North Coast Regional Water Quality Control Board

Inspection Memo

To: Gil Falcone, Senior Environmental Scientist, Southern Non-point Source and 401 Certification Unit
Ryan Bey, Senior Environmental Scientist, Northern Non-point Source and 401 Certification Unit

From: Scott A. Gergus, Engineering Geologist, Northern Non-point Source and 401 Certification Unit

Date: March 16, 2023

Subject: March 6, 2023, Poppy Creek inspection at 2226 Oakview Court, Santa Rosa.

File: Felipe Olvera, 2226 Oakview Court, Santa Rosa, Sonoma County, APN 180-240-032
WDID No. 1B23027WNSO, ECM PIN: CW-887443,

Complaint Background

Regional Water Board staff Kaete King referred a complaint to me on February 8, 2023, regarding an unpermitted grouted rock wall at 2226 Oakview Court in Santa Rosa. The grouted rock wall is located at the rear of the property on the left-bank of Poppy Creek. In October of 2022, Flannery Banks with the City of Santa Rosa notified our office of unpermitted work (fill) placed within Poppy Creek by a private landowner, and that they were taking the lead on working with the landowner to get the site back into compliance with regulatory agencies. Mr. Banks emailed Ms. King a photograph of the grouted rock wall (City of Santa Rosa Photograph). On February 23, 2023, Lucy Macmillan emailed Ms. King a copy of the USACE alleged Violation Notice sent to Mr. Felipe Olvera. Ms. King forwarded the USACE alleged Violation Notice to me.

City of Santa Rosa Photograph: Photograph taken by City of Santa Rosa staff prior to October 2022, looking upstream Poppy Creek and showing grouted rock wall at the rear of 2226 Oakview Court, Santa Rosa.

Inspection

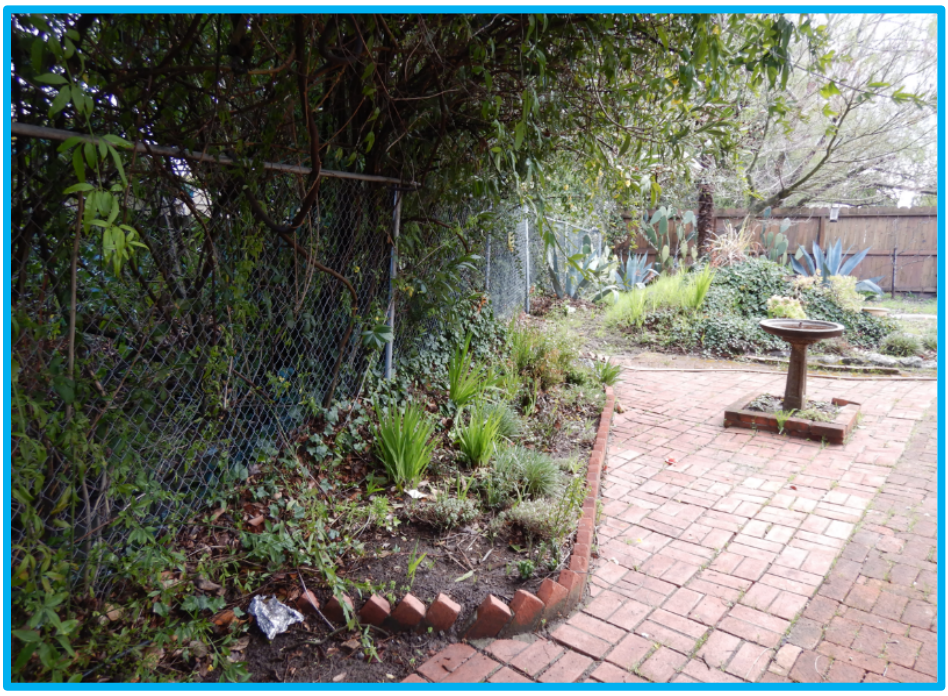
On March 6, 2023, an inspection was held at Felipe Olvera residence at 2226 Oakview Court, in Santa Rosa. The purpose of the multi-agency inspection was to evaluate the alleged unpermitted grouted natural rock wall installed along the left bank of Poppy Creek. The following inspection participants included:

- Felipe Olvera – homeowner.
- Lucy Macmillan – Environmental scientist, 108 Rising Road, Mill Valley, CA, 94941, (415) 389-9199, lucymacmillanconsulting@gmail.com

- Boyd Stockham – friend, (707) 664-0945.
- Keith Lopez – friend, (707) 664-0945.
- Jayme Ohlhaver – San Francisco District, USACE, 450 Golden Gate Avenue, 4th Floor, San Francisco, CA 94102-3404, (415) 503-6834, Jayme.A.Ohlhaver@usace.army.mil
- Amber Lee Bark – San Francisco District, USACE, 450 Golden Gate Avenue, 4th Floor, San Francisco, CA 94102-3404.
- Megan Lackie – City of Santa Rosa Code Enforcement, 100 Santa Rosa Avenue, Room 3, Santa Rosa, CA, 95404, (707) 543-3329, mlachie@srcity.org
- Daniela DeBaca – City of Santa Rosa Code Enforcement, 100 Santa Rosa Avenue, Room 3, Santa Rosa, CA, 95404, (707) 543-3463, ddebaca@srcity.org
- Scott Gergus, North Coast Regional Water Quality Control Board, (707) 576-2685, scott.gergus@waterboards.ca.gov

Mr. Stockman provided a brief history of the property. Mr. Olvera's home was built in 1950 as part of the North College Neighborhood. The house has an attached garage and has not been added onto. Mr. Olvera has owned the property since 2016 and has not enlarged his backyard into the streamway (Photograph 1), although the grouted natural rock wall is encroaching into the streamway (City of Santa Rosa Photograph). Poppy Creek channel was historically rerouted to follow property lines through the neighborhood and flows into Paulin Creek near the Sonoma County Administration Center.

Mr. Olvera was concerned the banks of Poppy Creek were eroding and becoming unstable (Photograph 2). Mr. Olvera's family and friends installed the grouted natural rock wall along Mr. Olvera's streambank in August 2022 (City of Santa Rosa, Photograph 1). Work was stopped by City of Santa Rosa staff and Santa Rosa police. Ms. Olvera said their garage is located 5 feet from the top-of-bank and was concerned about Poppy Creek streambank failing and damaging their garage (Photographs 3 and 4). Ms. Olvera showed me a cell phone video of Poppy Creek taken this rainy season. Poppy Creek was a few inches below the top-of-bank and appeared to be entering a backyard on the opposite side of the creek. The high-water scour mark was clearly seen on the opposite bank (Photograph 5)



Photograph 1: Mr. Olvera's backyard. Poppy creek top-of-bank closely follows the fence line.

Photograph 2: Looking downstream, Mr. Olvera's fence falling over into Poppy Creek trees are leaning over.

Photograph 3: Looking upstream, Mr. Olvera's garage is five feet from top-of-bank. White fence post is falling over into Poppy Creek.

Photograph 4: Looking downstream, Mr. Olvera's garage is five feet from top-of-bank. White fence post is falling over into Poppy Creek.

Poppy Creek in the Olvera neighborhood is a straightened earthen channel with pockets of disposed broken concrete debris on the right bank and channel (Photograph 6). The channel is trapezoidal in shape, an estimated 14 feet wide at top-of-bank, estimated 5-foot-wide streambed, and an estimated 6 feet deep (Photographs 5 and 6). Several large oak trees as well as other unidentified trees overhang and shade the channel. A dense grove of bamboo was observed on the downstream right bank (Photograph 7). The banks are vegetated with Himalayan blackberry, ivy, and landscaping plants. Sedges appeared to grow along the flowing channel and streambed appeared be soil with gravel and scattered medium sized rocks.

Photograph 5: Looking upstream Poppy Creek. Poppy Creek is a trapezoidal channel. High-water scour mark at bottom of wooden fence.

Photograph 6: looking upstream Poppy Creek of the grouted rock wall, broken concrete debris disposed on the right bank and in the active channel.

Photograph 7: Poppy Creek looking downstream showing vegetation and bamboo. Appeared high-water flooded the opposite bank backyard.

Mr. Stockham said the grouted rock wall was constructed without permits. Mr. Ohlhaver told Mr. Stockham, Poppy Creek appeared to be jurisdictional waters of the U.S. and this type of work requires permitting. To facilitate the permit process Mr. Ohlhaver said the USACE needs answers to the following questions:

- Is the wall keyed into the streambed?
- How deep is the keyway?
- Does the keyway extend for the entire length of the wall?
- What are the materials used to construct the wall?
- Is the wall stable?
- How thick is the wall or how much streamway volume does the wall occupy?

Mr. Ohlhaver said answers to these questions will determine if the grouted wall needs to be removed, replaced, or partially removed. Additionally, Mr. Ohlhaver told Mr. Stockham a permit would be needed from the USACE for the following work:

- Removal of the wall,
- Modification of the wall,
- Replacement of the wall, or
- Issue an after the fact permit, but Mr. Ohlhaver said that was unlikely.

The group was made aware that this type of work required a permit prior to work beginning and it is currently in violation of Regional Water Board regulations. Mr. Stockham said he understood the project had no permits and was in violation with several agencies. Mr. Stockham assured the group he would help bring the site into compliance for Mr. Olvera and remove the grouted rock wall if necessary. Additionally, I explained our agency prefers bioengineering rather than bank hardening such as rock walls. When installing rock our agency requires fill material including rock to be minimized and mitigated. However, bioengineering to stabilize streambanks may not always be practical because of stream conditions. The project may require a combination of bank hardening and bioengineering. Ms. Macmillan will coordinate with design engineer(s) to evaluate site conditions and present project options to the Regional Water Board (RWB). The preferred option will be the least environmentally damaging impact with the greatest potential to protect water quality and beneficial uses of Poppy Creek. The preferred option may be modified before the RWB will consider issuing a permit. Also, 401 Certification permits have associated fees. Ms. Macmillan will enter the necessary project details into the online 401 Certification calculator to determine the permit fee. Ms. Macmillan indicated she was familiar with this process.

Grouted rock wall description

Mr. Stockham said the grouted natural rock wall was placed against an eroding and unstable earthen slope. The rock wall measured with a clinometer and averaged 65^0 angle and constricting an already narrow stream channel (Photograph 8). The finished wall was measured to be 35 feet long with an estimated 20 feet partially constructed. An additional estimated 60 feet of wall was proposed along the patio backyard

streambank. This type of work is not normally permitted by the RWB without mitigation either bioengineering or other. Typically, RWB staff engage early in the permit application process and ensuing discussions address avoidance and minimization methods for the entire project. These discussions would include ensuring the amount of rock used at the site is kept to a minimum and a bioengineered approach be considered. Because no permit was obtained from the RWB, these discussions never occurred. Obtaining a permit from the RWB ensures the project is the least environmentally damaging alternative.

A licensed engineer, hydrologist or other qualified professional should be consulted to address the stability of the rock wall and earthen bank and address the hydraulic capacity of the channel with and without the rock wall as well as assessing the impacts to neighboring properties with regard to flood capacity future scour and armoring. Steep streambanks are commonly found along rerouted residential streams where backyard space is maximized at the expense of streambank stability, erosion concerns, and hydraulic capacity. In these scenarios, there is insufficient room for streambanks to slope gently from the backyard's edge down to the streambed.

Photograph 8: Grouted rock wall placed at an estimated 65^0 angle and constricting the Poppy Creek channel.