

COASTAL CONSERVANCY

Staff Recommendation
May 26, 2016

**LOWER GREEN VALLEY CREEK
COHO MIGRATION ENHANCEMENT**

Project No. 16-014-01
Project Manager: Lisa Ames

RECOMMENDED ACTION: Authorization to disburse up to \$378,366 to the North Coast Resource Conservation and Development Council to: 1) develop conceptual designs for enhancement of at least two off-channel coho salmon habitat sites; 2) develop comprehensive water conservation plans on at least three priority agricultural properties; and 3) construct a 100,000 gallon rainwater catchment system in the Lower Green Valley Creek watershed in Sonoma County.

LOCATION: Lower Green Valley Creek, a tributary to the Russian River in Western Sonoma County near Sebastopol (see Exhibit 1: Project Location)

PROGRAM CATEGORY: Resource Enhancement

EXHIBITS

Exhibit 1: [Project Location Map](#)

Exhibit 2: [Project Site Maps and Designs](#)

Exhibit 3: [Project Letters](#)

RESOLUTION AND FINDINGS:

Staff recommends that the State Coastal Conservancy adopt the following resolution pursuant to Sections 31160 *et seq* of the Public Resources Code:

“The State Coastal Conservancy hereby authorizes the disbursement of up to \$378,366 (three hundred seventy-eight thousand, three hundred sixty-six dollars) to the North Coast Resource Conservation and Development Council (NCR CDC) to: 1) develop conceptual designs for enhancement of at least two off-channel coho salmon habitat sites; 2) develop comprehensive water conservation plans on at least three priority agricultural properties; and 3) construct a 100,000 gallon rainwater catchment system in the Lower Green Valley Creek watershed in Sonoma County. This authorization is subject to the following conditions:

1. Prior to the disbursement of funds for the design and planning components of the project, NCR CDC shall submit for the review and approval of the Conservancy’s Executive Officer,

a final work program, including schedule and budget, and the names of any contractors that NCRCDC intends to retain.

2. Prior to the disbursement of funds for constructing the rainwater catchment system:
 - a. NCRCDC shall submit for the review and approval of the Conservancy's Executive Officer: a work program, including schedule and budget; the names of any contractors that NCRCDC intends to retain; a plan for acknowledging Conservancy funding; and evidence that all permits and approvals required to implement the project have been obtained.
 - b. NCRCDC shall enter into and record an agreement with the owner of the property on which the project will be carried out sufficient to accomplish the purposes of the project and to protect the public interest in the project pursuant to Public Resources Code Section 31116(c)."

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 authorization is consistent with Chapter 6 of Division 21 Public Resources Code regarding the enhancement of regionally important salmonid habitat.
2. The proposed project is consistent with the current Conservancy Project Selection Criteria and Guidelines.
3. NCRCDC is a nonprofit organization existing under section 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 will enable the NCRCDC in conjunction with the Gold Ridge Resource Conservation District (GRRCD) to complete a project that will restore coho habitat and riparian function in Lower Green Valley Creek through planning and implementation efforts to offset water diversions during critical rearing and migration times and provide off-channel winter refugia. GRRCD has special expertise in Sonoma County in undertaking the planning, design and implementation of tasks associated with the proposed project, but has concerns about its ability to handle project management. NCRCDC has agreed to undertake the overall project administration, while GRRCD, as its contractor, will carry out the planning and design tasks and the on-the ground work.

The proposed project's components include: 1) developing conceptual designs for enhancement of at least two off-channel coho salmon habitat sites; 2) developing comprehensive water conservation plans on at least three priority agricultural properties; and 3) constructing a 100,000 gallon rainwater catchment system on a 300-goat dairy to eliminate withdrawals from a tributary

to Green Valley Creek, while attenuating stormwater that is otherwise channeled into the tributary from a variety of capture surfaces.

Central California Coast coho salmon (*Oncorhynchus kisutch*) are on the brink of extinction. Although their range once stretched inland along more than 250 miles of California's coast, only a few watersheds now support more than remnant populations. Green Valley Creek, a tributary to the lower Russian River in Sonoma County, is one of the few watersheds in the region that still maintains a small, wild population of coho.

The Green Valley Creek watershed has been identified by state and federal government as priority recovery habitat for coho salmon and steelhead trout. It is a primary focus for the California Department of Fish and Wildlife (CDFW) and the National Marine Fisheries Service (NMFS) coho recovery programs, the Russian River Coho Salmon Captive Broodstock Program, and the Russian River Coho Water Resources Partnership, which has identified the Green Valley Creek watershed as one of only five first priority streams critical for near term salmonid recovery in the Russian River watershed.

Since 2009, GRRCD and its partners, through multiple funding sources, including the Conservancy, have prepared two phases of a management plan for the Green Valley Creek Watershed that focused on the prime spawning and rearing reaches of Upper Green Valley and Purrington Creek subwatersheds, and their potential to support salmonid populations through the restoration of watershed function. GRRCD has spearheaded multiple restoration efforts in these upper reaches, including in-stream habitat enhancement, sediment reduction, water conservation, and fish passage barrier removal.

While coho habitat restoration work continues in the upper watershed, the planning process also highlighted the importance of focusing on the lower reach of the Green Valley Creek mainstem as a migration corridor. Historically, the lower reaches likely provided extensive winter off-channel high flow refuge and rearing opportunities for adults and outmigrating juveniles. Many areas throughout this low-gradient reach now suffer from channel incision, vertical banks, homogenous bed form, and lack of floodplain connectivity, creating adverse conditions for migrating adult and juvenile salmonids. In addition to the degraded channel form, fish passage barriers hinder access to the prime spawning habitat in the upper watershed and water diversions for vineyards and other demands draw down streamflow during critical low flow periods.

In order to enhance the coho habitat and riparian function of the Lower Green Valley Creek, under the planning and design component of the proposed project, GRRCD will: work closely with landowners and regulatory agency staff to evaluate the existing floodplain and channel topography; identify and verify at least two sites for design development; model winter streamflows through the project reach; and develop conceptual alternative designs for habitat enhancement. By promoting floodplain connectivity and attenuating channelized winter flows, the designs will also serve to promote groundwater recharge in an area of significant overdraft (O'Connor Environmental Inc., *Integrated Surface and Groundwater Modeling and Flow Availability Analysis for Restoration Prioritization Planning: Green Valley/Atascadero and Dutch Bill Creek Watersheds*, 2015 [OEI]). The preferred design alternative will be selected for each site based on balancing the quantity and quality of habitat created with construction costs to maximize value. Selected concepts will be designed to the 30% plan set level, which, along with construction design and implementation cost estimates and a basis-of-design report that can be used to solicit additional support and funding for project completion from other funding sources.

To address streamflow impairments affecting rearing and migration, the proposed project also includes water conservation planning and implementation. GRRCD is currently conducting outreach to agricultural water users throughout lower Green Valley Creek, and performing preliminary site assessments to determine where significant water management strategies could be developed. Through this funding, GRRCD will develop comprehensive water conservation plans on at least three priority agricultural properties to lessen the impacts of summer irrigation and spring frost protection withdrawals, while capturing stormwater to temper winter flows and promote groundwater recharge. Plans may include wind machine placement, micro-sprinkler system installation, winter water storage and rainwater catchment, tile drainage capture, cover crops, and soil health measures to enhance water holding capacity and lessen irrigation needs. Plans will estimate water savings, and include Natural Resources Conservation Service (NRCS) practices and specifications to ensure compliance with its Environmental Quality Incentives Program (EQIP) funding. Plans will then be submitted to both NRCS and appropriate grant programs for implementation funding. Landowners will provide cost share for both plan development and implementation.

In addition to these planning efforts, a water conservation and alternative supply project near the headwaters of a perennial tributary in the project reach will be implemented. A 100,000-gallon rainwater catchment system will be constructed on a 300-goat dairy. The catchment system consists of three rainwater storage tanks, water catchment and conveyance infrastructure on barn and house roofs and water lines to the storage tanks. (See Exhibit 2). The catchments system will serve to eliminate withdrawals from a tributary to Green Valley Creek (on which the dairy is located) while attenuating stormwater that is otherwise channeled into the tributary. This tributary feeds into one of the primary site opportunities for off-channel habitat re-creation, since tributary confluences are known to be high-value areas for high flow refugia and winter coho rearing. The tributary also appears to contain viable spawning habitat for steelhead. Reducing late spring and early summer diversions from the tributary will help maintain and improve the off-channel refugia habitat at the confluence, riffle connectivity in the mainstem, and outmigration conditions for any salmonids utilizing the tributary. The landowner will sign a forbearance/maintenance agreement stipulating that water savings will be used to offset, not augment, summer diversions. The landowner is providing 10% cost share towards construction costs. The Conservation Corps North Bay has indicated they are interested in assisting in the construction of the rainwater catchment system.

Acting as a fiscal sponsor, NCR CDC has successfully partnered with resource conservation districts in Marin, Sonoma, Lake and Mendocino counties to facilitate the support of sustainable agriculture and protection of natural resources. NCR CDC has served as fiscal sponsor for the GRRCD on numerous projects including the Westminster Wood Water Conservation Project and the Hughes Dairy Salmon Creek Off-Channel Pond Project. NCR CDC's project administration facilitates GRRCD's continued participation in grant programs in a cost-effective and sustainable manner.

Since 1941, GRRCD has been providing educational, technical and funding assistance to agricultural operators in watersheds throughout the district. GRRCD has successfully implemented and completed numerous federal and state-funded grant programs and projects. The GRRCD has a long history of successfully implementing and providing match funding for Conservancy-funded projects. With support from the Conservancy, GRRCD planned and implemented sediment assessment and resource enhancement projects in Salmon Creek, Estero

Americano, and Dutch Bill Creek watersheds in western Sonoma County. As mentioned above, the Conservancy funded GRRCD to develop the Upper Green Valley Watershed Management Plan which identified the numerous factors affecting salmonid survival and riparian function throughout the watershed. In 2014, GRRCD received Conservancy funding for design work and the construction of an off-channel habitat enhancement project in Thomas Creek, a tributary to Green Valley Creek. The proposed project seeks to build on this work through further design and implementation of enhancement efforts addressing the habitat impairment issues identified in the Plan. Through its Climate Ready grant program, the Conservancy funded GRRCD to develop a Design for Agricultural Water Resiliency planning project and subsequent rainwater catchment construction project in the Salmon Creek watershed.

In order to address the primary habitat impairments along the 5-mile stretch of lower Green Valley Creek, the NCRDC submitted an application to fund the Lower Green Valley Creek Coho Migration Enhancement Project under the Conservancy's Proposition 1 (Water Quality, Supply, and Infrastructure Improvement Act of 2014, Water Code § 79700 et seq.) competitive grant process. The proposed project was selected under the Conservancy's *Proposition 1 Grant Program Guidelines* because it ranked highly in meeting the evaluation criteria of a multi-benefit ecosystem and watershed protection and restoration project that benefits anadromous fish. If implemented, the Lower Green Valley Creek Coho Migration Enhancement Project will achieve a number of the purposes outlined in Chapter 6 of Proposition 1 including: assisting in the recovery of an endangered species by improving watershed health, in-stream flows and fish passage; protecting and restoring aquatic, wetland and migratory bird ecosystems including fish and wildlife corridors; reducing pollution or contamination of rivers and streams, and protecting or restoring natural system functions that contribute to water supply, water quality, or flood management; implementing watershed adaptation projects for which the Grantee has consulted with the state and local conservation corps and included their services; and assisting in water related agricultural sustainability projects.

Site Description: The focus of the project is the approximately 5-mile lower reach of the Green Valley Creek mainstem, from its confluence with Atascadero Creek down to the Russian River (see Exhibit 1: Project Location). The reach serves as the migration corridor for salmonids accessing the prime spawning and rearing reaches in the upper watershed, and historically provided winter flow refugia for outmigrating smolts. Lower Green Valley Creek is comprised of a low-gradient channel incised into alluvial valleys. The channel is simplified and largely disconnected from its floodplain; when it does overtop its banks during major storm events, fish are flushed out onto graded agricultural fields and left stranded. While much of the lower half of this reach remains forested, vineyard development has expanded both within the floodplain and along adjacent ridgetops, increasing water use needs for summer irrigation or spring frost protection, and exacerbating channelized winter high flow velocities from tile drainage systems.

Just above the Iron Horse property as indicated on Exhibit 2, forest cover on the hills surrounding the creek becomes sparser, with expanded agricultural and rural residential development. A streamflow availability analysis recently completed for the watershed (OEI) cited this reach as suffering from long-term pool disconnection during dry years, and recommends restoration projects aimed at enhancing streamflow and improving juvenile rearing habitat be focused in this reach. The riparian corridor itself through this reach is relatively wide, particularly through the nearly mile-long Iron Horse Vineyards property, and offers multiple opportunities for off-channel habitat creation. A site visit conducted in fall 2015 in coordination

with the landowner and the habitat restoration design firm Prunuske Chatham, Inc, identified two large unused areas where flooding and fish stranding regularly occurs, and could be devoted to off-channel habitat enhancement. The landowner is willing and interested in providing space for habitat restoration projects. Additional off-channel habitat planning efforts are currently underway just upstream of the Iron Horse site, on the CDFW-owned Atascadero Reserve (see Exhibit 2).

The 300-goat dairy sits just uphill of Iron Horse Vineyards, pulling water from a tributary that runs down through one of the proposed off-channel habitat sites. The proposed rainwater catchment system is meant to further enhance this confluence habitat, tempering stormwater through the site during high flows and improving summer stream flows.

Project History: As noted above, federal and state regulatory agencies have recognized the Green Valley Creek watershed as priority recovery habitat for coho salmon and steelhead trout. Thus, since 2009, GRRCD and its partners have undertaken planning and implemented multiple restoration projects in the Green Valley Creek Watershed, focusing on the prime spawning and rearing reaches of Upper Green Valley and Purrington Creek subwatersheds.

More recently, however, attention has been focused on the lower reaches of the Green Valley Creek mainstem, because planning and research has indicated that it has historically provided extensive winter off-channel high flow refuge and rearing opportunities for adult and outmigrating juvenile coho. The proposed project was developed in order to address degradation and fish passage barriers present in the lower reaches.

NCRCDC submitted an application to the Conservancy through the November, 2015 Prop 1 proposal solicitation. The project was reviewed and scored highly for the reasons discussed in the Project Summary section above.

PROJECT FINANCING

Coastal Conservancy	\$378,366
National Fish and Wildlife Foundation (pending)	\$45,000
National Oceanic and Atmospheric Agency (pending)	\$35,000
NRCS	\$10,000
Sonoma County Water Agency	\$9,000
Landowner Cost Share	\$15,000
Project Total	\$492,366

In addition to securing the funding for the project, NCRCDC and GRRCD are contributing \$10,500 in staff time.

The expected source of Conservancy funds for this project is the fiscal year 2015/16 appropriation to the Conservancy from the Water Quality, Supply, and Infrastructure Improvement Act of 2014 (Proposition 1, Water Code § 79700 et seq.). Funds appropriated to the Conservancy derive from Chapter 6 (commencing with § 79730) and may be used “for multi-

benefit water quality, water supply, and watershed protection and restoration projects for the watersheds of the state” (Section 79731). Section 79732(a) identifies the specific purposes of Chapter 6, which include: implementing watershed adaptation projects in order to reduce the impacts of climate change (subsection (a)(2)); protecting and restoring aquatic, wetland and migratory bird ecosystems including fish and wildlife corridors (subsection (a)(4)); the protection and restoration of coastal watersheds (subsection (a)(10)); reducing pollution or contamination of rivers and streams, and protecting or restoring natural system functions that contribute to water supply, water quality, or flood management (subsection (a)(11)); assisting in the recovery of endangered species by improving watershed health, instream flows, and fish passage (subsection (a)(12)); and assisting in water related agricultural sustainability projects (subsection (a)(13)).

As required by Proposition 1, the proposed project provides multiple benefits. The project focuses on restoring overall watershed function while working to create a healthy stream system that effectively provides habitat for anadromous fish, promotes groundwater recharge, tempers stormwater, and establishes floodplain connectivity. The project works to seek alternatives for human water supply while attenuating flooding concerns, creating long-term solutions that balance the needs of ecosystem function with a growing population.

Proposition 1 (Section 79707 (b)) also suggests that priority be to projects that leverage private, federal, or local funding. It is anticipated that a combination of federal and local funding and landowner contributions will be made available for the project

The proposed project was selected through a competitive grant process under the Conservancy’s *Proposition 1 Grant Program Guidelines* adopted in June 2015. (See § 79706(a)). The proposed project meets each of the evaluation criteria in the Proposition 1 Guidelines as described in further detail in this “Project Financing” section, the “Project Summary” section and in the “Consistency with Conservancy’s Project Selection Criteria & Guidelines” section of this report.

CONSISTENCY WITH CONSERVANCY’S ENABLING LEGISLATION:

The proposed project is undertaken pursuant to Chapter 6 of Division 21 of the Public Resources Code, as follows:

Pursuant to Pursuant to §31251, the Conservancy may award grants to local public agencies and nonprofit organizations for the purpose of enhancement of coastal resources which, because of human-induced events, or incompatible land uses, have suffered loss of natural and scenic values. Consistent with this section, the project will enhance and restore fish habitat and aid in the recovery of salmon and steelhead populations that have been degraded by agricultural land use practices. Thus, this grant will be used for corrective measures that will enhance the natural character of the area, consistent with Section 31251.

As required by Section 31252, the area of the proposed project is identified in the Sonoma County Local Coastal Program (LCP) as requiring public action and assistance to resolve existing resource protection problems. The LCP identifies the need for public assistance to maintain flows in streams identified as anadromous fish habitat such as the Green Valley Creek, a tributary to the Russian River, at a minimum flow level as required to continue their use as an anadromous fish spawning area.

Pursuant to §31253, “[t]he Conservancy may provide up to the total of the cost of any coastal resource enhancement project” Consistent with this section, the proposed contribution, intended for design, water conservation planning, and implementation of a rainwater catchment system represents 80% of the overall project cost and, in determining the funding amount, the Conservancy has considered factors relevant to project eligibility, as detailed in the “Consistency with Conservancy’s Project Selection Criteria & Guidelines” section, below.

**CONSISTENCY WITH CONSERVANCY’S 2013 STRATEGIC PLAN
GOAL(S) & OBJECTIVE(S), AS REVISED JUNE 25, 2015:**

The proposed project is consistent with the following goals and objectives of the Conservancy’s 2013-2018 Strategic Plan:

Consistent with **Goal 5, Objective A**, the project includes the development of plans for off-channel sites and water conservation for the restoration and enhancement of the Lower Green Valley Creek, a coastal stream corridor habitat.

Consistent with **Goal 5, Objective D**, the project’s construction of the rainwater catchment system will implement a project that enhances the Green Valley Creek coastal watershed and floodplain.

Consistent with **Goal 5, Objective E**, the project includes the construction of a rain catchment system designed to ensure sufficient instream flow, and provide instream habitat and favorable water temperatures.

Consistent with **Goal 6, Objective B**, the project will foster the long-term viability of coastal working lands while assisting agricultural producers with reducing the impacts of their operations on wildlife habitat and water quality. The proposed project seeks to enhance the sustainability of agricultural operations in the project area by promoting alternatives to riparian diversions, a critical step with the ongoing drought and increasing competition for water between agricultural water users and ecological function. The project also promotes wildlife habitat enhancement and expansion of the riparian corridor on agricultural lands.

Consistent with **Goal 7, Objective D**, the project includes implementation of an adaptation pilot project that will reduce hazards from extreme storm events, and which will protect natural resources and maximize public benefits. Climate change models for the region predict that rainfall will become increasingly unpredictable, with a prolonged dry season and storms occurring in more sporadic, intense events. The proposed project seeks to both help agricultural operations adjust to this through alternative water storage and conservation measures, and provide stream habitat improvements that will both improve summer low flow conditions and winter high-flow refugia.

**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 October 2, 2014, 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. **Promotion and implementation of state plans and policies:** The proposed project would serve to promote and implement several state plans, including:
 - *California Water Action Plan* (2014). The California Natural Resources Agency, California Environmental Protection Agency, and California Department of Food and Agriculture developed this Water Action Plan to meet three broad objectives: more reliable water supplies, the restoration of species and habitat, and a more resilient, sustainably managed water resources system. This project will advance the following goals of the Plan : Goal #4, Protect and restore important ecosystems - the project seeks to develop plans to restore floodplain connectivity and the diverse array of riparian and wetland species it supports; Goal #5, Manage and prepare for dry period - the project seeks to both plan and implement water conservation and large-scale stormwater storage for agricultural operations currently dependent on riparian or unreliable groundwater diversions, while promoting measures to address dry season streamflow impairments; Goal #6, Expand water storage capacity and improve groundwater management - the project seeks to not only construct large scale water storage, but promote agricultural practices that enhance soil water holding capacity and groundwater recharge; and Goal #8, Increase flood protection. The project seeks to promote agricultural practices that can reduce stormwater runoff, while constructing secondary channel meanders that reconnect floodplains and promote groundwater recharge during storm events.
 - *California @ 50 Million: The Environmental Goals and Policy Report* (Governor’s Office of Planning and Research, 2013 Draft). *Build a Resilient and Sustainable Water System*, Action #5: Prioritize watershed protection and health in ecosystem management; and *Steward and Protect Natural and Working Landscape*, Action #6: Build resilience into natural systems and prioritize natural and green infrastructure solutions.
 - *CA Climate Adaptation Strategy/Safeguarding California: Reducing Climate Risk Plan* (CA Natural Resources Agency, July 2014). The plan identifies key recommendations, including recommendation #2, which directs that the state change water management to address increasing competition for water between agriculture, wildlife, and human uses.
 - *CA State Wildlife Action Plan* (CA Department of Fish and Wildlife, 2015 Update). Section 6.7, Anadromous Fish Conservation Targets and Strategies, sets forth a host of Conservation Strategies for listed in at risk salmonids, which include the coho salmon. The proposed project will address a number of those strategies including increasing water supply and developing plans to restore habitat. Further, the proposed project carries out the goals of CDFW’s *Recovery Strategy for California Coho Salmon* (2004).

4. **Support of the public:** The proposed project has received broad-based support from numerous agencies, including NMFS, the Sonoma County Water Agency (SCWA), CDFW, the National Fish and Wildlife Foundation (NFWF), the Department of Water Resources (DWR), and the County of Sonoma. Letters of support are included in Exhibit 3.
5. **Location:** The proposed project will be conducted in the coastal draining Green Valley Creek watershed of western Sonoma County and will benefit anadromous fish spawning habitat in this section of the greater Russian River watershed.
6. **Need:** Some cost share has been secured for the construction component of this proposal, while additional cost share is pending. Without Conservancy participation, it is uncertain if additional cost share could be obtained within the timeframe of the other grant agreements, and the cost share that has been secured or is pending would have to be sacrificed or reallocated.
7. **Greater-than-local interest:** Located in Sonoma County, the Green Valley Creek watershed has been identified by the state and federal governments as priority recovery habitat for coho salmon and steelhead trout. It is a primary focus for CDFW's and NMFS's coho recovery programs, the Russian River Coho Salmon Captive Broodstock Program, and the Russian River Coho Water Resources Partnership, which has identified the Green Valley Creek watershed as one of only five first priority streams critical for near term salmonid recovery in the Russian River watershed.

The watershed is also central to west Sonoma County's agricultural community, with nearly 40% of the watershed in agricultural production. The remaining acreage is composed primarily of rural residential parcels and small towns, making Green Valley the most highly populated watershed within the Gold Ridge district. This very mixed and populous pattern of land use has complicated efforts to restore riparian function, as riparian corridors are minimal and floodplains have been highly developed. This project presents a rare opportunity to restore floodplain connectivity

8. **Sea level rise vulnerability:** The proposed project is not vulnerable to sea level rise as the Russian River is at about 160 feet above sea level where Green Valley Creek empties into it.

Additional Criteria

9. **Urgency:** Efforts of the proposed project to enhance habitat for the Central California Coast coho salmon, a species on the brink of extinction, meet the definition of urgent.
10. **Resolution of more than one issue:** The proposed project focuses on restoring overall watershed function, working to create a healthy stream system that effectively provides habitat, promotes groundwater recharge and tempers stormwater, and establishes floodplain connectivity. The proposed project works to seek alternatives for human water supply while attenuating flooding concerns, creating long-term solutions that balance the needs of ecosystem function with a growing population.
11. **Leverage:** See the "Project Financing" section above.
12. **Innovation:** The feasibility and design of off-channel habitat in the site reach will utilize state of the art 2-dimensional hydraulic modeling software to show existing flow patterns

and document high flow habitat improvements by proposed projects. Habitat suitability curves for coho salmon and steelhead juveniles will be applied to water depth and velocity data to quantify acreage of suitable conditions over a range of winter flows. This type of analysis is the standard for evaluating potential effectiveness of off-channel habitat improvement projects.

To develop an alternative water supply to stream diversion, the proposed project will utilize innovative roofwater harvesting to help restore natural streamflows during drought periods.

13. **Readiness:** The grantee has secured matching funds for the project and completed designs for the rainwater catchment component of the proposed project. The RCD is ready to obtain permits and begin construction in the summer of 2016.
14. **Cooperation:** The RCD's comprehensive watershed health program in the Green Valley Creek watershed is coordinated in partnership with multiple partners including UC Cooperative Extension, the Center for Ecosystem Management and Restoration, Trout Unlimited, and Sea Grant California. As a component of that program, the proposed project is receiving secured cost share support from NFWF, DWR, and SCWA, and has been developed in coordination with CDFW and NMFS fisheries biologists.
15. **Vulnerability from climate change impacts other than sea level rise:** California's coastal areas, including the Green Valley Creek watershed, are expected to experience more sporadic and intense storm events, with increasing pressures from a growing population. The project is designed to mitigate for these conditions, promoting floodplain functionality to temper stormwater, while providing water security and climate change resiliency for agriculture. Designs are developed in consideration of these changes in rainfall patterns
16. **Minimization of greenhouse gas emissions:** Some GHG production will occur during project construction, which involves heavy equipment use. However, GRRCD's construction procurement policy strongly favors local contractors, minimizing mobilization emissions. Emissions from construction will be mitigated by riparian planting that will occur with implementation of the off-channel habitat project, which will expand the riparian corridor into an unused agricultural field.

CONSISTENCY WITH LOCAL COASTAL PROGRAM POLICIES:

The proposed project is consistent with the Sonoma County Local Coastal Program (LCP), certified in June 1981 and revised and incorporated into the Sonoma County General Plan updated in December 2008, in respect to Section III concerning environmental resource management. The project will lead to implementing the following recommendation of the LCP for anadromous fish streams such as Green Valley Creek and its tributaries: "68.) Maintain flows in streams identified as anadromous fish habitat at a minimum flow level as required to continue their use as an anadromous fish spawning area."

COMPLIANCE WITH CEQA:

The planning elements of the proposed project are statutorily exempt from review under the California Environmental Quality Act (CEQA) pursuant to 14 Cal. Code of Regulations Section 15262, in that they involve only planning studies for possible future actions which the Conservancy has not approved, adopted, or funded. Planning carried out as part of the project will, however, consider environmental factors, as required by Section 15262. The planning elements of the proposed project are also categorically exempt under §15306, in that they consist of data collection, research, and resource evaluation activities that will not result in a serious or major disturbance to an environmental resource.

The proposed project's implementation component, the construction of the rainwater catchment system at the goat farm, is categorically exempt under Section 15303(e), which exempts the construction and location of limited numbers of new small facilities or structures. The project meets the terms of this exemption as it consists of the installation of limited numbers of new, small facilities or structures (water tanks and conveyance lines) that are accessory to existing structures (barn and related dairy buildings) and will be placed in an area that is already developed.

Staff will file a Notice of Exemption upon authorization of the project.