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	Mitigation Measure VI-6: Prior to initiation of grading, the project sponsor (GVRD) shall obtain a grading permit from the City of Vallejo, and shall comply with all requirements of the grading permit.	Greater Vallejo Recreation District	City of Vallejo	Condition of grading permit approval; field verify during grading		
Geologic Instability	Mitigation Measure VI-7: Implement Mitigation Measures VI-1 and VI-2.	See Mitigation Measures VI-1 and VI-2	See Mitigation Measures VI-1 and VI-2	See Mitigation Measures VI-1 and VI-2		
Expansive Soil	Mitigation Measure VI-8: Implement Mitigation Measure VI-2.	See Mitigation Measure VI-2	See Mitigation Measure VI-2	See Mitigation Measure VI-2		
Soil Impacts of Septic Systems	Mitigation Measure VI-9: The project sponsor (GVRD) shall ensure that the project's septic system complies with all requirements of Chapter 6.4 Sewage Standards of the Solano County Code. If required by the Solano County Environmental Health Services Division to maintain the proper functioning of the disposal field in accordance with Section 6.4-80(g) of the Solano County Code, paddock uses shall be excluded from the area above the disposal field.	Greater Vallejo Recreation District	County of Solano Environmental Health Services Division	Compliance with Solano County Code; Condition of septic tank permit approval Exclusion of paddock uses (if required); Ongoing during operation		
HAZARDS AND HAZARDOUS MATERIALS						
Hazardous Materials Use During Construction	Mitigation Measure VII-1: Implement Mitigation Measure VIII-1.	See Mitigation Measure VIII-1	See Mitigation Measure VIII-1	See Mitigation Measure VIII-1		
Herbicides	Mitigation Measure VII-2: Implement Mitigation Measure IV-5.	See Mitigation Measure IV-5	See Mitigation Measure IV-5	See Mitigation Measure IV-5		
Underground Storage Tank	Mitigation Measure VII-3: The project sponsor (GVRD) shall retain a qualified consultant to perform a Phase I Environmental Site Assessment (ESA) for the site. The Phase I ESA shall include, but not be limited to, determination of the presence of an underground storage tank (UST) associated with the old glass bottle-type gasoline pump is located north of the barn, and lead contamination in soils. If the Phase I ESA determines that there is or may be an underground storage tank or tanks on the site, the project sponsor (GVRD) shall comply with the recommendations of the Phase I ESA regarding additional investigation, such as a Phase II Environmental Site Assessment, and/or disposition of the underground storage tank(s). If an underground storage tank or tanks are located	Greater Vallejo Recreation District	Solano County Department of Environmental Management, California Department of Toxic Substances Control (DTSC)	Phase I ESA: Prior to construction Phase II ESA (if required): Prior to construction Removal of UST, soil sampling, and/or soil remediation (if required): As determined by Solano County Department of Environmental Management and DTSC Preparation and		

Identified Impact	Related Mitigation Measure	MONITORING		VERIFICATION	
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	<p>on the site, the project sponsor (GVRD), in coordination with the Solano County Department of Environmental Management, shall determine an appropriate disposition for the UST(s) (removal or abandonment in place). If required by the Solano County Department of Environmental Management, the project sponsor (GVRD) also shall retain a qualified environmental professional to assess the presence and extent of soil and/or groundwater contamination related to the underground storage tank (UST), in conformance with state and local guidelines and regulations.</p> <p>If sampling identifies surface and/or subsurface contamination, the area shall be remediated in accordance with the standards, regulations, and determinations of local, state, and federal regulatory agencies. All earth-disturbing activities conducted during remediation shall comply with Mitigation Measures V-1 (which requires monitoring by a qualified archaeologist), V-2, V-3, and V-4. The project sponsor (GVRD) shall coordinate with the Solano County Department of Environmental Management and any other applicable regulatory agencies to adopt contaminant-specific remediation target levels. The excavated soil shall be removed and disposed of at an approved disposal facility.</p> <p>If required by the Solano County Department of Environmental Management, the project sponsor (GVRD) shall prepare and implement a site-specific health and safety plan to mitigate potential hazards to construction workers and the general public during remediation. The health and safety plan shall meet the requirements of federal, state, and local environmental and worker safety laws. Specific information to be provided in the plan shall include identification of contaminants, potential hazards, material handling procedures, dust suppression methods, personal protection clothing and devices, controlled access to the site, health and safety training requirements, monitoring equipment to be used during remediation to verify health and safety of the workers and the public, measures to protect public health and safety, and emergency response procedures.</p> <p>All reports and plans prepared in accordance with this mitigation measure shall be provided to the Solano County Department of Environmental Management and to any other appropriate agencies</p>			<p>Implementation of Site Mitigation Plan, and Handling, Hauling, and Disposal Practices (if required): As determined by Solano County Department of Environmental Management</p> <p>Closure/ Certification Report: After UST removal activities are completed and prior to issuance of a certificate of occupancy</p>	

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	identified by the Solano County Department of Environmental Management. If the UST and/or contaminated soil is removed from the site, the project sponsor (GVRD) shall, after all hazardous materials have been removed and soil and groundwater analysis and other activities have been completed as appropriate, submit to the Solano County Department of Environmental Management (and any other agencies identified by the Solano County Department of Environmental Management) a report stating that the mitigation measure has been implemented. The report shall describe the steps taken to comply with the mitigation measure and include all verifying documentation. The report shall be certified by an REA or similarly qualified individual who states that the mitigation measure has been implemented, and specifying the actions that have been implemented.					
Lead Contamination In Soil	Mitigation Measure VII-4: Implement Mitigation Measure VII-3.	See Mitigation Measure VII-3	See Mitigation Measure VII-3	See Mitigation Measure VII-3		
Lead-Based Paint and Asbestos	Mitigation Measure VII-5: Prior to demolition, renovation, or repair of any structure on the site, the structure(s) shall be assessed for the presence of any lead and asbestos containing materials by a qualified consultant. If present, these materials shall be removed by a qualified contractor, in compliance with all applicable laws and regulations.	Greater Vallejo Recreation District	City of Vallejo	Condition of demolition permit approval; field verify implementation during demolition		
Hazardous Materials Impacts on Schools	Mitigation Measure VII-6: Implement Mitigation Measures VII-1, VII-2, VII-3, and VII-4.	See Mitigation Measures VII-1, VII-2, VII-3, and VII-4	See Mitigation Measures VII-1, VII-2, VII-3, and VII-4	See Mitigation Measures VII-1, VII-2, VII-3, and VII-4		
<i>HYDROLOGY AND WATER QUALITY</i>						
Impacts of Project Construction on Water Quality	Mitigation Measure VIII-1: The project sponsor shall develop and implement a Storm Water Pollution Prevention Plan (SWPPP) for construction of the proposed project, as required by the State Water Resources Control Board (SWRCB) and San Francisco Bay Regional Water Quality Control Board (RWQCB). The SWPPP shall include, at a minimum, the following elements: <ul style="list-style-type: none"> • Source identification; • Preparation of a site map; 	Greater Vallejo Recreation District	City of Vallejo	Condition of grading permit approval; field verify during grading and construction		

Identified Impact	Related Mitigation Measure	MONITORING			VERIFICATION	
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	<ul style="list-style-type: none"> • Description of construction materials, practices, and equipment storage and maintenance; • List of pollutants likely to contact storm water • Estimate of the construction site area and percent impervious area; • Erosion and sedimentation control practices, including soils stabilization, revegetation, and runoff control to limit increases in sediment in storm water runoff, such as detention basins, straw bales, silt fences, check dams, geofabrics, drainage swales, and sandbag dikes; • Proposed construction dewatering plans; • List of provisions to eliminate or reduce discharge of materials to storm water; • Description of waste management practices; and • Maintenance and training practices. 					
	<p>Mitigation Measure VIII-2: The project sponsor (GVRD) shall develop and implement a Stormwater Control Plan for the proposed project as required by applicable regulations, in compliance with Section C.3 of the RWQCB's NPDES permit governing discharges from the municipal storm drain systems. The Stormwater Control Plan shall include, at a minimum, the following elements:</p> <ul style="list-style-type: none"> • Description of site features and conditions that constrain, or provide opportunities for, stormwater control. • Description of site design characteristics that protect natural resources. • Description of site design characteristics, building features, and pavement selections that reduce imperviousness of the site. • Tabulation of pervious and impervious area, showing self-retaining areas and areas tributary to each infiltration, treatment, or hydrograph modification BMP (Best Management Practice). • Preliminary designs for each treatment or hydrograph modification management BMP. • Identified pollutant source areas, including, but not limited to, equestrian activities producing manure and gardening/farming activities using 	Greater Vallejo Recreation District	City of Vallejo	Preparation of Stormwater Control Plan: Condition of Site Development Permit and building permit approval Long-term maintenance: In accordance with Stormwater Control Plan		

Identified Impact	Related Mitigation Measure	MONITORING			VERIFICATION	
		Implementation Entity	Monitoring and Verification Entity	Timing Requirements	Signature	Date

Impacts of Project Operation on Water Quality	<p>biocides, and for each, the source control measure(s) used to reduce pollutants to the maximum extent practicable.</p> <ul style="list-style-type: none"> • Identification of any conflicts with codes or requirements or other anticipated obstacles to implementing the Stormwater Control Plan. • General description of maintenance needs for treatment/hydrograph modification BMPs. • Means by which BMP maintenance will be financed and implemented in perpetuity. • Statement accepting responsibility for operation and maintenance of treatment BMPs. 					
	<p>Mitigation Measure VIII-3: Implement Mitigation Measures IV-5 and VIII-2.</p> <p>Mitigation Measure VIII-4: Implement the following Best Management Practices (BMPs) for manure management. If GVRD, the Solano Land Trust, and Pacific Gas and Electric Company enter into a cooperative management agreement, these BMPs shall be incorporated into the agreement.</p> <ol style="list-style-type: none"> 1. Remove manure regularly (daily is best) or keep manure under cover such that runoff does not come into contact with manure stockpiles. <ol style="list-style-type: none"> a. Stalls, corrals and wash areas shall be cleaned and manure removed on a daily basis. b. Paddocks shall be cleaned according to the following schedules: <ol style="list-style-type: none"> i. During the summer dry season (April 15 to October 14 each year): paddocks shall be cleaned at least once every week. ii. During the winter rainy season (October 15 to April 14 each year): paddocks shall be cleaned at least twice every week. 2. Provide temporary storage for manure that cannot be disposed of daily – about 15 cubic feet of storage per horse per week. Manure shall not be stored for more than a week on site. 3. Grade the area surrounding the manure storage area to prevent surface water from reaching the storage area. 4. Store horse waste on an impervious surface (a concrete pad or plastic tarp) and under cover (a roof or tarp) during rains to prevent leaching or runoff of pollutants. 5. Locate buildings, covered areas, high-use 	See Mitigation Measures IV-5 and VIII-2 Greater Vallejo Recreation District	See Mitigation Measures IV-5 and VIII-2 City of Vallejo	See Mitigation Measures IV-5 and VIII-2 Condition of Site Development Permit; ongoing during project operation		

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	arenas, horse wash racks, and manure storage areas away from waterways and separated by buffer strips of vegetation to filter sediments and absorb nutrients in runoff. 6. Do not dump horse waste on the edge of, or directly into waterways. 7. Consider composting if conditions are suitable.					
Erosion and Siltation	Mitigation Measure VIII-5: Implement Mitigation Measure VIII-1.	See Mitigation Measure VIII-1	See Mitigation Measure VIII-1	See Mitigation Measure VIII-1		
NOISE						
Construction Noise	Mitigation Measure XI-1: The project sponsor (GVRD) shall require the construction contractor(s) to: <ul style="list-style-type: none"> • Use noise shielding and muffling devices on construction equipment that comply with all applicable standards and regulations; and • Limit construction activity to the hours between 7 a.m. and 8 p.m., Monday through Friday. 	Construction contractor	Greater Vallejo Recreation District	Condition of construction contract; field verify during construction		
TRANSPORTATION						
Impacts on St. Johns Mine Road	Mitigation Measure XV-1: The project sponsor (GVRD) shall develop and maintain a matrix of scheduled activities at McIntyre Ranch to ensure that a cumulative trip rate of 190 vehicle trips per day is not exceeded. Records of actual trips shall be maintained as project activities are implemented. The scheduling matrix shall be regularly reviewed and updated at least annually with records of actual trips, to maintain its effectiveness as a means of managing trips to the McIntyre Ranch.	Greater Vallejo Recreation District	City of Vallejo	Development of activities matrix; Condition of Site Development Permit; prior to project operation Updating and monitoring: Annually during project operation		
Transportation Safety	Mitigation Measure XV-2: The project sponsor (GVRD) shall implement the following improvements to St. Johns Mine Road and onsite roads: <ul style="list-style-type: none"> • On St. Johns Mine Road, a yellow centerline shall be added in locations where the roadway width is a minimum of twenty-feet. Dirt and vegetation encroaching on the roadway shall be cleared to the edge of the asphalt. If white edge lines are installed, the roadway shall be maintained clear of dirt and vegetation so that the edge lines are visible. • At the proposed base rock-surfaced carpool 	Greater Vallejo Recreation District	City of Vallejo	Condition of Site Development Permit, and prior to issuance of certificate of occupancy		

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	<p>parking area feet on the south side of the road outside the first cattle guard near the intersection of St. Johns Mine Road and Columbus Parkway, install a sign "Permit Parking for McIntyre Ranch Only – all other vehicles will be towed."</p> <ul style="list-style-type: none"> • Install 25 MPH pavement markings on St. Johns Mine Road between the two cattle gates. • Install a sign stating "No Thru Traffic to Hiddenbrooke" on St. Johns Mine Road. • Install 15 MPH signs and pavement markings on onsite roads. 					
UTILITIES AND SERVICE SYSTEMS						
Water Supply	<p>Mitigation Measure XVI-1: The project sponsor (GVRD) shall implement the following:</p> <ul style="list-style-type: none"> • Prepare an engineering study and design for on-site water supply and delivery for fire and drinking water, as described in 3.8 Utilities, Infrastructure and Services, B. Water Supply and System of the McIntyre Ranch Master Plan. The engineering study and design shall determine, but not be limited to, the potential impact of the proposed project, including potential pasture irrigation, on the ground water supply, and the sustainability of the groundwater supply incorporating the effect of drought years; • All gardens shall employ water-efficient irrigation systems; and • Irrigation of pastures shall be limited to a level that will not adversely affect the local aquifer, as determined by the engineering study and design for on-site water supply as described in 3.8 Utilities, Infrastructure and Services, B. Water Supply and System of the McIntyre Ranch Master Plan. 	Greater Vallejo Recreation District	City of Vallejo	<p>Engineering Study: Prior to construction</p> <p>Irrigation systems for gardens: Condition of Site Development Permit; and prior to issuance of certificate of occupancy</p> <p>Irrigation of pastures: Ongoing during project operation</p>		

Identified Impact	Related Mitigation Measure	MONITORING			VERIFICATION	
		Implementation Entity	Monitoring and Verification Entity	Timing Requirements	Signature	Date
Potential Impact on Landfill Capacity	Mitigation Measure XVI-2: Prior to the initiation of project construction, the project sponsor shall prepare a recycling plan to cover all phases of project construction. The recycling plan shall identify a strategy for handling all waste materials that will be generated during construction and demolition, in order to divert a minimum of 50 percent by weight. The project sponsor (GVRD) shall document the diversion in a summary report of the diversion to the City.	Greater Vallejo Recreation District	City of Vallejo	Recycling Plan: Condition of grading and building permit approvals; field verify during grading and construction Documentation of diversion: Prior to issuance of certificate of occupancy		
	Mitigation Measure XVI-3: The trash receptacles provided with the project's picnic tables shall include separate containers for collection of recyclable materials such as glass, paper, plastic, and tin/aluminum cans, and shall provide for the regular collection of these materials from the project site throughout the life of the project.	Greater Vallejo Recreation District	City of Vallejo	Receptacles: Condition of building permit approvals, and prior to issuance of a certificate of occupancy Collection: ongoing		
Laws and Regulations Related to Solid Waste	Mitigation Measure XVI-4: Implement Mitigation Measure XVI-2.	See Mitigation Measure XVI-2	See Mitigation Measure XVI-2	See Mitigation Measure XVI-2		
	Mitigation Measure XVI-5: Implement Mitigation Measure XVI-3.	See Mitigation Measure XVI-3	See Mitigation Measure XVI-3	See Mitigation Measure XVI-3		