

COASTAL CONSERVANCY

Staff Recommendation
May 27, 2010

**ETICUERA CREEK WATERSHED INVASIVE PLANT CONTROL
AND HABITAT RESTORATION**

Project No. 08-158-01
Project Manager: Betsy Wilson

RECOMMENDED ACTION: Authorization to disburse up to \$118,200 to The Land Trust of Napa County to implement invasive plant control and riparian habitat restoration in the Eticuera Creek watershed in northeastern Napa County.

LOCATION: Eticuera Creek Watershed located at the north end of Lake Berryessa in northeastern Napa County (Exhibit 1)

PROGRAM CATEGORY: San Francisco Bay Area Conservancy

EXHIBITS

- Exhibit 1: [Project Location and Site Map](#)
 - Exhibit 2: [Mitigated Negative Declaration and Mitigation Monitoring Plan](#)
 - Exhibit 3: [Blue Ridge Berryessa Natural Area Brochure](#)
 - Exhibit 4: [Site Photographs](#)
 - Exhibit 5: [Project Letters](#)
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RESOLUTION AND FINDINGS:

Staff recommends that the State Coastal Conservancy adopt the following resolution pursuant to Sections 31160-31165 of the Public Resources Code:

“The State Coastal Conservancy hereby authorizes disbursement of an amount not to exceed one hundred eighteen thousand, two hundred dollars (\$118,200) to The Land Trust of Napa County (“Land Trust”), in cooperation with the Blue Ridge Berryessa Natural Area Conservation Partnership, to implement invasive plant control and riparian habitat restoration in the Eticuera Creek watershed in northeastern Napa County, subject to the condition that no Conservancy funds shall be disbursed until the Executive Officer of the Conservancy has approved in writing:

1. A final work plan, including a budget and schedule.
 2. The name and qualifications of any contractors that the Land Trust intends to retain to carry out the project.
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3. A signage plan that acknowledges Conservancy funding.
4. Documentation that the Land Trust has obtained all permits and approvals required for the project under federal, state, and local law.
5. A written agreement between the Land Trust and the owner of any property on which project work will occur, permitting the work to be undertaken and allowing for access to the property for the purposes of undertaking the work and for subsequent monitoring and maintenance.”

Staff further recommends that the Conservancy adopt the following findings:

“Based on the accompanying staff report and attached exhibits, the State Coastal Conservancy hereby finds that:

1. The proposed project is consistent with the current Project Selection Criteria and Guidelines.
2. The proposed authorization is consistent with the purposes and objectives of Chapter 4.5 of Division 21 of the Public Resources Code, Sections 31160-31165, regarding the San Francisco Bay Area Conservancy Program.
3. The Conservancy has independently reviewed the Mitigated Negative Declaration and Mitigation Monitoring Plan adopted on January 22, 2009 by the California Department of Fish and Game, and attached to the accompanying staff recommendation as Exhibit 2, and finds that there is no substantial evidence that the implementation of the Eticuera Creek Watershed Invasive Plant Control and Habitat Restoration project will have a significant effect on the environment, as defined in 14 California Code of Regulations Section 15382.
4. The Land Trust of Napa County is a non-profit organization existing under 501(c)(3) of the U.S. Internal Revenue Code, and whose purposes are consistent with Division 21 of the Public Resources Code.”

PROJECT SUMMARY:

This authorization would provide up to \$118,200 to The Land Trust of Napa County (“Land Trust”) to implement invasive plant control and riparian habitat restoration in the Eticuera Creek watershed in northeastern Napa County. The proposed project is a watershed-level management effort to protect and restore riparian habitat in the 34,000-acre Eticuera Creek watershed. Invasive plant control will occur within a 300-acre portion of the upper watershed (at the Knoxville restoration site) and along 43 miles of tributary streams throughout the watershed. Invasive plant control will be followed by replanting of native riparian and floodplain vegetation at the Knoxville restoration site. The Land Trust will work closely with the Blue Ridge Berryessa Natural Area Conservation Partnership (“BRBNA Conservation Partnership”), an informal association long involved in this area.

The Eticuera Creek watershed comprises 34,000 acres at the north end of Lake Berryessa in the Putah Creek watershed (Exhibit 1). The area is a mosaic of public and private properties with substantial holdings by the California Department of Fish and Game (“DFG”), the Bureau of Land Management (“BLM”), the University of California Natural Reserve System (“UCNRS”), Homestake Mining Company, and the privately-owned Gamble Ranch. The Eticuera Creek watershed is located within the core of the 785,000-acre Blue Ridge Berryessa Natural Area

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(“BRBNA”), a regional geographic designation defined by a partnership of over 100 members, including private landowners, public land managers, universities, nonprofit organizations, area residents, and recreationists (Exhibit 3: BRBNA Brochure). The BRBNA’s diverse geology supports a unique assemblage of ecological communities, providing habitat for many birds, mammals, amphibians, reptiles, fish, and invertebrates. The area is sufficiently remote and large enough to support tule elk, mountain lions, bears, bald and golden eagles as well as a variety of hawks, osprey, harriers, falcons, owls, and other raptors. The serpentine soils of the region host a large number of rare and endemic plants, and the streams and lakes provide abundant riparian and fisheries habitat.

Ecosystem function within the Eticuera Creek watershed, particularly in the area of the former Knoxville town site, is considered impaired at many levels due to the extensive presence of invasive non-native plants. Stream channelization has increased flow rates, accelerated erosion, prevented the regeneration of native riparian plants, and facilitated the invasion of non-native species. The loss of native riparian vegetation and the change in the morphology of the stream channel has removed habitat for important vertebrate species such as the western pond turtle, foothill yellow-legged frog, long-eared owl, Cooper’s hawk, downy woodpecker, yellow breasted chat, Wilson’s warbler, and song sparrow. The impacts of invasive plant species on native communities include species endangerment, reductions in biodiversity and wildlife habitat, alterations to ecosystem processes such as fire frequency, nutrient cycling, and hydrology, increases in topsoil loss, alterations to soil microclimate, and economic impacts such as reductions in land value and livestock forage capacity.

DFG has identified invasive plant species such as tamarisk, arundo, and perennial pepperweed as the foremost threat to healthy ecosystem function at their 20,000-acre Knoxville Wildlife Area, located in the Eticuera Creek watershed. DFG and other landowners are actively involved in carrying out invasive plant control projects on their respective lands, but also recognize the need to develop and implement a watershed-level management plan, especially with respect to invasive plant control, as it will be difficult to prevent the continued introduction and spread of invasive plant species if neighboring landowners do not have the same management goals. To address this need, the Land Trust and the BRBNA Conservation Partnership, with the support of the landowners, is proposing a coordinated invasive plant control and riparian habitat restoration project to address critical stewardship needs in the watershed. The proposed project includes the following components:

- *Baseline survey and mapping of baseline conditions.* Baseline conditions of invasive infestations in tributary streams in the Eticuera Creek watershed will be conducted by field technicians on foot or ATV using hand-held GPS units. The survey and mapping work will occur in the first year of the project.
- *Invasive plant control.* Invasive plant control will occur at the 300-acre Knoxville restoration site located in the upper watershed and in a narrow corridor (approximately 75-foot wide) along 43 miles of tributary streams throughout the watershed including all of Knoxville Creek and portions of Eticuera Creek, Long Canyon, Zim Zim Creek, Nevada Creek and Adams Creek. The primary plants proposed for removal and control are tamarisk and perennial pepperweed. Yellow star thistle, black mustard, artichoke thistle, bull thistle, barbed goatgrass, medusahead, tall fescue, and Harding grass will also be targeted at the Knoxville restoration site.

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Plant control techniques will vary by species and will include the use of the following control methods: mowing, cutting, herbicides, and grazing. In some cases chemical control will be preceded by cutting (e.g. tamarisk) or mowing (e.g. pepperweed). Intensive weed control, at both the watershed-scale and at the Knoxville restoration site, will be concentrated in the first two years of the project and follow-up weed control will occur in years 3-5.

- *Riparian habitat restoration at Knoxville town site.* The historic town site of Knoxville was a mining town of several hundred people in the late 1800s. Today, there is little evidence of this habitation. All structures have deteriorated and been removed, and the only evident impact is that the area surrounding the town site is dominated by invasive plants and is devoid of woody vegetation.

Following invasive plant control, the Knoxville restoration site will be replanted with native riparian and floodplain vegetation in order to increase the resistance of the riparian community against future invasions by non-native species that could become re-invaded by tamarisk, perennial pepperweed, or other invasive plant species. The restoration work will occur in year 3 of the project and includes the following components:

- Site preparation. The Knoxville site will be prepared to create a suitable seed bed for native grasses, trees and shrubs through prescribed burning, short-term intense grazing with cattle, sheep, or goats, or mechanical harrowing.
 - Grass/forb seeding. Native grasses and forbs will be seeded within the 300-acre restoration area. A diverse mix of native grasses and forbs from different functional groups (e.g. early versus late season, perennial versus annual) will be used to increase the ability of the restored community to resist invasion by non-native species. All seeds will be collected from within a five mile radius of the restoration site.
 - Tree/shrub planting. Planting of native trees and shrubs will occur along creek banks and on surrounding floodplain. Re-establishment of riparian vegetation will focus on fast-growing species such as willow and cottonwood. Floodplain restoration will include plantings of sedges and rushes, and woody species such as valley oak, elderberry, and redbud. As with grasses and forbs, all seeds will be collected from within a five mile radius of the restoration area.
- *Hydrographic assessment.* Sections of Knoxville Creek and Eticuera Creek show evidence of channelization and accelerated erosion caused by mining and past road construction. A consultant will be hired to conduct an expert assessment of the hydrography and morphology of Knoxville and Eticuera Creeks and provide recommendations for restoring the creek to a more natural hydrography through bio-engineering methods, including installation of erosion-control geotextiles and planting of native grass plugs and other native riparian vegetation and possibly through more intensive stream channel modifications, such as the placement of gabions. Intensive modifications are outside the scope of this project, but could be integrated into future restoration plans.
 - *Monitoring/Follow-up Treatment.* Follow-up weed control treatment, replanting of woody species, and repair of herbivore exclosures and irrigation systems will be conducted as necessary in years 4-5 of the project. Tamarisk and pepperweed are known to re-sprout several years after treatment, and other weeds may have a persistent seed

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bank. Monitoring will be done to assess project success and to guide management decisions, such as when and how to conduct follow-up weed control. Monitoring will include photographic stations that will be visited annually over the course of the project. In addition a number of transects in the Knoxville restoration area will be sampled annually to track changes in the species composition and cover of the herbaceous plant community.

While the proposed project has a five-year term, Conservancy funds would only be applied to work that can be completed in the first three years of the project.

Formed in 1976, the Land Trust is a privately supported nonprofit organization which has participated in permanently protecting nearly 50,000 acres in Napa County. The Land Trust has received and successfully managed several grants from the Conservancy. The BRBNA Conservation Partnership, started in 1997, is a voluntary and inclusive organization of public, private, and non-profit partners who have a shared goal of promoting the conservation and enhancement of the lands that comprise the 785,000-acre BRBNA by encouraging the sensitive management of its natural, agricultural, recreational, archeological, and historical resources. With help from the Conservancy, the BRBNA Conservation Partnership developed a “conservation framework” to guide conservation of the BRBNA’s biodiversity, working ranches, and nature-based recreation. The Land Trust of Napa County will work closely with the BRBNA Conservation Partnership on the project.

Site Description: The Eticuera Creek watershed comprises 34,000 acres at the north end of Lake Berryessa in the Putah Creek watershed, and can be subdivided into four smaller watersheds - Knoxville Creek, Zim Zim Creek, Adams Creek, and Toll Canyon (Exhibit 1). The Eticuera Creek watershed provides outstanding examples of oak woodlands and grasslands dominated by native perennial bunchgrasses, both of which are underrepresented in the public lands of California. It provides habitat for numerous wildlife species that are California Species of Special Concern or are of interest to the public, including tule elk, prairie falcon, bobcat, black bear, mountain lion, sage sparrow, pileated woodpecker, golden eagle, and foothill yellow-legged frog. Representative photographs of the project area are provided in Exhibit 4.

Since Europeans settled the area in the mid-1800s, the primary land uses in the Eticuera Creek watershed have been mining and grazing. The project area includes the historic town site of Knoxville, which at its heyday in the late 1800s was a town of several hundred people. Today there is little evidence of this habitation. All structures have deteriorated and been removed, and the only evident impact is that the area surrounding the town site is dominated by invasive weeds and is devoid of woody vegetation.

About 82% of the plant species recorded in the watershed are native to California; the rest are non-native species that have been imported, either intentionally or unintentionally, from elsewhere since European settlement. Riparian plant communities, particularly along Knoxville and Eticuera Creeks, have been especially impacted by human disturbance and invasion.

The Eticuera Creek watershed is located within the larger 785,000 Blue Ridge Berryessa Natural Area. This region supports a variety of ecological communities including serpentine chaparral, grasslands, oak woodlands, and extensive riparian and cliff habitats. Contiguous ranches and natural areas provide unfragmented habitat for the movement of mountain lions, coyotes, and other big mammals. The BRBNA includes concentrations of rare species and globally

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significant plant communities and has been recognized as one of the most biologically diverse areas in the United States by The Nature Conservancy.

Project History: The Conservancy has worked with the BRBNA Conservation Partnership for a long time. Through the Bay Area Open Space Council, the Conservancy supported early planning and fundraising efforts to the Partnership. The initial work helped pave the way for grants that enabled mapping and the creation of the BRBNA Conservation Framework, both tools used in developing the proposed project.

In addition, the Conservancy has supported a number of land acquisitions in the region including the 12,575-acre Lauffs Ranch property acquired by DFG in 2005 (and adjacent to the 8,078-acre Knoxville Wildlife Area acquired by DFG in 2000), a 75-acre addition to UC McLaughlin Natural Reserve in 2004, over 700 additional acres to the UC Quail Ridge Reserve between 2001-2008, and a 59-acre addition to the UC Stebbins Cold Canyon Reserve in 2006.

Most recently, the Conservancy has supported trail and restoration work around Lake Berryessa through providing grant funds to Berryessa Trails and Conservation (BT&C), a non-profit organization working on trail and conservation projects in the BRBNA region. The work of BT&C comes out of several years of recreation planning for the BRBNA and the Lake Berryessa region in particular. The stewardship project and improvement of recreation access are part of the larger BRBNA vision.

PROJECT FINANCING

Coastal Conservancy	\$ 118,200
Wildlife Conservation Board	531,900
Homestake Mining Company	<u>50,000</u>
Total Project Costs	\$ 700,100

The anticipated source of Conservancy funds is the fiscal year 08/09 appropriation to the Conservancy from the Safe Drinking Water, Water Quality and Supply, Flood Control, River and Coastal Protection Bond Act of 2006 (Proposition 84) (Public Resource Code Sections 75001 *et seq.*). Consistent with Section 75060, the proposed project will protect and restore natural habitat values of a watershed of San Francisco Bay and is consistent with Chapter 4.5 of Division 21, as discussed below.

Proposition 84 also requires that for restoration projects that protect natural resources, the Conservancy assess whether the project meets at least one of the criteria specified in Section 75071(a)-(e). The proposed project satisfies four of the specified criteria as follows: 1) consistent with subsection (a), the project will protect and enhance the biological diversity and integrity of a large block of linked, unfragmented habitat; 2) consistent with subsection (b), the project will contribute to the long-term protection of and improvement to the water and biological quality of the Eticuera Creek watershed, a watershed which drains to the Sacramento River; 3) consistent with subsection (c), the proposed work in the Eticuera Creek watershed will result in restoration of 300 acres of riparian habitat, a major habitat type that has been heavily disturbed and widely destroyed around San Francisco Bay and the State, and 4) consistent with

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subsection (e), non-state matching funds from the Homestake Mining Company and other partnering landowners are being contributed toward eradication, restoration, monitoring, and maintenance costs.

CONSISTENCY WITH CONSERVANCY'S ENABLING LEGISLATION:

This project would be undertaken pursuant to Chapter 4.5 of the Public Resources Code, which established the San Francisco Bay Area Conservancy Program.

Under Section 31162, the Conservancy may award grants to public and private agencies in the nine-county San Francisco Bay Area.

Consistent with Section 31162(b), the proposed invasive plant control and habitat restoration project will restore and enhance natural habitats, watershed, and other open-space resources of regional importance, a primary goal of the San Francisco Bay Area Conservancy Program. The project will remove invasive non-native plants, including tamarisk and perennial pepperweed, along 43 miles of creek in the watershed and will restore 300 acres of riparian and floodplain habitat at the former Knoxville town site.

This project meets the criteria set forth in Section 31163(c), in that it would: (1) be consistent with the DFG's Knoxville Wildlife Area Management Plan, BLM's Resource Management Plan, the UC McLaughlin Reserve Management Plan, NRCS's watershed objectives for private land, and the BRBNA Conservation Framework; (2) involve multiple agencies working together; (3) be implemented and completed in a timely manner; (4) provide benefits that would be lost if the project is not implemented quickly as the nascent populations of invasive plant species in the watershed can be more easily controlled at their current levels; and (5) include matching funds from several other sources, including the Wildlife Conservation Board, Homestake Mining Company, and in-kind contributions of staff time and resources from partnering public agency and private landowners.

**CONSISTENCY WITH CONSERVANCY'S 2007
STRATEGIC PLAN GOAL(S) & OBJECTIVE(S):**

Consistent with **Goal 10, Objective H** of the Conservancy's 2007 Strategic Plan, the proposed project will result in restoration of approximately 300 acres of riparian and floodplain habitat at the former Knoxville town site. In addition, the project includes primary invasive species eradication efforts on 6.8 linear miles of creek on the Gamble property and follow-up treatment on over 36 linear miles of creek in the Eticuera Creek watershed.

Consistent with **Goal 10, Objective K** of the Conservancy's 2007 Strategic Plan, the proposed project will implement one project to control or eradicate non-native invasive species within a 300-acre portion of the upper watershed at the Knoxville restoration site and along 43 linear miles of creek in the Eticuera Creek watershed.

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**CONSISTENCY WITH CONSERVANCY'S
PROJECT SELECTION CRITERIA & GUIDELINES:**

The proposed project is consistent with the Conservancy's Project Selection Criteria and Guidelines, last updated on June 4, 2009, in the following respects:

Required Criteria

1. **Promotion of the Conservancy's statutory programs and purposes:** See the "Consistency with Conservancy's Enabling Legislation" section above.
2. **Consistency with purposes of the funding source:** See the "Project Financing" section above.
3. **Support of the public:** The project has the support of the partnering public agency and private landowners, including DFG, BLM, UCNRS, and the Gamble Ranch. These landowners are actively involved in carrying out invasive plant control projects on their respective lands, but also recognize the benefits of cooperative efforts that cross jurisdictions and address the entire watershed. In addition, there is significant public support for the project including State Senator Pat Wiggins, Assemblymember Noreen Evans, the Natural Resource Conservation Service, Homestake Mining Company, and the U.C. Cooperative Extension. Project letters are included as Exhibit 5.
4. **Location:** The proposed project is in Napa County, which is within the jurisdiction of the San Francisco Bay Area Conservancy Program.
5. **Need:** The Wildlife Conservation Board is expected to contribute over seventy percent of the funds required for this multi-year project; however additional funding is still needed from other sources. Partnering landowner agencies are contributing in-kind staff time and resources and are involved in carrying out invasive plant control projects on their respective lands. However, due to severe funding shortages for both state and federal public land management, these agencies do not have the financial resources to implement a coordinated land management effort in the watershed. Without the Conservancy's support, there will not be enough funding to implement the project on a coordinated, watershed-scale level.
6. **Greater-than-local interest:** The Eticuera Creek watershed's remote landscape contains much of California's native biodiversity including oak woodland, riparian, chaparral, and rare serpentine habitats. The proposed project will improve habitat for numerous wildlife species that are California Species of Special Concern, including foothill yellow-legged frog, western pond turtle, Cooper's hawk, the prairie falcon, long-eared owl, and California sage sparrow. The Eticuera Creek watershed is a part of the larger BRBNA, which provides unfragmented habitat for the movement of mountain lions, coyotes, and other big mammals, includes concentrations of rare species and globally significant plant communities, and has been recognized as one of the most biologically diverse areas in the United States by The Nature Conservancy.
7. **Sea level rise vulnerability:** The project is located in an area that is not vulnerable to impacts due to anticipated rise in sea levels attributable to global climate change.

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Additional Criteria

8. **Urgency:** The project is urgent in that the nascent populations of invasive plant species in the Eticuera Creek watershed can be more easily controlled at their current levels. With DFG's successful removal of tamarisk along much of Eticuera Creek, the opportunity exists at this juncture to fully eliminate invasive plant species in the riparian corridor and restore native vegetation where needed. Implementing additional invasive plant control measures now takes advantage of and builds upon the investment that has already been made in the watershed.
9. **Leverage:** See the "Project Financing" section above.
10. **Innovation:** The proposed project represents the collaborative efforts of several public agency and private partners to address the impacts of invasive plants and to restore the riparian ecosystems of the Eticuera Creek watershed. In addition to achieving measurable improvements, the BRBNA Conservation Partnership hopes to provide a successful model of public-private cooperation for land stewardship in the region and beyond.
11. **Readiness:** The BRBNA Conservation Partnership has been active in the region since 1997 and has commitments of support and cooperation from the partnering landowners. Preliminary planning work and initial phases of invasive plant control have already been conducted by UCNRS and DFG and the partnering landowners are ready to undertake the next phase of invasive plant control and restoration work on their properties. The BRBNA Conservation Partnership is ready to implement the project once the necessary funding has been obtained.
12. **Realization of prior Conservancy goals:** "See "Project History" above."
13. **Cooperation:** The key element of the proposed project is the cooperative relationship among several public agency and private partners (i.e., DFG, BLM, UCNRS, and Gamble Ranch) to provide for coordinated, complementary land management throughout the watershed. The partnering landowners are actively involved in carrying out invasive plant control projects on their respective lands but also recognize the benefits of cooperative efforts that cross jurisdictions and address the entire watershed. Each partnering agency has worked extensively in the project area and has been a participant in the BRBNA Conservation Partnership for many years. In addition, the Natural Resource Conservation Service has helped develop the scope and details of the proposed project. And the Audubon California Landowner Stewardship Program will provide on-the-ground technical support and labor, as well as facilitate the involvement of the California Conservation Corps and the Center for Land Based Learning in some of the restoration efforts.
14. **Minimization of Greenhouse Gas Emissions:** The project has the potential to generate short-term greenhouse gas emissions associated with vehicles (e.g., pick-up truck and ATV) used to shuttle work groups to and from the work sites and a tractor may be used in the restoration work, but these emissions would be limited and not cumulatively significant. In addition, the restoration plan includes the planting of native perennial grasses and new shrubs and oaks. Oaks have a very high density of carbon compared to other trees and may sequester almost double the amount of soil carbon underneath their canopy than places where there are no oaks. Perennial bunch grasses, which will be planted to replace weeds in the restoration area, are believed to sequester more carbon due to their larger root masses than

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annual weeds. Overall, no increase in greenhouse gases is expected from implementation of the proposed project.

COMPLIANCE WITH CEQA:

The DFG is the lead agency under the California Environmental Quality Act (“CEQA”) for the Eticuera Creek Watershed Invasive Plant Control and Habitat Restoration Project. The DFG circulated the proposed Mitigated Negative Declaration and Initial Study for the project for public review between December 9, 2008 and January 8, 2009. No public comments were received. The DFG adopted a Mitigated Negative Declaration and Mitigation Monitoring Plan (Exhibit 2) for the Eticuera Creek Watershed Invasive Plant Control and Habitat Restoration Project on January 22, 2009.

The Initial Study indicated that the proposed project has the potential to significantly affect biological resources, cultural resources, hazards and hazardous materials, and hydrology and water quality in the project area and vicinity. Overall, the proposed project will have a long-term beneficial impact to sensitive species through improvement of habitat and water quality within and adjacent to the project area. Impacts are short term and will be minimized through avoidance and minimization measures, as well as through mitigation. For these reasons, project impacts are less than significant with mitigation incorporated.

Biological Resources: While the project is designed to increase or protect populations of sensitive species in the long term, implementation of the proposed project could result in short-term, potentially significant impacts to sensitive wildlife and plant species. A number of California Species of Special Concern have been recorded in the project area, including the western pond turtle, foothill yellow-legged frog, and long-eared owl. A number of sensitive plant species also occur in the project area including Adobe lily, Cleveland’s milkvetch, swamp larkspur, serpentine sunflower, bare monkeyflower, Cleveland’s butterweed, and marsh zigadenus.

The following mitigation measures will be implemented to ensure that potential short term impacts to special status wildlife and plant species would be reduced to a less than significant level:

- Prior to any disturbance near serpentine wetland seeps, a qualified botanist or trained field technician shall survey the area for sensitive plants. If sensitive plants are found, invasive weeds shall be hand-pulled if they occur within 25 feet of a sensitive plant. Herbicides shall not be applied within 25 feet of a sensitive plant.
- Prior to work crews performing duties that require workers to step within the channel and on emersed cobble/gravel bars of any stream, a qualified biologist or trained field technician shall search the area for foothill yellow-legged frog and western pond turtle. If found, the frogs (including larval forms) and pond turtles shall be relocated immediately upstream of the work area. In addition, only ATVs (i.e., not pickup trucks or other vehicles) will be allowed for wet stream crossings
- Prior to any work activities being conducted near a nest of long-eared owl, bald eagle, golden eagle, or burrowing owl, a qualified biologist or trained field technician shall perform a survey of the area. If a nesting long-eared owl, golden eagle, bald eagle, or burrowing owl is

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found, all work in the area shall cease until the nest is determined by the biologist or technician to be not occupied.

- To minimize impacts to breeding passerine birds, prior to removal of tamarisk, individual tamarisk trees shall be searched for bird nests by a qualified biologist or trained field technician. If a nest is found, it shall be flagged in the field and be given a 100-foot buffer where no tamarisk shall be removed until after the young have fledged as determined by a qualified biologist or trained field technician.
- If livestock grazing is used for site preparation at the 300-acre Knoxville restoration site, the livestock shall be excluded from any riparian areas using fencing, including electric fencing if needed. Fencing shall be checked periodically and any portions found damaged or in disrepair shall be immediately repaired.

Cultural Resources: Several cultural resource studies have occurred within the Eticuera Creek watershed documenting significant historic resources. Ground disturbing activities (e.g., harrowing, grazing) are proposed as potential site preparation tools at the 300-acre Knoxville restoration site. A qualified archaeologist shall conduct a field survey prior to ground site preparation. Harrowing shall not be conducted at documented historic sites, areas where there are obvious surface remains, and areas where structures are indicated on historic maps. Grazing shall be the preferred method of site preparation in areas with concentrations of historic resources.

If human remains are encountered within the restoration area, work shall halt in the vicinity, the County Coroner shall be notified, and a qualified archaeologist shall be contacted to evaluate the situation. If human remains are of Native American origin, the Coroner shall notify the Native American Heritage Commission within 24 hours of this identification.

Hazards and Hazardous Materials: The proposed project involves the use of herbicides. All herbicide work shall occur under the supervision of a licensed pesticide applicator. All personnel transporting or applying herbicides shall be instructed by a licensed pesticide applicator on proper procedures for handling and applying pesticides. Herbicides shall be mixed and transported in batches of 100 gallons or less to minimize impacts of accidental spills. All transport vehicles shall be equipped with spill kits.

Hydrology and Water Quality: The project involves application of herbicide near water and the use of vehicles to cross stream channels. Water quality could potentially be harmed by improper application of herbicide or by erosion and sedimentation caused by vehicle use. All herbicides used in the vicinity of standing water shall be registered for use in aquatic environments. And, as noted above, all herbicide use shall be supervised by a licensed pesticide applicator. Pre-existing culverts and historic ranch roads shall be used to limit the need for stream crossings. Sediment delivery to watercourses shall be avoided and minimized by crossing dry portions of stream where possible, and by only allowing the use of ATVs through wet stream crossings. All ATVs that cross streams shall be inspected daily for leaks and discharge of engine oil lubricants. All fueling and maintenance activities shall occur away from creek channels.

Greenhouse Gas Emissions: The project involves vehicular use (pick-up trucks and ATVs) to shuttle work groups to and from the work sites as well as tractor use to conduct the restoration work; therefore, the project has the potential to generate short-term greenhouse gas emissions associated with vehicle uses. However, the project design incorporates best management

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practices of use of the fewest vehicles possible and carpooling work groups to the project site. The project design also includes the planting of native perennial grasses and new shrubs and oaks. Oaks have a very high density of carbon compared to other trees and may sequester almost double the amount of soil carbon underneath their canopy than places where there are no oaks. Perennial bunch grasses, which will be planted to replace weeds in the restoration area, are believed to sequester more carbon due to their larger root masses than annual weeds. Therefore, the project, as designed, does not have the possibility for a significant greenhouse gas emissions impact on the environment.

Staff has independently reviewed DFG's Adopted Mitigated Negative Declaration and Mitigation Monitoring Plan. Additionally, staff has included in its independent review an analysis of the project's possible impacts from greenhouse gas emissions and determined that the project does not have the potential for a significant effect due to greenhouse gas emissions. The additional review for this possible effect was conducted on the project because after the Mitigated Negative Declaration was adopted by DFG, the California Natural Resources Agency adopted new CEQA Guidelines requiring that an agency consider the proposed project's possible impacts from greenhouse gas emissions.

Staff recommends that the Conservancy find that the proposed Eticuera Creek Watershed Invasive Plant Control and Habitat Restoration project, as mitigated, will not have a significant effect on the environment as defined in 14 Cal. Code of Regulations, Section 15382. Upon approval, staff will file a Notice of Determination for the project.