permit SONOMA

County of Sonoma
Permit & Resource Management Department

ROILING PERMIT APPLICATION

DRN-003

By placing my contact information (name, address, phone number, email address, etc.) on this application form and submitting it to Permit Sonoma, I understand and authorize Permit Sonoma to post the application to the internet for public information purposes, including my contact information.

Date March 12, 2025 ROI _____ Previous ROI _____

Site Address 9786 Ross Station Road, Sebastopol, CA 95472

APN 084-190-002-000, 084-190-001-000 River or Stream Green Valley Creek

Anticipated Work Start Date 6/15/25 Estimated Completion Date 10/15/25

Type of Work

- ■ To protect riparian property adjacent to a river or stream
- ☐ To perform construction work on riparian property
- ☐ To construct recreational dams
- ☐ To construct temporary bridges, dikes, dams and settling ponds

Applicant ☐ Owner ☐ Engineer ☐ Architect ☐ Contractor ■ Other

Name John Green Company Gold Ridge RCD

Mailing address 2776 Sullivan Road, Sebastopol, CA 95472

Phone 707-823-5244 x10 Email john@goldridgercd.org

Applicant Signature John Green Digitally signed by John Green Date: 2025.03.12 15:14:51 -07'00'

Additional Contact ☐ Owner ☐ Engineer ☐ Architect ☐ Contractor ■ Other

Name Kyle Johnson Company PCI Ecological

Phone 707-827-8933 Email kyle@pcz.com

APPLICATION REQUIREMENTS

- A detailed statement describing the work or operations to be done and the manner in which they will be carried out to avoid unreasonably decreasing the clarity of the river or stream, including any proposed monitoring or mitigation measures.
- A location/vicinity map (8 ½ in. X 11 in.) showing where the project is located in relation to nearby lots, streets, highways and/or major natural features (e.g., locator maps & road maps).
- A copy of the Fish and Wildlife permit or waiver.
- A copy of the California Regional Water Quality Control Board water quality certification, if required.
- Reference to last roiling permit, if any.
- A check payable to "Permit Sonoma" (see current fee schedule). This fee includes any requested extensions for the calendar year.
- A copy of the California Environmental Quality Act (CEQA) document.
- A copy of any approved County permit conditions (e.g. mining approval).

TO BE COMPLETED BY PERMIT SONOMA STAFF

Proposed Board Meeting Date _____ Fees _____

GENERAL INFORMATION

The Board of Supervisors approves all roiling permits under Section VIII of the Water Clarity Ordinance of the County of Sonoma, Ordinance No. 3836R (Chapter 23 of the Sonoma County Code).

A complete application must be submitted to the Permit Sonoma a minimum of eight weeks before the start of project.

Work cannot start until after the Sonoma County Board of Supervisors has approved the application for a Roiling Permit.

Ordinance No. 3836R is an initiative measure adopted by the electorate of Sonoma County on June 7, 1988. The Ordinance requires that a roiling permit be issued prior to performing the types of work described on the application form. The permit can only be issued upon a four-fifths vote of the Sonoma County Board of Supervisors and only for a maximum period of 30 days. Permits may be extended for additional 30 day periods upon an additional four-fifths vote of the Board of Supervisors. The Board designated Permit Sonoma as the administering agency of this Ordinance.

Permit applications are filed electronically by sending an email to PermitSonoma-Engineering@Sonoma-County.org, by mail or in person. Roiling permits are subject to CEQA. Applications by other than public agencies must be accompanied by evidence that the proposed work or operations have been submitted for review to the Permit and Resource Management Department pursuant to Article III of Chapter 23A of the Sonoma County Code. Such applications shall not be deemed completed until such environmental review has been completed. Applications by departments of the County of Sonoma must be accompanied by evidence of compliance with Article II of Chapter 23A of the Sonoma County Code. Applications by other public agencies must be accompanied by either a Notice of Determination or a Notice of Exemption filed by such public agency pursuant to the California Environmental Quality Act (CEQA).

Because the ordinance requires each permit to be authorized by a four-fifths vote of the Board of Supervisors, the issuance of a permit requires at least two weeks after compliance with CEQA requirements have been demonstrated (but cannot occur until the Board takes action at a regularly scheduled Board meeting).

The categories of work described on the application form may require an Agreement Regarding Proposed Stream or Lake Alteration with the California Department of Fish and Wildlife pursuant to Section 1601 et seq. of the California Fish and Wildlife Code and waste discharge requirements issued by a Regional Water Quality Control Board pursuant to the Porter-Cologne Water Quality Control Act (commencing at Section 13000 of the California Water Code). The work may also require a permit issued by the United States Army Corps of Engineers pursuant to Section 404 of the Federal Clean Water Act. In addition, the work may be subject to other Federal, State, and local governmental regulations. It is the applicant's responsibility to comply with all applicable laws and regulations.

Project Description
Lower Green Valley Creek Off-Channel Habitat Enhancement Project at Iron Horse Vineyards
October 2023

Prepared for:
Gold Ridge Resource Conservation District
2776 Sullivan Road
Sebastopol, CA 95472

GOLD RIDGE
RESOURCE CONSERVATION DISTRICT

Prepared by:
Prunuske Chatham, Inc.
103 Morris Street, Suite A-5
Sebastopol, CA 95472

PCI ECOLOGICAL

Introduction

The Iron Horse Vineyards property is one of the largest single-owner properties on lower Green Valley Creek in west Sonoma County, and provides a unique opportunity to create large flooded off-channel areas. The landowner is willing to dedicate several fallow fields and the riparian corridor to restoration actions. The Iron Horse Winery Off-Channel Habitat Enhancement Project (Project) was developed by Gold Ridge RCD and Prunuske Chatham, Inc. (PCI) to create complex high-flow refugia and winter foraging areas for out-migrating juvenile coho salmon and steelhead. A Technical Work Group (TWG)[1] was convened to provide design guidance and direction.

A suite of integrated habitat enhancement site design elements has been developed to significantly increase off-channel rearing and refugia habitat. The overall objective of the project is to design complex, low-velocity in-channel and off-channel habitats to support juvenile salmon during their winter rearing and spring outmigration life stages; features that will contribute proportionally to the recovery of coho populations in Green Valley Creek and the Russian River. Several additional objectives informed the site evaluation and preliminary design thinking, including the desire to:

- Maintain balance between coho habitat needs and other critical floodplain functions (groundwater recharge) and habitats (shallow seasonal ponds used by amphibians).
- Provide habitat for other special status species, where possible.
- Reduce water quality impacts from driveways and drainages.
- Maintain or increase wetland area within the project footprint.
- Increase wetland diversity.

The project is located on the reach of Green Valley Creek that runs through the Iron Horse Vineyards property at the West end of Ross Station Road, between the towns of Graton and Forestville in Sonoma County. The confluence of Atascadero Creek and upper Green Valley Creek is approximately ¼ mile upstream of the project site. Project coordinates are: 38.4553149° North, - 122.89403° East.

This project will entail the construction of an integrated suite of habitat enhancement elements that will significantly increase off-channel rearing and high-flow refugia habitat for salmonids in lower Green Valley Creek. The project will create 3 acres of low velocity and depth rearing habitat during frequent winter storm inundation periods. The seasonally flooded wetlands will be vegetated with water tolerant native species to provide cover during periods of inundation. Inundation durations of the lowered flooded wetlands features will be increased to one to four weeks with each storm event; this extended flooding duration allows productivity in the flooded wetlands to evolve from primary to secondary, which provides nutrient rich foraging opportunities for juvenile salmonids.

The project includes three main elements to meet the restoration objectives of enhancing low-velocity in-channel and off-channel habitats and reducing impacts from driveways and drainages:

[1] The TWG is composed of staff from Gold Ridge RCD (Sierra Cantor, John Green, and Noelle Johnson), Iron Horse Vineyards (Laurence Sterling), California Department of Fish and Wildlife (Derek Acomb, Gina Benigno, Mitsuko Grube, Laura McLean, and Ryan Watanabe), NOAA Fisheries (Brian Cluer and Rick Rogers), NOAA Restoration Center (Joe Pecharich), California Sea Grant (Mariska Obedzinski), California State Water Resources Control Board (Gil Falcone and Kaete King), and California Coastal Conservancy (Lisa Ames).

a. **Upper and lower floodplain off-channel habitat features**, including the creation of three seasonal wetlands and enhancement of two seasonal connector channels on the floodplain adjacent to Green Valley Creek, will create areas of frequently inundated, low-velocity refuge and rearing habitat during winter and spring flow conditions such that alcoves will have depths of 6-feet to 3-feet during low winter base flow, side channels and low elevation areas in the seasonally flooded wetlands will be inundated at high winter base flows, and the inset floodplain benches, wetlands and connector channels will be activated and accessible to fish during frequent storm events; this feature will function as a very low velocity backwater environment until the high flow connector channels are activated.

   The upper floodplain off-channel habitat feature will be graded along with two alcoves at Green Valley Creek with two pinch jams, a backwater jam, and a habitat structure installed to provide and maintain access to the off-channel habitat. Grading will occur over approximately 2 acres. Erosion control and revegetation will include installation of straw wattles and the site will be seeded with a seasonal wetland and meadow area seed mix). Areas of more concentrated flows within the off-channel habitat feature will be seeded and coir blanket will be installed. Soil pins will be installed in the channel bottom. More permanent planting will be based on anticipated water surface levels: Eleocharis in the lowest elevation of the feature along with sedge and rush plug planting, seasonal wetland plants, wet meadow, and grassland vegetation. Willow poles and willow packing will occur at the large wood structures. Riparian trees and shrubs will be planted along the wetland and grassland areas. Emergent edge planting will occur as appropriate. Revegetation will cover approximately 1.9 acres.

   The middle floodplain off-channel habitat feature grading will cover approximately 0.9 acres with 2 habitat structures, a channel jam, a pinch jam, and brush mattresses and slash packing at Green Valley Creek. One of the two connector channels will be constructed at the downstream end of the middle floodplain off-channel habitat feature. The 160-foot long upstream connector channel and a 140-foot downstream connector channel will convey flows from existing side channels that flow during high flow events allowing salmonids to more fully use the habitat in the floodplain. Grading will occur across approximately 0.16 acres to construct the channel. The middle floodplain and connector channel will receive the same erosion control treatment as the upper floodplain habitat feature. Revegetation in the middle floodplain and connector channels will be approximately 0.6 acres.

   The lower floodplain off-channel habitat feature will be graded along with two alcoves, two channel jams, and two pinch jams to maintain access to the newly graded feature. A 160-foot salvage tree fill jam will be constructed to connect the habitat feature to the Green Valley Creek. The salvage tree jam will use trees salvaged from the site. These trees will be placed parallel with the channel and with rootwads facing upstream to provide fish passage through the channel. Anchor logs will be driven below ground at the height of frequent storm inundation to provide support for the log structure. Salvage trees and branches will be placed throughout the structure. Erosion control will be similar to the middle and upper floodplain. Revegetation species will vary by planting zones based on anticipated water surface elevations. Revegetation will occur over approximately 2.6 acres.

b. **Large wood structures,** including construction of eight engineered log jam structures (pinch jams, cross-channel jams) and five in-channel habitat structures will be installed in Green Valley Creek in association with the upper floodplain off-channel habitat and connector side channels to create in-channel complexity and maintain instream habitat features.

c. **Driveway improvements** including road treatments and culvert upgrades on the Iron Horse Vineyards access road, which crosses the floodplain and Green Valley Creek, will ensure fish passage from the upper floodplain features to downstream connector channels and reduce water quality impacts from the gravel road surface. Driveway improvements will include elevating the driveway to provide adequate sub-drainage in the road prism to support improvements to the road surface and to allow for increased flow capacity through the two floodplain relief culverts. Two new culverts will be installed along with inlet and outlet protection at each: 37-foot long, 4 feet high by 6 feet wide and 27-foot long, 3 feet high by 5 feet wide concrete box culverts. Natural bed material will be placed in the culvert using 6-12 inch rock with river run interstitial fill to create a low flow channel. Compacted aggregate base material will be placed around the culvert along with installation of a cutoff wall.

   Approximately 600 feet of the existing 18-foot wide driveway will be scarified and resurfaced with 6 inches of subgrade, 12 inches of crushed drain rock, 3 inches of class II aggregate base over filter fabric. The driveway will be sloped and will conform to the existing roadway and the shoulders will have riprap placed on #2 backing. Erosion control along the driveway will include placement of native grass seed and tackified mulch for any staging areas. The channel downstream of the new culvert will include installation of straw wattles with native seasonal wetland and meadow area seed mix.

Materials

Dewatering activities will occur in five individual locations or along the entire length of Green Valley Creek through the project area, which ever approach the selected construction contractor deems most efficient. Individual dewatering reaches would total 450 feet. Dewatering activities to occur in the mainstem of Green Valley Creek are necessary to protect the water quality downstream of the project-related disturbance. Materials include silt control filter fabric, impervious liners, cofferdam material, fish and exclusion screens, casings, washed rock.

Large wood structures and habitat structures are used within the site to create and maintain in-stream habitat features. Materials required include 25 logs, 27 rootwads, and 48 vertical log anchors (plus the incorporation of 23-25 salvage trees), anchoring materials (steel threaded rod, steel plate washers, steel nuts), rope, and miscellaneous parts and fasteners as specified in the project plans. These comprise the wood structures in association with off-channel features.

Biotechnical and erosion control features (including willow wattle, brush mattress, and large-wood-structure slash packing) will be implemented as appropriate on disturbed areas. Materials needed include coir mat, erosion control blanket, wedge stakes, weed-free straw mulch, native grass seed and rope along with willow stakes harvested onsite. Protective fencing (t-posts, orange barrier fencing and nylon cable ties and rebar caps) will be installed to protect trees and shrubs from damage associated with clearing and grubbing.

Driveway improvement materials will include materials for paving the road as well as crushed drain rock to elevate the road, road base, and one pre-cast concrete box culverts.

Floodplain revegetation activities involve revegetating disturbed areas newly created habitats. Revegetation materials include native plant materials (trees, shrubs, vines, forbs, grasses, rushes, and other monocots), planting soil or mulch, 100% biodegradable weed control fabric (hemp or jute) and fasteners (100 d nails with washers or staples), all associated browse guard or plant protection cages and irrigation system materials (water tank, filter, valves, mainline, drip tubing, emitters).

Water quality monitoring equipment needed to comply with the requirement that projects dewatering waterways monitor and report water quality during dewatering activities. Parameters, such as but not limited to dissolved oxygen, temperature, conductivity, and turbidity shall be reported. Materials for water quality monitoring activities include two deployable water quality meters (sondes), necessary software for downloading data, calibration solutions, and batteries.

Project Sizing and Habitat Creation

Creation of 3.2 acres (139,392 square feet) of complex high-flow refugia and winter foraging habitat for winter-rearing and out-migrating juvenile coho salmon and steelhead trout and other aquatic species. The total linear length in feet of Green Valley Creek where the project will take place is 1,750 feet. The following provides impact areas associated with the proposed project.

- Total project area – 7.1 acres
- Staging and access – 1.22 acres
- Planting/Revegetation areas – 5.76 acres
- Dewatering – 450 feet of Green Valley Creek
- Cut amounts – 13,210 cubic yards. Spoil material cut to create the off channel habitat features will be trucked off site to an approved location.
- Log structures - 25 logs, 27 rootwads, and 48 vertical log anchors (plus the incorporation of 23-25 salvage trees from offsite locations)
- Tree removal – up to 15 trees may be removed and incorporated into the log structures
- Erosion control – 5.7 acres
- Planting – 5.7 acres

The table below provides information about temporary disturbance in the vegetation types within the project area:

	Vegetation Type / Area (Acres)					
Temporary Impact Type	**Annual Cropland**	**Grassland**	**Valley Oak Woodland**	**Willow Thicket**	**Riparian Forest**	**Wetland**
Grading Footprint	0.0018	1.0886	0.0501	0.2382	0.7605	0.9187
Access and Staging	0.5906	0.8844	0.0538	0.1171	0.4751	0.6363
Total	**0.592**	**1.973**	**0.104**	**0.355**	**1.236**	**1.555**

The table below provides information about temporary disturbance in the vegetation types within the Sonoma County 50-foot Riparian Corridor:

	Vegetation Type / Area (Acres)					
Temporary Impact Type	**Annual Cropland**	**Grassland**	**Valley Oak Woodland**	**Willow Thicket**	**Riparian Forest**	**Wetland**
Grading footprint	0.0000	0.9182	0.0483	0.2382	0.5928	0.3765
Access and Staging	0.0000	0.6053	0.0133	0.1171	0.3797	0.0466
Total	**0.000**	**1.524**	**0.062**	**0.355**	**0.973**	**0.423**

Timeline

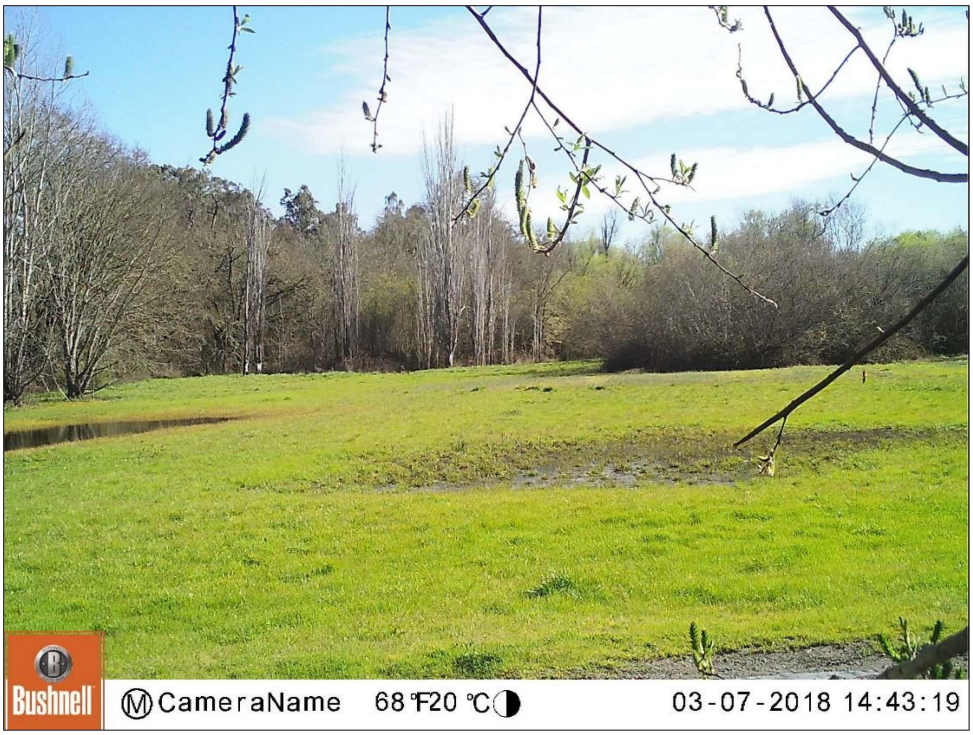
Construction will occur between April 1, 2024 and October 15, 2024. Dewatering and species relocation will occur between July 1, 2024 and October 15, 2024 in order to avoid impacts to California freshwater shrimp, coho salmon and steelhead. Revegetation efforts would occur in the fall and winter 2024. Water quality and post-construction monitoring will occur between April 1, 2024 and March 1, 2028.

Existing Condition Photos

Iron Horse Winery Access Driveway during high flows in Green Valley Creek

Iron Horse Winery Access Driveway during high flows in Green Valley Creek

Iron Horse Winery Access Driveway during high flows in Green Valley Creek



Iron Horse, Upper Floodplain Area

Iron Horse, Green Valley Creek Side Channels