

QUARTERLY STATUS REPORT

Quarterly Status Reports are required per contract terms. If no work was done during the reporting period, the CONTRACTOR must provide an explanation of the circumstances.

Project Title: Keokea Gulch Riparian Corridor Rehabilitation Project

Project Start/Completion Date: July 9th, 2020 – January 8th 2022

Estimated % of Project Completed: 70%

Estimated % of Grant Funds Previously Requested: 70 %

Quarterly Status Report Number: 4

Name, telephone number, and e-mail of person to be contacted for questions regarding this report: Michael Reyes, 808-866-8619, mreyesecology@gmail.com

Please provide the following information for this reporting period. Additional sheets may be attached:

This Quarterly Status Report is for the period indicated below (**check only one and insert year**):

- ☐ January 1 – March 31, _____ (Due April 15th)
- ☒ April 1- June 30, 2021 _____ (Due July 15th)
- ☐ July 1 – September 30, _____ (Due October 15th)
- ☐ October 1 – December 31, _____ (Due January 15th)

Quarterly Status Report Number: 4

Please provide the following information for this quarter. Additional sheets may be attached.

1. Tasks started and/or completed as outlined in the Scope of Services during the **current** reporting period.

A. Summary of work completed (list all tasks and deliverables)

Task/Deliverable	Date Completed/Submitted
MEC staff including Michael Reyes and Emily Johnson preparing site for planting	5/3/2021
MEC Staff including Michael Reyes and Katie Keast installing emitters	5/4/2021
30 Bayer employees and Michael Reyes from MEC planting for 3 hours	5/6/2021
30 Bayer employees, Richard Sylva, Pamela Sylva, Scott Meidell, Don Young, Kimokeo Kapahulehua, and Michael Reyes for 5 hours planting natives	5/7/2021
Michael Reyes, Richard and Pamela Sylva planting for 5 hours	5/14/2021
MEC staff including Michael Reyes and Emily Johnson preparing site for planting. Richard Sylva, Pamela Sylva, Christina, Chris, and Ginnie for 4 hours planting and weeding	5/21/2021
Michael Reyes, Richard Sylva, and Shannon Paapanen planting and prepping site	5/25/2021
Michael Reyes, Richard and Pamela Sylva, Sean, Effie, Kristina, Shannon, and three kids planting for 3 hours	6/7/2021
Richard Sylva and Michael Reyes checking driplines	6/21/2021
Richard, Bayer staff, and Michael Reyes fixing broken irrigation system	6/23/2021
Project Effectiveness Monitoring	6/28/2021
Project Effectiveness Monitoring	6/29/2021

B. Pollutant load reductions for the **current** reporting period

Pollutant	Estimated Load Reduction
Nitrogen (lbs/yr)	2.4
Phosphorous (lbs/yr)	2.4
Sediment (tons/yr)	1.2

C. Outreach and education for the **current** reporting period

Event or Activity	Date	Number of Participants/Attendees	Number of Volunteer Hours (if applicable)
Outreach opportunities have been limited due to Covid-19 and slow progress associated with the pandemic. That being said, Bayer and Haleakala Ranch have volunteered their staff on several occasions to assist with planting, to assist with the dripline infrastructure and timers, and to help propagate native plants for the project.	5/6/2021	31	90
MEC, Bayer, and Haleakala Ranch planting and blessing ceremony	5/7/2021	36	180

2. Narrative Progress Report

A. Description of project progress for the **current** reporting period.

We have planted the first 1800 plants we had purchased. We have had tremendous success with the survivorship of these plants which include Aalii, Naio, Wili wili, Alahee, Ilima, and Maiapilo, Ohe Makai, Koaia, Aweoweo, Awikiwiki, Mao and Achyranthes. We have been adjusting the water regime to slowly ween the current plants off R-1 water. They began at two gallons every other day. They were then tapered down to one gallon per day, every day. Currently they receive a gallon of water per day. The ultimate goal will be to cut off the water supply completely to ensure the forest is able to sustain itself.

B. Description of any major challenges or problems (e.g., weather, personnel, equipment, etc.) encountered and/or resolved that may have affected the CONTRACTOR's ability to complete the project as required. *If there is a material change in the Project Timeline or*

Budget because of these issues, please contact the Procurement Officer for more information about modifying the contract.

Obviously, the major hurdle has been Covid-19. The original plant costs were estimated at \$2.00 a plant. In reality, plant costs varied from \$2.75 to \$4.00. We have been trying to make up for this by propagating our own plants. Richard Sylva and I have been growing plants from seed at our houses and Bayer has volunteered their growing facility to propagate the seeds we received from Leeward Haleakala Watershed Partnership. We have also had to repair the dripline infrastructure on several occasions.

C. Description of any significant findings, results, or conclusions.

We have had fairly low mortality associated with the plantings. I believe the use of R-1 water provides benefit to the reef and coastal waters not represented in the pollutant load reduction estimates provided in Table B.

3. Based on the Scope of Services and Project Timeline, a brief description of tasks expected to be completed in the next reporting period.

In the next quarter, we will purchase plants to supplement any plants lost to mortality. We would also like to expand the dripline infrastructure both mauka and makai of its current location. We will submit a press release informing the public about the project and we will update the website with our progress.

The following videos show baseline conditions of the newly installed ungulate fencing and dripline infrastructure compared with the March 2021 and May 2021 conditions after the initial round of planting has been completed. The change in conditions at the Keokea Rehabilitation project site is striking and we are so pleased with how well the new plants are doing.

Baseline 2020

<https://youtu.be/WS7Oz9jHMfE>

March 2021

<https://youtu.be/Gr2B6fuxhCY>

May 2021

<https://youtu.be/U0wYtVXsyrM>