Stansberry Creek Riparian Restoration

- Addendum -

Restoration and Monitoring Plan for Replacement of Culverts

Prepared for Safier Family Farms

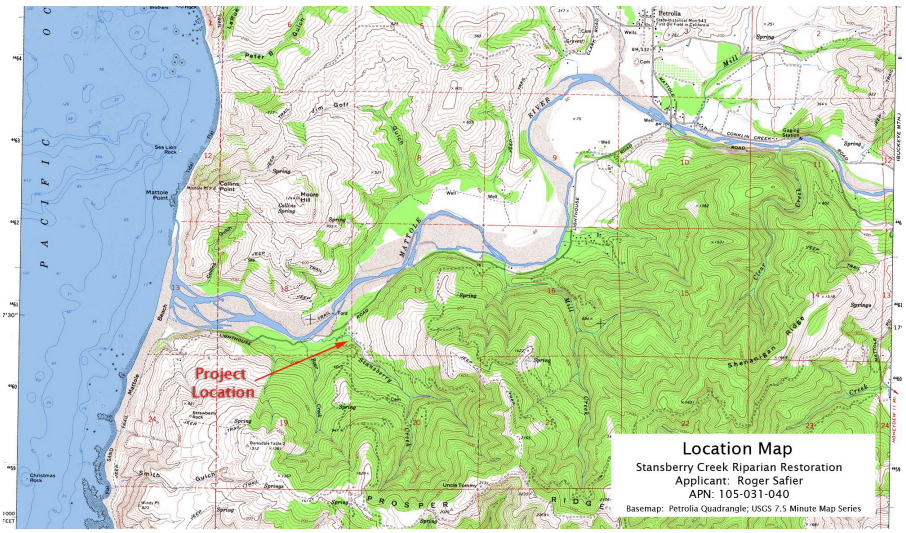
LSA Permit:
1600-2019-0705-R1

Humboldt County Emergency Permit:
PLN-2019-15434E

Prepared by Thomas B. Dunklin
tdunklin@gmail.com
June 6, 2024

Project Location

The project is located in lower Stansberry Creek, a small tributary to the lower Mattole River, on the property of Roger Safier (APN 105-031-040). Stansberry Creek enters the Mattole River approximately 1.5 river miles upstream from the confluence of the Mattole River with the Pacific Ocean.



Restoration, Maintenance and Monitoring Plan (2024)

Since the initial levee failure and subsequent repair work, no further equipment work has been required, and the channel is back to its pre-disturbance condition.

Natural re-vegetation by alder, willow and brush species has resulted in a dense riparian fringe along both banks. Winter flows have not exceeded the overflow elevation of the berm at the sediment retention basin, even during last year's relatively wet winter. This is likely due to the lack of high intensity/duration rainfall events (>10" in 24 hours), and to an absence of mass erosion upstream of the site.

The progression of natural re-vegetation from 2019, 2021, 2024 are shown in the following panoramas:

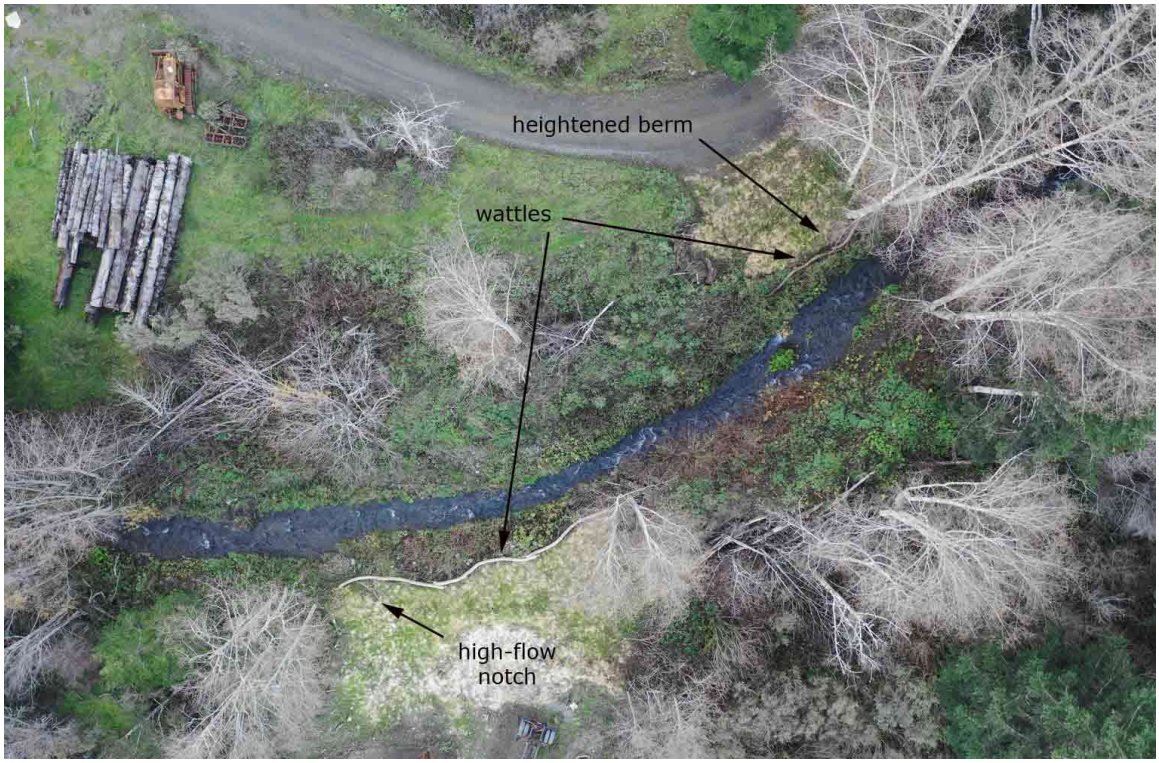
panorama by Thomas Dunklin - July 25, 2019

Channel and Vegetation Conditions Before (above) and After (below) project implementation

panorama by Roger Safier - October 29, 2021

Aerial panorama of same project reach on June 20, 2024. Pano by Thomas Dunklin

Our primary goals are to minimize potential for plugging of the culvert beneath Lighthouse Road. This will be accomplished by raising the berm at the failure site, and by maintaining a debris basin with a “high flow notch” to prevent uncontrolled breaching and overwhelm of culvert in the event of a high flow event. (See post project photo below, taken January 9, 2022)

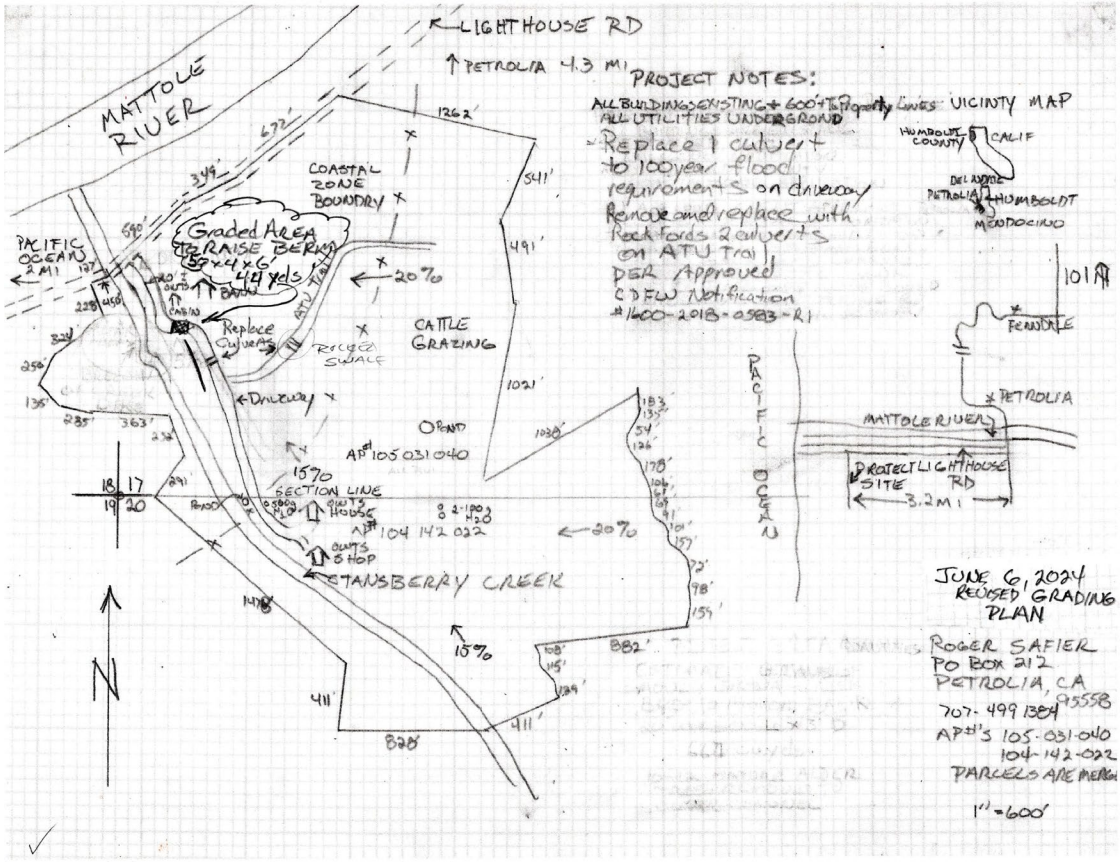


In the future, our plan is to continue with photo-documentation, and to monitor channel conditions during large storm events, in the event that another landslide occurs. If such an event does occur, all appropriate agencies will be notified of the conditions.

Willow and alder growth in the riparian zone is very aggressive at this site. Removal of vegetation that potentially block flow is one option for minimizing future culvert blockage. For example, in recent years, nearby riparian restoration projects have harvested willow cutting by hand from the outlet area of the Stansberry Creek culvert.

Grading Plan

Minimal grading was required to repair the breached berm. The dimensions of the repair zone were approximately 50'x4'x6 feet, which translates to roughly 44 cubic yards. (see Site and Grading Plan below).



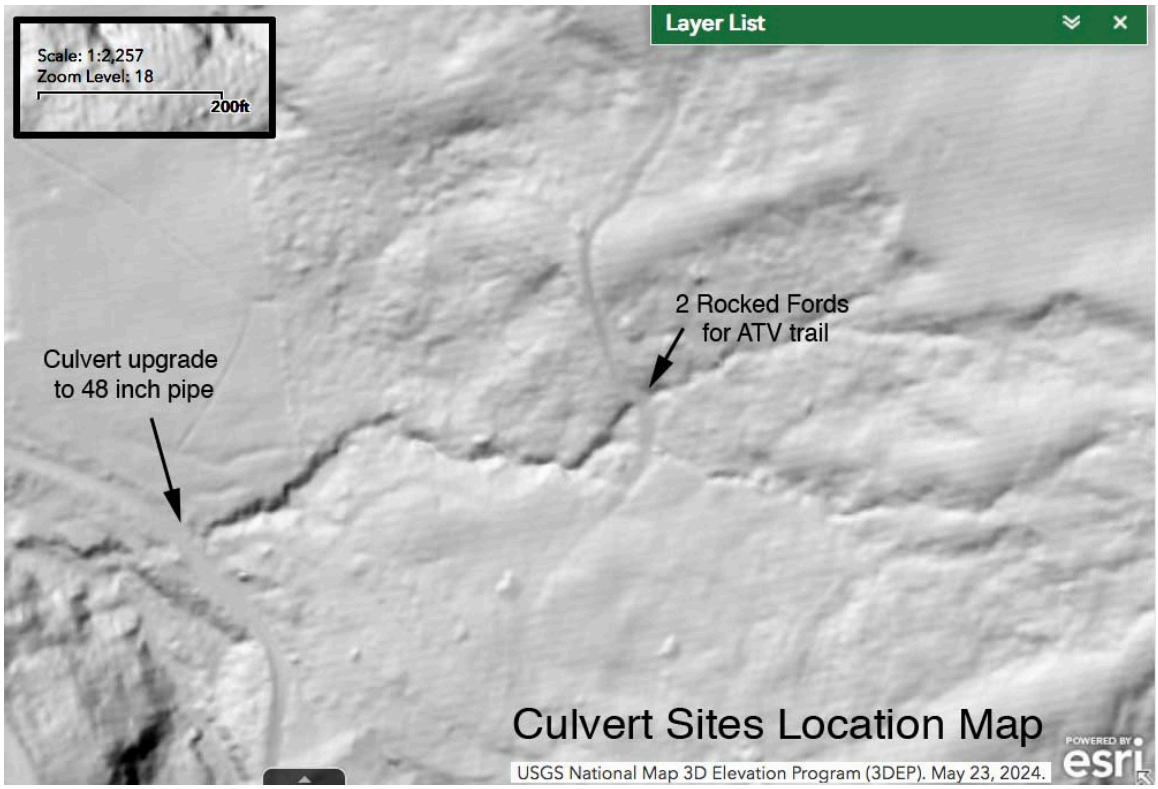
The photo below, taken in early October, 2021 shows the area graded and covered with straw mulch. The area was raised slightly, to prevent further

breaching during high flow/sediment yield events. I have confirmed that no other grading occurred, and that the measurements stated are accurate. (See photo on page 3, for aerial overview of work area). The area to the west of the channel had debris removed and wattles added, but no grading occurred.

Culvert Improvements

The culvert improvements include three sites along a channel draining a pasture on the north side of Stansberry Creek (see Culvert Sites Location Map, below). Two of the sites are adjacent to each other, and involve converting undersized culverts to rocked fords that will be utilized exclusively by ATVs. These sites are located approximately 650 feet from the wetted channel of Stansberry Creek.

The third site is along the main access road and involves replacing the existing 24” culvert, upgrading it to a 48” culvert. The culvert upgrade will utilize BMPs such as straw mulch to minimize surface erosion and outlet armoring to prevent downstream adjustments and erosion.



Habitat Evaluation and Riparian Delineation

On August 15, 2021, Nathan Queener, Biologist for the Mattole Salmon Group evaluated the site for both biological assessment and riparian delineation purposes (see attached letter). He found a dry channel unsuitable for foothill yellow-legged frogs, and measured the distance from the outlet of the 24" culvert to the wetted channel in Stansberry Creek at 165 feet.

Mattole Salmon Group

PO Box 188
1890 Lighthouse Road
Petrolia, CA 95558

ph: (707) 629-3433
fx: (707) 629-3435
msg@mattolesalmon.org

www.mattolesalmon.org

Pre-construction survey for SAA 1600-2018-0583-R1
August 15, 2021

Nathan Queener
Fisheries Biologist, Mattole Salmon Group
nathan@mattolesalmon.org

Field Notes

On August 15, 2021 accompanied by landowner Roger Safier I completed a pre-construction survey for culvert replacement of "Crossing -1", located at 40.2889, -124.3271.

I walked the stream channel 150' upstream and downstream of the crossing, as required in section 2.3 of the SAA. No water was present in the channel, which had clearly been dry for multiple weeks. No adult foothill yellow-legged frogs (FYLF) were encountered during the survey.

The following photos were taken during this site visit. Downstream of Crossing-1 165' the dry channel drains into Stansberry Creek, which is visible in the last photo and contains flowing water.

Stream crossings 3 and 4 also contained no water at the time of the site visit.

Restoration and Monitoring at Culvert Upgrade Sites.

The reach of channel downstream of the new culvert will be impacted the most by the larger diameter culvert installation. To prevent further erosion, rock armoring will be placed and adjacent sites planted with willow cuttings. Exposed soils will be seeded with native grass mix and mulched with straw. Seeding and planting will happen in the late fall, before the rainy season. In the event of a dry fall/winter, irrigation is also an option.

The rocked fords will have minimum disturbance upstream and downstream of the actual crossings. Any bare earth will be seeded and mulched. Abundant willows adjacent to the crossings can also be cut and planted, if necessary.

All sites will be monitored to insure that re-vegetation efforts are successful.

Please contact us if you require any additional information. I can be reached at 707-496-6257, and Roger can be reached at 707-499-1384.

Requested Correspondence

Finally, here is the requested correspondence between Tricia Shortridge and Roger Safier (10/9/2020) that documents that no fees would be billed to the restoration project.

Gmail

Roger Safier <pepperwood36@gmail.com>

Stansberry Creek LSA extension for Roger Safier

Shortridge, Tricia <TShortridge@co.humboldt.ca.us> Fri, Oct 9, 2020 at 4:42 PM
To: Roger Safier <pepperwood36@gmail.com>

Roger, I need to get confirmation from my supervisors how to move forward since there are no fees to be billed to this project.

Will get back to you.

Best regards,

Tricia Shortridge, Planner

tshortridge@co.humboldt.ca.us

Planning and Building Department

Current Planning Division

AFSCME Local 1684 Union Steward

3015 H Street

Eureka CA 95501

(707) 445-7541

[Quoted text hidden]