



**REGULAR MEETING  
GOLDEN RAIN FOUNDATION LANDSCAPE COMMITTEE**

**Monday, November 30, 2020 – 1:30 p.m.  
VIRTUAL MEETING  
Laguna Woods Village  
24351 El Toro Road, Laguna Woods, CA**

**AGENDA**

1. Call to Order
2. Acknowledgment of Media
3. Approval of the Agenda
4. Approval of Meeting Report for August 12, 2020
5. Chair Remarks
6. Department Head Update

**Consent:**

None

**Reports**

7. Update on the Creek

**Items for Discussion and Consideration**

8. Tree Removal Request: 4003-1D (Shaw) - One Olive tree and four Aleppo Pine trees
9. Update of Manure Disposal at Equestrian Center

**Concluding Business:**

10. Member Comments (Items Not on the Agenda)

*Laguna Woods Village owners/residents are welcome to participate in all open committee meetings and submit comments or questions regarding virtual meetings using one of two options:*

1. Via email to [meeting@vmsinc.org](mailto:meeting@vmsinc.org) any time before the meeting is scheduled to begin or during the meeting. Please use the name GRF Landscape Committee in the subject line of the email. Name and unit number must be included.

2. By calling (949) 268-2020 beginning one half hour before the meeting begins and throughout the remainder of the meeting. You must provide your name and unit number.

11. Response to Member Comments
12. Committee Member Comments
13. Date of Next Meeting – Tuesday, February 10 at 1:30 p.m.
14. Adjournment

Yvonne Horton, Chair  
Kurt Wiemann, Staff Officer  
Eve Morton, Landscape Operations Coordinator  
Telephone: 949-268-2565



**OPEN MEETING**

**REGULAR MEETING OF THE GOLDEN RAIN FOUNDATION  
LANDSCAPE COMMITTEE**

**Wednesday, August 12, 2020 – 1:30 P.M.**

**VIRTUAL MEETING**

**Laguna Woods Village Community Center  
24351 El Toro Road**

**COMMITTEE MEMBERS PRESENT:** Chair - Yvonne Horton, Bert Moldow, Lynn Jarrett, Manuel Armendariz, Elsie Addington

**COMMITTEE MEMBERS ABSENT:** Andre Torng, Reza Karimi

**OTHERS PRESENT:** Bunny Carpenter, Juanita Skillman

**ADVISORS PRESENT:** None.

**STAFF PRESENT:** Kurt Wiemann, Eve Morton, Maribel Flores

**REPORT**

**1. Call to Order**

Chair Horton called the meeting to order at 1:32 p.m.

**2. Acknowledgement of Media**

No press was present.

**3. Approval of the Agenda**

Director Jarrett made a motion to approve the agenda. Director Addington seconded. The committee was in unanimous support.

**4. Approval of Meeting Report of February 12, 2020**

Director Armendariz made a motion to approve the Meeting Report. Director Jarrett seconded. The committee was in unanimous support.

**5. Committee Chair Remarks**

None.

**6. Department Head Update**

Mr. Wiemann reported that there has been concern about the monkey puzzle trees in the creek area. They produce tree pods there that are quite large. They only drop every other year. It would be very difficult to remove the pods from the trees

and very expensive. He has placed signs there to warn residents of the falling seed pods. Their size is 18 inches by 24 inches.

The Landscape Department has been buying new equipment which was budgeted. They are looking into the possibility of using electric battery powered tools to reduce noise and pollution. Some of the electric tools tested in the past aren't as powerful as the gas-powered tools. Technology should come along in a few years where electric tools may work as well as gas-powered tools.

Consent:

*All matters listed under the Consent Calendar are considered routine and will be enacted by the Committee by one motion. In the event that an item is removed from the Consent Calendar by members of the Committee, such item(s) shall be the subject of further discussion and action by the Committee.*

None.

Reports:

None

Items for Discussion and Consideration:

**7. Request for Tree Removal – 3024-A (Bissiri) and 3024-B (Hollie) --Three California Pepper Trees located between the rear of building 3024 and the Tennis Courts at Clubhouse 7**

Director Moldow made a motion to accept staff's recommendation and approve removal of all three trees; staff will pay to remove the decaying tree and the requesting residents will pay to remove the other two trees. Director Armendariz seconded. The committee was in unanimous support.

**8. Discuss Cost of Upgrading Landscaping at the Gates**

Mr. Wiemann reported that most of the work to upgrade landscaping at the gates may be worked on by the new planting crew so an outside contractor will not be needed for this work. To increase accountability and service levels, he has reorganized the Landscape Department and the planting crew is part of that reorganization. Landscaping improvements have already taken place at three of the gates. He reported that staff will be able to work on most of the other gate landscaping in 2021.

There is now also an irrigation specialist on the planting crew which is helping to streamline irrigation issues.

**9. Update on the Creek**

Mr. Wiemann reported that there was a preliminary inspection last week of the mitigation site at the creek. The rule is that the Village must keep any non-native weeds at the creek to just five percent. He is hoping to be done with mitigation next year. He has petitioned the departments that oversee the creek to allow us to remove some of the cattails. According to the mitigation rules, staff is allowed to trim the cattails only in the summer months.

Creating a native turtle pond is an option being considered which would allow the Village to open some of the area by the bridge and a couple of other sections upstream. Mitigation credits are extremely expensive so are not really an option. There are five governmental agencies who govern the creek.

#### **10. Update on Manure Disposal from the Stables**

After staff was ordered by AQMD officials that we could no longer use our existing tub grinder and were waiting delivery of the new tub grinder, we were cited for having too much mulch in the mulch yard. However, we are now clear of that citation. The mulch yard looks great. We are now able to grind tree stumps so are no longer paying approximately \$30K per year to pay someone else to grind them. The Village produces about 2,500 cubic yards of green waste per month. The tree trimmers also dump into our mulch yard. Staff will be dispersing a lot of mulch this fall and winter.

Regarding the manure disposal at the Equestrian Center; initial conversations with the County was a “no” but we told them we could handle it. However, we need to revise our permit to do so. Also, an odor management plan will need to be put into place. We don’t plan on using the manured mulch around the units. It will only be used for other areas such as the horse trails, clubhouses, slopes, and in the Nursery.

Chair Jarrett stated that she will be showing a video of the tub grinder in action on her TV6 spot next week.

#### Items for Future Agendas:

#### Concluding Business:

#### **11. Member Comments (Items Not on the Agenda)**

*The Community Center is closed and this will be a virtual meeting which Members may view on the Village website under Residents>Governance>Board Meeting Videos. Member comments will be read during the meeting and the committee will respond. Members can request to speak via email to [meeting@vmsinc.org](mailto:meeting@vmsinc.org) any time before the meeting is scheduled to begin or during the meeting. Please use the name of the committee meeting in the subject line of the email or call 949-268-2020 beginning one half hour before the meeting begins and throughout the remainder of the meeting. You must provide your name and unit number.*

None.

#### **12. Response to Member Comments**

None.

#### **13. Committee Member Comments**

Director Armendariz stated that perhaps a fence should be put around the monkey puzzle trees at the creek which drop the heavy pods. Staff was asked to put together the cost to fence in those trees and bring that report to the next meeting.

Mr. Wiemann stated that the fence needs to be at three feet tall as to not be a tripping hazard.

**14. Date of Next Meeting – TBD**

**15. Adjournment at 2:14 p.m.**

~~Yvonne Horton~~  
[Yvonne Horton \(Aug 25, 2020 12:06 PDT\)](#)

Yvonne Horton, Chair



## STAFF REPORT

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**DATE: November 30, 2020**

**FOR: Landscape Committee**

**SUBJECT: Aliso Creek Update**

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### **RECOMMENDATION:**

Receive and File.

### **BACKGROUND:**

In 2014, The Golden Rain Foundation of Laguna Woods (GRF) entered into a Streambed Alteration Agreement (Agreement) with the California Department of Fish and Wildlife (CDFW) due to the construction of the pedestrian bridge located in Aliso Park. The creek area is considered a natural riparian habitat and is subject to the regulations put forth by several government agencies, with CDFW being the lead agency. The agreement requires annual biological monitoring of the area directly downstream of the bridge.

The agreement stipulates that the monitoring shall continue for a minimum of five years and shall continue until GRF meets success criteria set forth in the agreement. This year is the sixth year of the monitoring. Once the criteria are met, the biologist monitoring is no longer required; the prescribed maintenance shall continue in perpetuity.

### **DISCUSSION:**

Each year, the Landscape Department has two main objectives in Aliso Creek; control weeds, both native and non-native, and complete the annual survey.

Guidelines are set by the regulating agencies governing when and how maintenance activities can take place within the limits of the creek bed. Staff can remove litter and invasive weeds by hand from the banks and adjacent areas year-round. Work within the creek bed, such as removing native growth such as cattails, can only occur outside of the typical wildlife mating season. Once a survey is performed by a wildlife biologist to locate any native Southwestern Pond Turtles (SPT) the maintenance work will not have any negative impact on the habitat of the SPT.

The SPT survey this year was conducted by Endemic Environmental Services, Inc. and a single SPT and two other non-native turtles were found (Attachment 1). Per the agreement, the non-native turtles were removed from the habitat. This is the first year that a SPT was discovered in the creek. A document, Southwestern Pond Turtle Avoidance and Mitigation Plan for Laguna Woods, was prepared and submitted to CDFW

for review (Attachment 2). Once the review is completed, staff will be beginning the annual removal of cattails from the creek bed. Cattail removal is limited to cutting by hand without disturbing the stream bed and no more than one foot above waterline.

GRF contracts with a biologist (Chambers Group, Inc.) to perform the annual monitoring inspections, guide staff, and coordinate with regulating agencies to produce an annual report (Attachment 3). The results of the survey for 2020 showed a slight increase in bare ground and non-native species. These results indicate a need to continue the monitoring for another year to the end of 2021.

### **FINANCIAL ANALYSIS:**

The funds for the surveys and reports are included in the 2020 Business Plan.

**Prepared By:** Kurt Wiemann, Director of Landscape Services

**Reviewed By:** Eve Morton, Landscape Coordinator

### **ATTACHMENT(S)**

**Attachment 1:** Southwest Pond Turtle Survey

**Attachment 2:** SPT Avoidance and Mitigation Plan

**Attachment 3:** Annual Performance Monitoring Report





## Endemic Environmental Services, Inc.

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30 October 2020  
Attn: Kurt Wiemann  
Director of Landscape Services  
Laguna Woods Village

### **Subject: Laguna Woods Village Western Pond Turtle Presence/Absence Surveys**

#### **Executive Summary**

Endemic Environmental Services, Inc. (EES) conducted southwestern pond turtle (*Actinemys pallida*) presence/absence surveys in a portion of Aliso Creek that runs through Laguna Woods Village, a residential community. The purpose of the surveys was to detect and minimize any impacts that could occur to western pond turtles (SWPTS). EES conducted surveys from 20 October – 23 October 2020. Surveys included visual surveys for basking and swimming detections. EES also conducted a 4-night trapping event for detection in deeper pools of Aliso Creek. One adult male SWPT was detected during the survey.

#### **Project Description**

The project activity is limited to routine maintenance that includes emergent aquatic vegetation removal. Vegetation removal will be removed by using hand tools (i.e. trimmers, hedgers etc.) while leaving approximately 1 foot of vegetation above the water surface to maintain water quality and erosion control.

#### **Project Location**

The project is surrounded by Laguna Woods Village and bounded by Moulton Parkway to the west; Laguna Hills Drive bound it to the south, and Paseo de Valencia to the east. The project is located within and adjacent to Aliso Creek located in Orange County, California; Latitude 33.595377, Longitude -117.710435; United States Geological Survey (USGS) 7.5-minute map San Juan Capistrano quadrangle, Section 34, Township 6 south, Range 8 west, and Section 3, Township 7 south, Range 8 west, San Bernardino meridian; Assessor's Parcel Numbers 621-101-04. 621-101-05. 621-101-06, and 621-111-11.

#### **Survey Method**

To trap pond turtles, suitable basking habitat (where pond turtles congregate) were determined to optimize the efficacy of trapping. Suitable turtle basking habitat includes areas of slow moving water with the presence of emergent vegetation such as Cattails (*Typha spp.*) and California Bulrush (*Schoenoplectus californicus*). Nylon funnel net traps were baited with mackerel in two pools that had suitable water depths. Traps were checked daily for a four-day period. Visual Surveys were conducted daily. Visual surveys consisted of walking the creek banks and searching



## Endemic Environmental Services, Inc.

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all potential basking habitats and within rock cobbles in the flowing creek. The water was also shallow in place where turtles could be visible in the water.

### **Survey Results**

One male SWPT was detected during the visual and trapping survey (Photo 1). Additionally, two red-eared sliders were detected in our trapping surveys. Our trapping event also captured non-native green sunfish in moderate abundance. Peak daytime temperatures ranged between 23 and 28 degrees Celsius.

### **Conclusion and Recommendations**

Since our surveys detected a southwestern pond turtle, a turtle avoidance and minimization plan (TAMP) is recommended to be prepared and executed that follows compliance with the CDFW Streambed Alteration Agreement.

If there are any questions, comments, or concerns, please feel free to contact me.

Sincerely,

Barry Nerhus  
President/Ecologist  
Endemic Environmental Services, Inc.  
(714) 393-6249  
[bnerhus@endemicenvironmental.net](mailto:bnerhus@endemicenvironmental.net)



## Endemic Environmental Services, Inc.



**Figure 1.** Survey Area. The blue border had the highest potential for pond turtle habitat and the survey was focused in this area.





Endemic Environmental Services, Inc.

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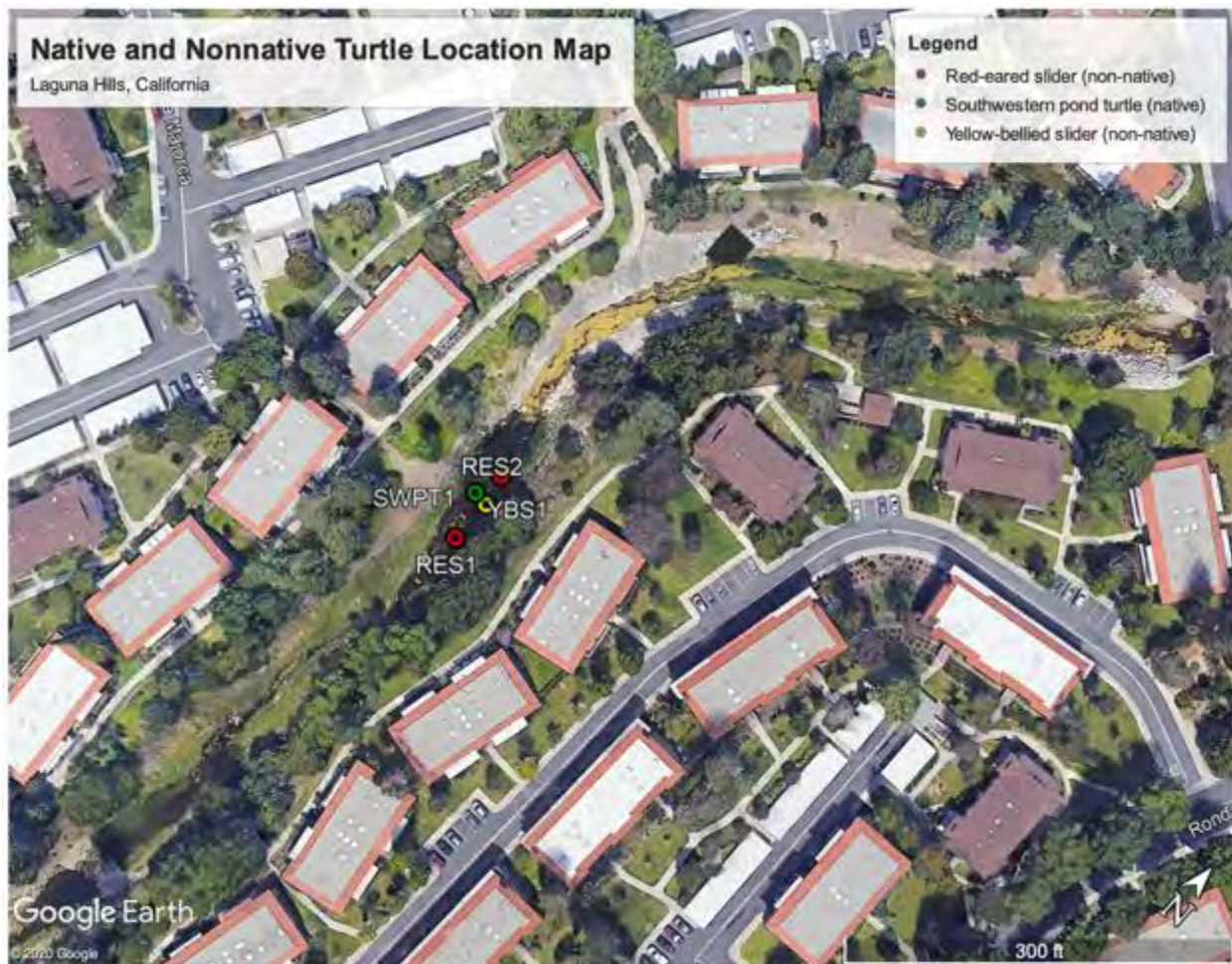


**Photograph 1.** Male Southwestern Pond Turtle (*Actinemys pallida*) captured during our sampling and survey period.



## Endemic Environmental Services, Inc.

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**Photograph 2.** This location is a pool within Aliso Creek just downstream of the Via Sevilla Road Bridge. One SWPT and three non-native turtles were captured. The non-native turtles were removed from the site.



## ATTACHMENT 2

# Southwestern Pond Turtle Avoidance and Mitigation Plan for Laguna Woods

**Prepared For:**



**Laguna Woods Village®**

Laguna Woods Village  
24351 El Toro Road  
Laguna Woods, CA 92637

**Prepared By:**



**Endemic**  
Environmental Services

Endemic Environmental Services, Inc.  
530 Ladera Vista Dr.  
Fullerton, CA 92831

**November 2020**

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## Project Description

The project is limited to routine maintenance that includes emergent aquatic vegetation removal. Vegetation removal will be removed by using hand tools (i.e. trimmers, hedgers etc.) while leaving approximately 1 foot of vegetation above the water surface to maintain water quality and erosion control. Sediment control and removal will be implemented within 20 feet of the two pedestrian walkways that cross the screen. Human trash and debris and nonnative species will be removed and properly disposed of on a routine basis.

### *Project Location*

The project is surrounded by Laguna Woods Village and bounded by Moulton Parkway to the west; Laguna Hills Drive bound it to the south, and Paseo de Valencia to the east. The project is located within and adjacent to Aliso Creek located in Orange County, California; Latitude 33.595377, Longitude -117.710435; United States Geological Survey (USGS) 7.5-minute map San Juan Capistrano quadrangle, Section 34, Township 6 south, Range 8 west, and Section 3, Township 7 south, Range 8 west, San Bernardino meridian; Assessor's Parcel Numbers 621-101-04. 621-101-05. 621-101-06, and 621-111-11. The site is adjacent to the community of Laguna Woods Village and is generally bounded by Moulton Parkway to the west, Laguna Hills Drive to the south, and Paseo de Valencia to the east, entirely within the city of Laguna Woods.

The creek is surrounded by emergent marsh vegetation such as cattails (*Typha* spp.), western ragweed (*Ambrosia psilostachya*), and false fleabane (*Pulicaria dysenterica*). Upland from the marsh vegetation, the treeline consists primarily of pepper trees, coast live oak, and ornamental trees. This treeline and the gentle slope of the channel separate the surrounding residential areas from the creek. The habitat is otherwise surrounded by housing developments that are adjacent to both sides of the creek.

### *Purpose*

The southwestern pond turtle (*Actinemys pallida*) is state listed as a Species of Special Concern by the California Department of Fish and Wildlife (IUCN 2020). Endemic Environmental Services (EES) conducted pre-maintenance surveys for Aliso Creek from 20 October – 23 October 2020. The surveys included visual surveys and a 4-night trapping event for detection in deeper pools. During the pre-maintenance surveys one adult male southwestern pond turtle (SWPT) was identified and trapped in the project area. The trapping results can be seen in Figure 1 and 2 of the Appendix. Pursuant to the CDFW Streambed Alteration Agreement (SAA) No. 1600-2013-0151-R5 a Southwestern Pond Turtle Mitigation Plan is required in the event that native turtles are observed in Aliso Creek. This Plan details all necessary avoidance, minimization, and mitigation measures to prevent unnecessary impact on southwestern pond turtles during maintenance activities.

### *Impacts*

According to the SAA, the aforementioned maintenance activities have the potential to lead to loss of the natural bed or bank; degradation or aggradation of the channel, accelerated channel scour, soil compaction or disturbance, restriction or increase in sediment transport; increased turbidity; increased sedimentation (chronic or episodic); change in water temperature; loss or decline of riparian and/or emergent marsh habitat; colonization by exotic plant or animal species; loss or decline of instream channel habitat; loss or decline of instream woody material; direct take of fish and other aquatic species; disruption to nesting birds and other wildlife; loss or decline of aquatic species' habitat: migration corridors, spawning or rearing areas; change in shading or insolation leading to vegetative change; and wildlife disturbance. The project will impact approximately 1.72 acres of stream bed, bank, and/or channel consisting of emergent freshwater marsh habitat with scattered native and non-native shrubs and trees through routine maintenance.

The southwestern pond turtles have the highest likelihood of being impacted during vegetation removal and sediment removal activities. Studies have reported that mowing can have an unanticipated negative impact in both upland and aquatic turtle habitat. SWPT will occupy upland habitat as adults and when nesting. The turtles can be killed or seriously injured in hatchlings, juvenile, or adult stages. Minor adjustments to equipment may reduce or eliminate turtle injury or mortality on sites where maintenance is required (Alvarez et al. 2017). There are two main ponding areas in the Laguna Woods Village community that present the highest likelihood of pond turtle occurrence. These two pooling areas can be seen in Figure 3 of the appendix (marked as pools #5 and #6) and it is recommended that trimming and maintenance be avoided in these areas when possible. The one adult male SWPT was captured in pool #5 during the surveys. When maintenance is required, the following Avoidance and Mitigation Measures will be followed as described below.

### **Avoidance and Mitigation Measures**

To avoid direct and indirect impacts of maintenance activities on southwestern pond turtles, the following AMMs will be implemented:

**AMM 1:** A qualified biologist must survey Aliso Creek for southwestern pond turtles prior to the start of Project activities. Surveys for SWPT and any active turtle nests will be conducted 15 to 30 days prior to the start of any Project activity involving dewatering, vegetation management, invasive weed control, or sediment removal. If needed, a qualified biologist holding a CDFW Scientific Collecting Permit for the species will move the species to the nearest area of suitable habitat outside of the Project Area.

**AMM 2:** If the southwestern pond turtle presence/absence surveys show that native turtles are present in the project footprint or within 300 feet of a project footprint, then an approved biologist will conduct a field investigation to delineate western pond turtle aquatic habitat within the project footprint and within 300 feet of the project footprint. The approved biologist will map all existing or potential sites and provide those maps to CDFW.

**AMM 3:** If native turtles are observed near the project site, efforts shall be made to reduce or eliminate the impact to the south-facing slope of the upland habitat.

**AMM 4:** If native turtles are observed near the project site, impacts to drainages and the surrounding area shall take place outside the southwestern pond turtle breeding period, which occurs from April 1 through August 31.

**AMM 5:** Vegetation removal and trimming tools should provide an additional space of 4-5 inches in upland areas and 6-7 inches in aquatic and wintering habitat in order to prevent incidental take for SWPT. All clearing crews must exercise precaution when trimming in sensitive habitats and avoid marked buffer areas.

**AMM 6.** Soil disking shall not occur within 300 ft of occupied aquatic habitat unless critical to the structure of the creek.

**AMM 7:** Maintenance crews shall avoid ponding areas where southwestern pond turtles are present. If it is not possible to avoid the delineated area, precautionary hand pulling techniques shall be implemented in designated buffer areas.

**AMM 8:** Before any sediment disturbing activities a qualified biologist shall implement a turtle exclusion and relocation program within the construction zone. This program shall provide for the erection of turtle barriers and regular trapping surveys of the construction area to capture and relocate turtles from within the project work area to the adjacent, unaffected habitat areas.

**AMM 9:** If a southwestern pond turtle is encountered during construction activities, the approved biologist will notify CDFW immediately. Construction activities will be suspended in a 100-foot radius of the individual until the individual leaves the project site on its own volition. If necessary, the approved biologist will notify CDFW to determine the appropriate relocation procedures. If the pond turtle is handled, a report will be submitted, including date, location, habitat description, and any corrective measures taken to protect the turtle, within 24 hours. The biologist will report any take of listed species to the U.S. Fish and Wildlife Service immediately.

**AMM 10:** If accidental injury or death of southwestern pond turtle occurs, workers will immediately inform the approved biologist or on-site monitor and site supervisor. The approved biologist or on-site monitor will notify the appropriate contact person at CDFW within 24 hours

of the incident. The report will provide the date and location of the incident, number of individuals taken, the circumstances resulting in the take, and any corrective measures taken to prevent additional take.

**AMM 11:** Maintenance activities may occur throughout the year as long as southwestern pond turtle habitat is identified, fully avoided, and movement of equipment is confined to existing roads. Maintenance and ground-disturbing activities must otherwise be conducted outside of the active season. These activities will be initiated after May 1 and will commence prior to September 15. If it appears that construction activities may go beyond September 15, the appropriate Permit Applicant must contact the approved biologist and CDFW as soon as possible, but not later than September 1, to determine if additional measures are necessary to minimize take.

**AMM 12:** If erosion control is implemented within western pond turtle habitat, non-entangling erosion control material will be used to reduce the potential for entrapment. Tightly woven fiber netting (mesh size less than 0.25 inch) or similar material will be used to ensure that turtles are not trapped (no monofilament). Coconut coir matting and fiber rolls containing burlap are examples of acceptable erosion control materials.

## **General Construction Measures**

The following general construction measures shall be implemented in order to avoid impacts to biological resources during construction of the proposed Project:

1. To the extent possible, construction personnel shall minimize the work area footprint and the duration at a work area site. Construction personnel shall use existing paved and unpaved roads to access the work area where present. Vehicles and equipment shall be parked on pavement, existing roads, and previously disturbed areas to the maximum extent feasible.
2. A litter control program will be instituted for the entire project site. All workers will ensure that their food scraps, paper wrappers, food containers, cans, bottles, and other trash are deposited in covered or closed trash containers. All garbage will be removed from the project site at the end of each work day, and construction personnel will not feed or otherwise attract wildlife to the area where construction activities are taking place
3. To avoid harm and harassment of native species, workers and visitors will not bring pets onto a project site. Open fires (such as barbecues), hunting, and fishing shall also be prohibited in work areas.

### *Habitat Protection*

SWPT is a semi-aquatic species that utilizes aquatic habitats for foraging and terrestrial habitats for reproduction and overwintering. Nest sites often take the form of unshaded areas with low shrubs and burrows. Southwestern pond turtles travel through upland habitat for a variety of reasons and can occur in the terrestrial environment at all times of year. This management strategy therefore must provide protection for not only waterways but adjacent lands (Reese et al. 1997). The approved biologist will delineate all habitat that with high likelihood of pond turtle occurrence prior to maintenance activities, specifically for pools #5 and #6 as detailed in Figure 3 of the survey area. If nesting turtles are found in the upland a 10 ft buffer will be implemented until the nest has been determined to be inactive by an approved biologist.

### *Management Recommendations*

- Continue trapping efforts for more detail population estimation around Aliso Creek.
- Remove exotic species that prey on and compete with pond turtles from sites identified for habitat enhancement.
- Implement educational programs and signage for best conservation management practices around Laguna Woods Village.
- Prevent species take from pollution, littering, and fishing.
- Take precautions in both upland and aquatic systems during maintenance activities.

It is recommended that trimmer and mower height be adjusted to 4-5 inches in high likelihood SWPT upland habitat and 6-7 inches in aquatic refuge, foraging, and wintering habitat (Alvarez et al. 2017). These adjustments will allow clearance for juvenile to adult pond turtles. Saumure et al. (2006) reports that added benefits of raising blade height include reduced soil erosion and machinery wear. SWPT have the highest likelihood of being avoided at sites where biological monitors can survey in advance of vegetation clearing. It is recommended that soil disking does not occur within 300 feet of ponding areas #5 and #6 unless it is critical to the structure and function of the creek.

Vegetation clearance should be excluded from areas when nestling turtles are emerging (March and early April) and during the period when nesting females use uplands (early May to early July) in order to reduce risk of injury or mortality (Reese and Welsh 1997).

### *Invasive Species Removal*

Non-native species have a significant impact on native ecosystems and trophic cascades. The removal of invasive species is essential to achieve sustainable western pond turtle populations (Hays et al. 1999). During preconstruction surveys and trapping efforts, Endemic Environmental Services will remove all non-native species from the system. In the past, these non-native species have included American bullfrog (*Lithobates catesbeianus*), red-eared slider (*Trachemys scripta elegans*), yellow-bellied slider (*Trachemys scripta scripta*), red-swamp crayfish (*Procambarus*

*clarkii*), and bluegill (*Lepomis macrochirus*). Non-native removal efforts reduce predators and competition in the ecosystem to allow for a greater probability of hatchling and juvenile survival and recruitment and therefore greater population success (Hays et al.1999).

## **Reporting Plan**

Reports to CDFW will consist of the following: Annual reports that: a. update SWPT status, b. summarize project surveys, c. report on effectiveness of protection measures (effectiveness monitoring), d. report on incidental take of species, if applicable, e. report on adaptive management, where applicable.

### *Reporting Measures*

Permittee shall meet each reporting requirement described below.

1. Notification Prior to Work. Permittee shall notify CDFW, in writing, at least 5 days prior to initiation of each maintenance activity. Start-work notification shall be sent to CDFW's South Coast Office at the address on page 1, ATTN: Streambed Alteration Program – SAA #1600-2013-0151-R5, or alternatively by electronic mail to [R5LSACompliance@wildlife.ca.gov](mailto:R5LSACompliance@wildlife.ca.gov).
2. Southwestern Pond Turtle Survey Reports. A report shall be submitted to CDFW detailing trapping survey methods and results of each southwestern pond turtle survey prior to initial maintenance activity and prior to each sediment disturbing activity. The report shall include the location of each trap, number and duration of each trapping period, and summary of trapping results. The report shall also include results from previous surveys performed in the area. If southwestern pond turtles are found on site, avoidance, exclusion, and minimization measures shall be submitted to CDFW prior to the initiation of maintenance activities as detailed in Measure 2.7.
3. Sensitive Species Observations. Permittee shall be responsible for reporting all observations of threatened /endangered species or species of special concern to CDFW's Natural Diversity Data Base (CNDDDB) within 10 days of sighting. The form and instructions for completing the form and submitting the information are available on-line at [http://www.wildlife.ca.gov/biogeodata/cnddb/submitting\\_data\\_to\\_cnddb.asp](http://www.wildlife.ca.gov/biogeodata/cnddb/submitting_data_to_cnddb.asp). In addition to sending the information to CNDDDB a copy should be sent to CDFW's South Coast Office at the address above, ATTN: Streambed Alteration Program – SAA #1600-2013-0151-R5.

All baseline data, positive results, project updates, and survey mapping will be synthesized and included in each report and submitted in a timely manner to Laguna Hills Village and the respective wildlife agencies for continued monitoring and mitigation.

## References

Alvarez, Jeff A, et al. "Potential injury and mortality in *Actinemys (Emys) pallida* during restoration and maintenance activities." *Western Wildlife*: 81. 2017.

CDFW. "Streambed Alteration Agreement Notification No. 1600-2013-0151-R5 Aliso Creek." Professional Community Management Inc. Aliso Creek Maintenance at Laguna Woods Village. 2013.

East Bay Municipal Utility District. "Low Effect East Bay Habitat Conservation Plan." 2008.

Endemic Environmental Services, Inc. "Laguna Woods Village Western Pond Turtle Presence/Absence Surveys". Laguna Woods Village. 2020.

Hays, D. W., K. R. McAllister, S. A. Richardson, and D. W. Stinson. "Washington State Recovery Plan for the Western pond turtle". Washington Department of Fish and Wildlife, Olympia, Washington. 1999.

IUCN. "Southwestern Pond Turtle". *Red List of Threatened Species*". 2020.

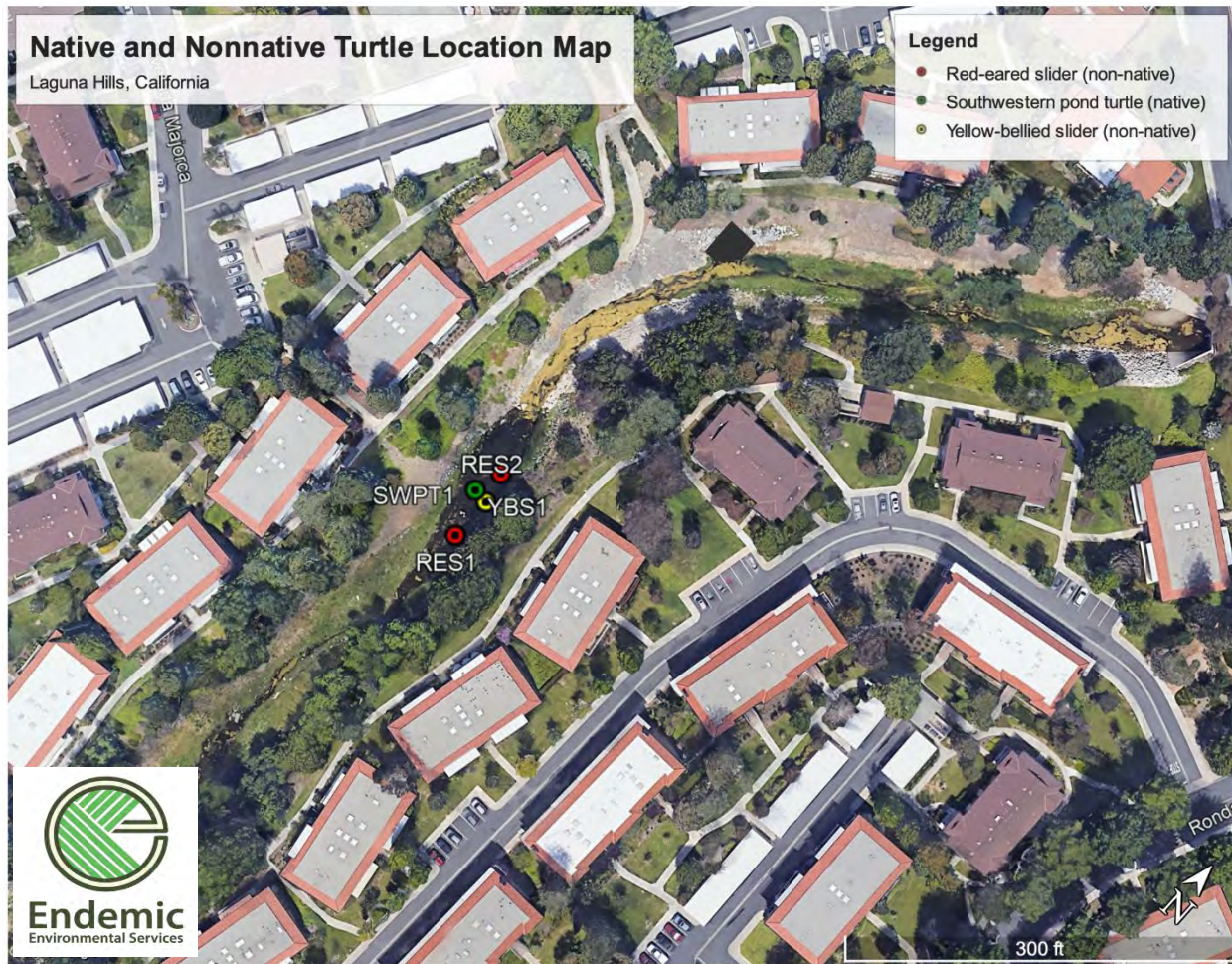
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## Appendix



**Figure 1.** This location is a pool within Aliso Creek just downstream of the Via Sevilla Road Bridge. One SWPT and three non-native turtles were captured. The non-native turtles were removed from the site.





**Figure 2.** Southwestern pond turtle captured in pool #5 of Aliso Creek during pre-maintenance surveys.



**Figure 3.** The survey area map shows the areas with the highest potential for pond turtle habitat and the general border for the survey area. Pooling areas #5 and #6 have been shown to have the highest incidence of capture.

## ATTACHMENT 3

### **2020 ANNUAL PERFORMANCE MONITORING REPORT FOR HABITAT RESTORATION AT THE ALISO CREEK TRAIL REPAIR PROJECT**

***Prepared for:***

**GOLDEN RAIN FOUNDATION OF LAGUNA WOODS**

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**NOVEMBER 2020**

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## **SECTION 1.0 – INTRODUCTION**

### **1.1 PURPOSE OF THE ANNUAL REPORT**

Chambers Group, Inc. (Chambers Group) was retained by the Golden Rain Foundation of Laguna Woods (GRF) to document and assess the progress of the habitat restoration project at the Aliso Creek Trail Repair Project (Project) on an annual basis. The purpose of this annual monitoring report is to document the status of the restoration site to date. This report satisfies the Year 6 requirements of the Final Habitat Mitigation and Monitoring Plan (HMMP, RBF 2014) as a component of the Regional Water Quality Control Board (RWQCB) Water Quality Certification Number 12C-038 to offset the unavoidable impacts associated with the Aliso Creek Trail Repair Project (RBF 2014). The California Rapid Assessment Method (CRAM) has been completed and the Summary Assessment Report is included per the requirements of Water Quality Certification Number 12C-038, Park VI. This annual report provides: (1) a summary of the Project background, (2) a summary of the HMMP goals to restore riparian scrub habitat, (3) a restoration site assessment for 2020 with quantitative measurements of vegetative cover, (4) a summary of the CRAM assessment, and (5) recommendations needed to meet the required performance standards.

### **1.2 PROJECT LOCATION**

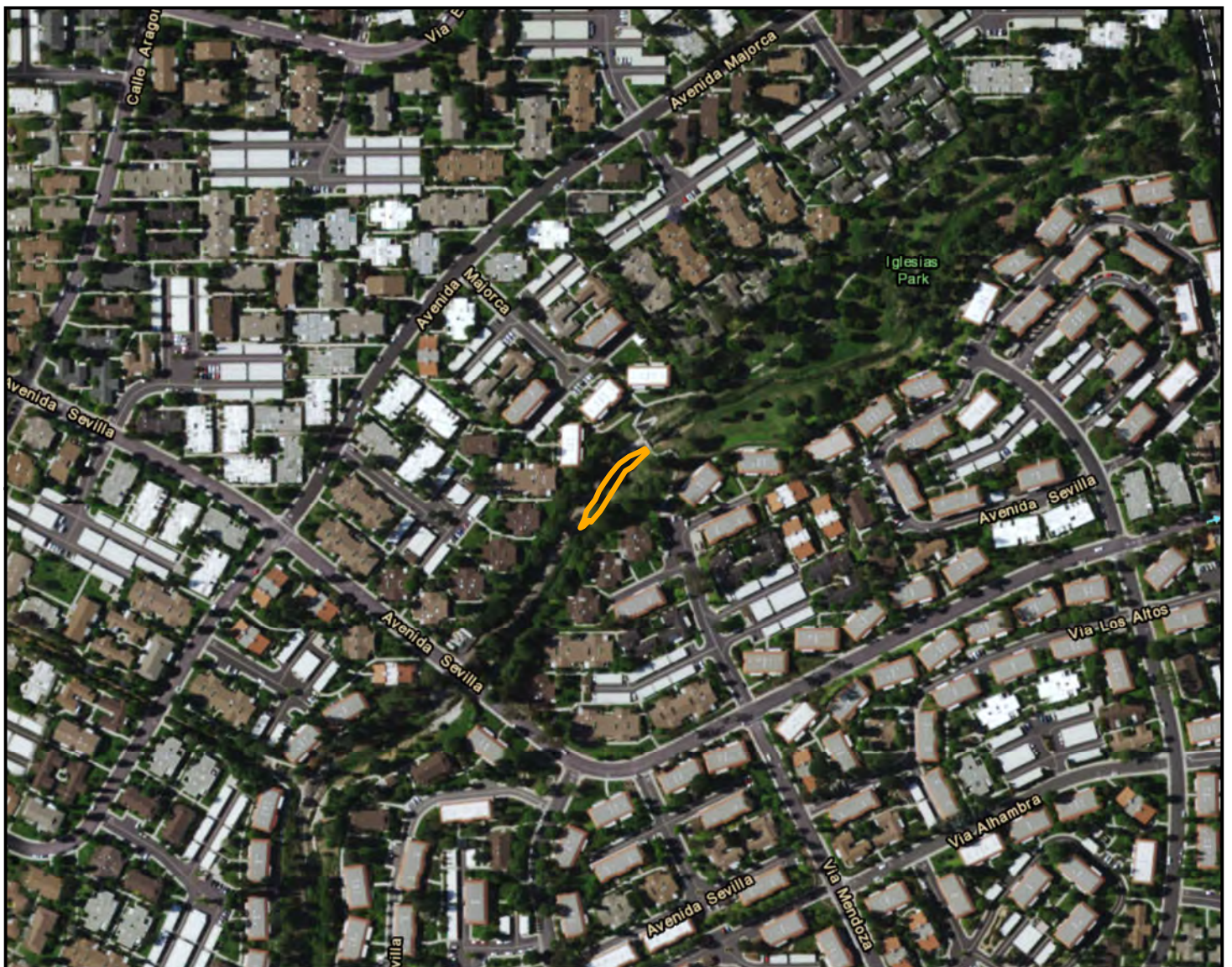
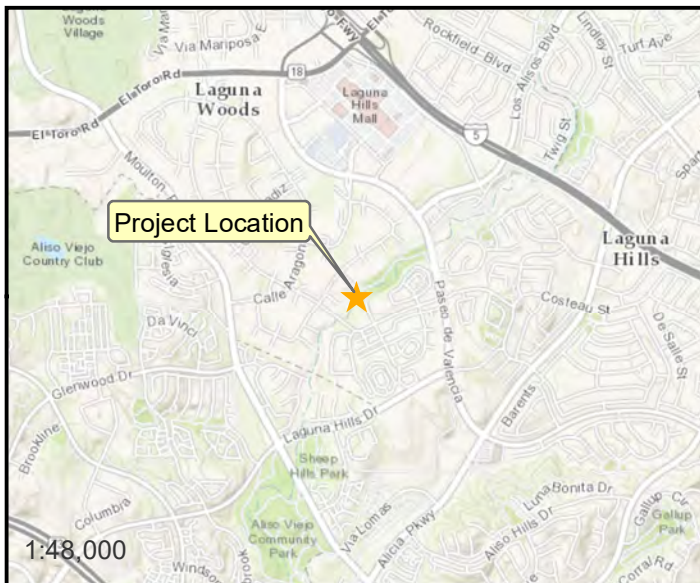
The Aliso Creek Trail Repair Project site is located within the Laguna Woods Village. The site is located along Aliso Creek upstream of the Avenida Sevilla road crossing, in the City of Laguna Woods, County of Orange, California. The site lies within the U. S. Geological Survey (USGS) San Juan Capistrano 7.5 minute quadrangle. The Public Land Survey System (PLSS) places the site at Township 6 South, Range 8 West, Section 34.

### **1.3 PROJECT BACKGROUND**

The Project consisted of replacing a pedestrian bridge over Aliso Creek that was damaged as a result of storm events. The pedestrian bridge is utilized by seniors in the Laguna Woods residential development and connects users to the local park. A double 3-foot-high by 7-foot-wide reinforced concrete box replaced the damaged pedestrian bridge. The bridge acts as a grade stabilizer within Aliso Creek. This stabilizer supports the creek's grade and is important for the protection of an existing 24-inch storm drain located immediately downstream. The bridge has approximately the same flow capacity as the prior crossing. Larger storm events were able to overtop the previous crossing; however, the paths connecting to this new facility are protected from erosion by use of reinforced turf mats.

In addition, the 140-foot section of service road adjacent to the creek was repaired by removing the remaining portion of surfacing within the reach and constructing a new reach of 16-foot-wide road. The outside edge of the road remains the same as the existing condition. The repairs began downstream at the location along the creek where grouted rock riprap was previously constructed adjacent to the road within the creek to provide grade stabilization within the creek. The upstream end of the repairs was at the location where the road joins the existing concrete path. A 10-foot transition from the 16-foot road to the existing 8-foot concrete path was also constructed. Rock riprap was placed adjacent to the road at a 2:1 slope into the creek. The riprap extends 3 feet below the invert elevation of the creek. The rock was buried by earthen fill and then revegetated with a native plant palette. The rock riprap is not visible post construction. Project construction occurred between May and August 2013.





#### Legend

 Project Location



0 200 400 800  
Feet

**Figure 1**  
Project Vicinity Map

## 1.4 PROJECT HISTORY

In compliance with the RWQCB Water Quality Certification Number 12C-038 to offset the unavoidable impacts associated with the Project and to compensate for the temporal loss of 0.06 acre of vegetation, areas impacted by the construction of the new foot bridge were hydroseeded and planted with a native riparian scrub mix (Table 1). The mitigation program consists of the creation at a ratio of 1.32:1 for permanent impacts to 0.06 acre of waters of the United States/State, for a total of a 0.079 acre.

The site had no native plant cover following the completion of the construction of the new bridge and repairs to the road. The area to be planted consisted of rock riprap that was placed adjacent to the road at a 2:1 slope into the creek. The riprap extends 3 feet below the invert elevation of the creek. The rock was then buried by earthen fill and revegetated. The current restoration area being actively maintained and enhanced totals 0.16 acre.

**Table 1: Native Seed Mixture**

Species Name	Common Name	Total Pounds <sup>†</sup>
<i>Ambrosia psilostachya</i>	western ragweed	0.32
<i>Artemisia douglasiana</i>	mugwort	0.01
<i>Distichlis spicata</i>	saltgrass	1.52
<i>Vulpia microstachys</i>	small fescue	0.64
<b>Total</b>		<b>2.49</b>

<sup>†</sup> Coverage Area: 5,532.00 square feet (0.127 acre) per the HMMP.

## 1.5 SEED APPLICATION

The hydroseeding application process followed the HMMP guidelines. Seeding of native plant species along the creek banks was conducted on December 5, 2014; January 27, 2015; and October 26, 2015. The amount of seed applied per species per event is shown below (Table 1).

## 1.6 RESPONSIBLE PARTIES

The GRF is responsible for overseeing the Landscape Contractor and ensuring success of the seeded and planted species within the site in compliance with the HMMP. The responsible parties, as outlined below (Table 2), include a qualified Landscape Contractor and a Restoration Specialist who are responsible for adhering to the guidelines specified in the HMMP.



**Table 2: Parties Responsible for Implementing the HMMP**

Responsibility	Organization	Contact
Prepare the HMMP, initial implementation and planting	RBF Consulting	Richard Beck 14725 Alton Parkway Irvine, California 92618 (949) 855-3687
Plant installation, seeding, and site maintenance	The Golden Rain Foundation of Laguna Woods	Kurt Wiemann, Director of Landscape Services P.O. Box 2220 Laguna Hills, California 92654 (949) 268-2316 Kurt.Wiemann@vmsinc.org
Post-construction maintenance monitoring and reporting; Agency coordination	Chambers Group, Inc.	Heather Clayton, Project Manager 5 Hutton Centre Drive, Suite 750 Santa Ana, California 92707 (949) 261-5414 ext. 7241 hclayton@chambersgroupinc.com

## 1.7 SITE MAINTENANCE AND MONITORING

The GRF has been responsible for maintaining the site since 2013. The Landscape Contractor or the GRF is responsible for the following tasks:

- remedial replanting if unforeseen site challenges occur
- irrigation and associated system maintenance
- weed control
- erosion control
- herbivore control
- access restriction
- trash removal

A five-year maintenance and monitoring program was created to direct the successful establishment of the native plant community. The GRF is responsible to provide onsite monitoring, which includes the following tasks:

- provide a qualitative and quantitative assessment of site conditions and performance;
- monitor site maintenance activities and identify necessary maintenance tasks to facilitate successful plant establishment; and
- document site conditions and produce an annual report consistent with agency requirements.

The monitoring schedule complies with the HMMP for the Aliso Creek Trail Repair Project developed by RBF (2014) and consists of monthly qualitative maintenance monitoring for the first six months after planting and quarterly qualitative maintenance monitoring for the remainder of the five-year Project. Annual quantitative monitoring was carried out this year (2020) and will continue annually throughout the monitoring period, or until the performance standards are met.

## 1.8 VEGETATION PERFORMANCE STANDARDS

The success criteria for the site are shown in Table 3. If, at any time the plants in the restoration site do not meet the performance standards set forth in the HMMP, GRF will be responsible for taking timely remedial actions to ensure compliance with the performance standards for the subsequent year.

**Table 3: Performance Standards by Year**

Year	Percent Cover of Native Species (%)	Percent Cover of Nonnative Species (%)	Maximum Percent Bare Ground (%)
1	35	< 5	65
2	50	< 5	50
3	70	< 5	30
4	75	< 5	25
5	80	< 5	20
6	80	< 5	20

## SECTION 2.0 – METHODS

### 2.1 MONITORING INSPECTION

The sixth annual performance monitoring inspection was conducted on June 24, 2020, by biologists Heather Clayton and Joanna Kipper of Chambers Group. As stated in the HMMP, vegetative sampling will consist of quantitatively measuring vegetative cover of native and non-native plant species along permanent transects. Biologists sampled five transects (Table 4) to quantify vegetative cover in Year 6 (2020). Transects are sampled in the same general area each year but are re-randomized for statistical power. Plant nomenclature follows that of The Jepson Manual: Vascular Plants of California, Second Edition (Baldwin et al. 2012). Plant species observed on the restoration site were compiled (Appendix A).

**Table 4: Transect Locations within the Restoration Area**

Transect Number	Easting	Northing*	Aspect
1	434377	3718050	174° south
2	434351	3718028	220° southwest
3	434326	3717995	23° north
4	434345	3718034	31° northeast
5	434366	3718052	216° southwest

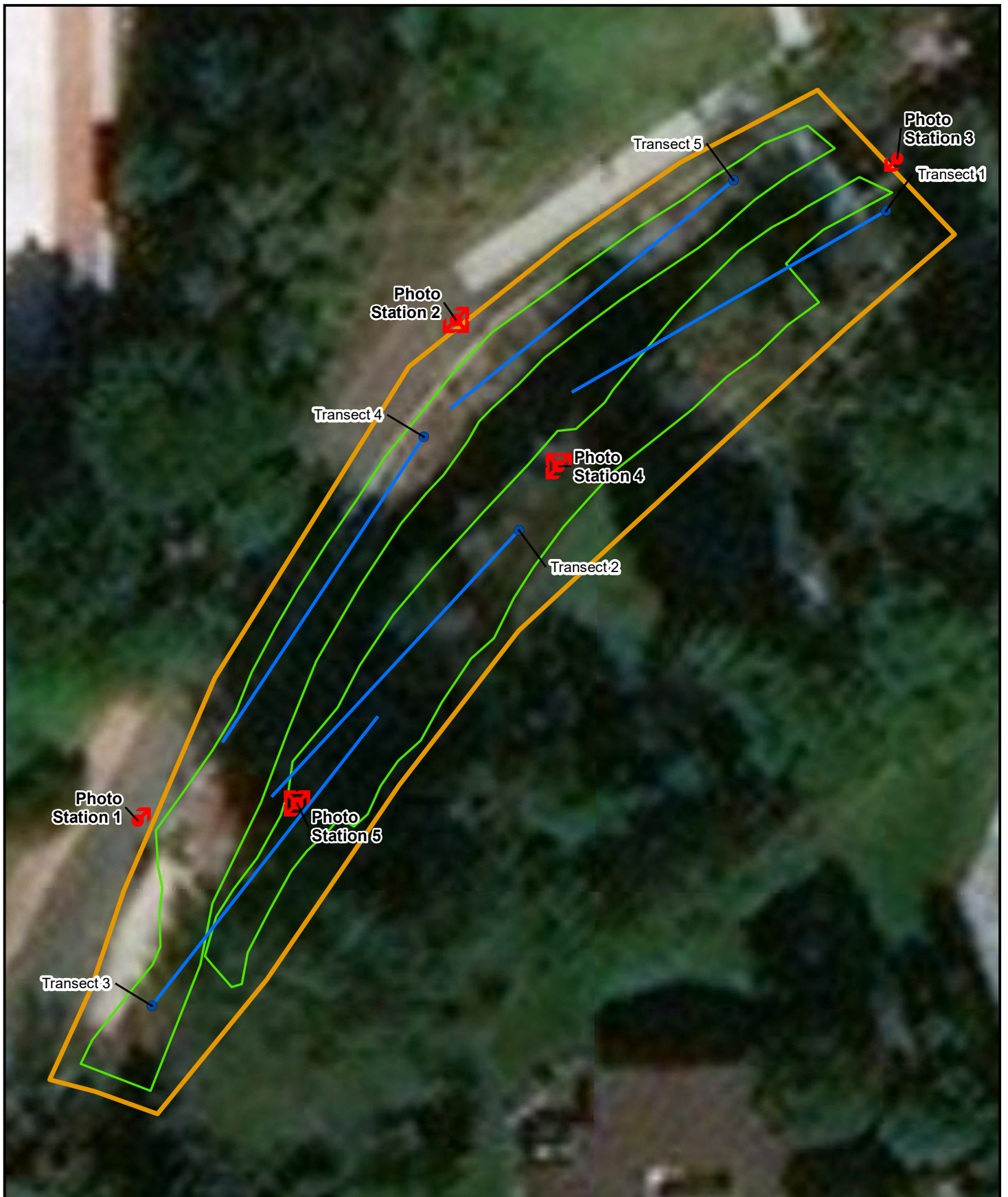
\*UTM coordinates in meters, NAD83, Zone 11S.

### 2.2 CRAM SURVEY

A California Rapid Assessment Method (CRAM) survey was conducted using the standard protocols on June 24, 2020, by lead CRAM Practitioner Lisa Louie with assistance from Chambers Group biologist Heather Clayton and Joanna Kipper. As stated in Water Quality Certification Number 12C-038, Park VI.A, CRAM must be utilized to establish pre-project baseline conditions and following completion of the mitigation site construction at Years 3 and 5 and continuing until success criteria have been met. The results of the CRAM assessment must be submitted each year with the Annual Monitoring Reports and data must be uploaded into eCRAM (<http://www.cramwetlands.org>).

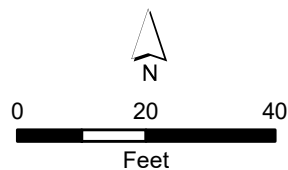
### 2.3 VEGETATIVE COVER

The point-intercept method was used to measure vegetative cover quantitatively (Sawyer and Keeler-Wolf 1995) along a series of five permanent transects. The starting point of each transect was recorded using a hand-held Global Positioning System (GPS) unit, and the direction of each transect was recorded using a compass. The transect locations are depicted in Figure 2.



#### Legend

- Project Area (0.31 acre)
- Restoration Area (0.16 acre)
- ↗ Photo Point (with direction)
- Transect Start Location
- Transect (25m)



**Figure 2**  
Transect & Photo Station Map

After each transect alignment was established, imaginary vertical lines were projected into the vegetation at 0.5-meter intervals along the transect length. Plant species touching the vertical line were recorded as “hits” and used to extrapolate the vegetative cover by species on each transect. The percent cover of vegetation is reported as absolute cover, which is calculated by totaling the number of hits for each species divided by the number of possible hits along the transect. Vegetative cover may be greater than 100 percent where multiple layers (i.e., shrubs and herbs) are present in the community, or where multiple species are encountered within a single layer at any given point along the transect. The ground cover under each plant “hit” was characterized as having either “rocks”, “litter” or “bare ground.”

The total hits for each vegetation type (e.g., native or non-native species) were averaged for all transects to determine the average absolute percent cover for the site. This is the measurement used in comparing site conditions to the performance standards set for the site in the beginning stages of the Project. Points along the transect lacking vegetation were recorded as “no plant” and used to calculate the amount of unvegetated surface or bare ground that was present within the restoration site.

## 2.4 PHOTOGRAPHIC DOCUMENTATION

To document the restoration progress, photographs were taken from five established locations (Appendix B). The directions and GPS coordinates of each of the five photo stations were recorded (Table 5) and are depicted in Figure 2.

**Table 5: Photo Stations within the Restoration Area**

Photo Station	Easting	Northing*	Direction
1	434325	3718008	northeast
2	434347	3718042	multiple
3	434377	3718053	southwest
4	434354	3718032	multiple
5	434336	3718009	multiple

\*UTM coordinates in meters, NAD83, Zone 11S.

## SECTION 3.0 – RESULTS

### 3.1 NATIVE PLANT COVER

The average cover of native vegetation was 102 percent (Table 6). Raw data collected along each transect are presented in Appendix C. The most common native species recorded on site included arroyo willow (*Salix lasiolepis*), mule fat (*Baccharis salicifolia* subsp. *salicifolia*), and red willow (*S. laevigata*). Other native species recorded in smaller densities were mugwort (*Artemisia douglasiana*), ragweed (*Ambrosia psilostachya*), and California wild rose (*Rosa californica*).

**Table 6: Vegetative Cover Summary**

Year		Native Species (%)		Non-Native Species (%)		Bare Ground (%)	
		Standard	Measured	Standard	Measured	Standard	Measured
One	2015	35	Not measured	<5	Not measured	65	Not measured
Two	2016	50	45*	< 5	75*	50	Not measured
Three	2017	70	83.6	< 5	9.2	30	24.8
Four	2018	75	74.4	< 5	48.0	25	16.4
Five	2019	80	117.6	< 5	7.6	20	7.2
Six	2020	80	102	< 5	8.8	20	27.2

\* Qualitative estimate, due to site conditions. Other values represent quantitative measurements.

TBD -- To Be Determined, data not yet collected.

### 3.2 NON-NATIVE PLANT COVER

The average non-native cover was 8.8 percent. The dominant non-native species on site was Bermuda grass (*Cynodon dactylon*). Other non-native species recorded in smaller densities were creeping bent grass (*Agrostis stolonifera*), herb of grace (*Bacopa monnieri*), prickly lettuce (*Lactuca serriola*), sweetclover (*Melilotus albus*), Spanish sunflower (*Pulicaria paludosa*), and Brazilian pepper (*Schinus terebinthifolius*).

### 3.3 UNVEGETATED AREAS

The average areas with no plants present (“no plant”), or the percent of the site not occupied by any vegetation, was measured at 18 percent.

### 3.4 GROUND COVER

The average ground cover was measured as 29.6 percent for “rocks,” 43.2 percent for “litter,” and 27.2 percent for “bare ground” (Table 7).



**Table 7: Ground Cover Summary**

<b>Transect Number</b>	<b>Rocks (%)</b>	<b>Litter (%)</b>	<b>Bare Ground (%)</b>
1	50.0	14.0	36.0
2	4.0	62.0	34.0
3	6.0	72.0	22.0
4	36.0	42.0	22.0
5	52.0	26.0	22.0
<b>Average</b>	<b>29.6</b>	<b>43.2</b>	<b>27.2</b>

### **3.5 CRAM ANALYSIS RESULTS**

As shown on the CRAM Summary Assessment Report, the project site has an Index Score of 44. This is based on a metric score of 25 for Buffer and Landscape Context, 33.33 for Hydrology, 50.00 for Physical Structure, 66.67 for Biotic Structure. Although the scores for Physical Structure and Biotic Structure increased from 2018 values due to the increase in native vegetation species and decrease in non-native species, the mitigation site conditions within the reach of the creek are still located within an active senior residential community. As such, the mitigation site is subject to high levels of human activity, including maintenance activities, such as lawn mowing and tree trimming, as well as passive recreation such as walking, running, and bicycle riding. The results have been uploaded into eCRAM (<http://www.cramwetlands.org>). The Summary Assessment Report is provided as Appendix D.

## SECTION 4.0 – DISCUSSION AND RECOMMENDATIONS

### 4.1 NATIVE AND NON-NATIVE VEGETATION

The restoration site along the creek banks was hydroseeded with the native plant mix as described by the HMMP three times during 2014 and 2015. Container planting also took place in 2014 and 2015 and along the upper buffer area of the north-facing bank in 2016. The site has been weeded periodically since 2014. These continued maintenance efforts have allowed for the persistence of native vegetation within the restoration area but have not been sufficient to keep weed cover below the required performance standard. Two significant storm events during the winter of 2017-2018 resulted in flooding events indicated by bent branches, downed shrubs, scouring of soils, thatch build up, and trash present within the Project site boundary. Annual post-construction site conditions demonstrate that vegetation cover within the site is annually reduced following flood events. However, qualitative surveys conducted in January and March 2018 indicated the native plant species cover can quickly recover from flooding events, despite increased cover of non-native species. In addition, during the qualitative surveys biologists observed that some of the native plants had inadvertently been removed by GRF maintenance staff or had been trimmed by unauthorized residents.

Biologists quantified the native vegetative cover at 102 percent in June 2020, indicating the site has exceeded the required native plant cover performance standard of 80 percent for Year 5. This high value suggests that the native vegetation on site has a well-established root system and has the potential to regrow above-ground biomass each year following flood events. The most common native species recorded on site included arroyo willow, mule fat, and red willow. Other native species recorded in smaller densities were mugwort, ragweed, and California wild rose.

Non-native vegetative cover was measured in 2020 at 8.8 percent. The dominant non-native species on site was Bermuda grass, with smaller densities of creeping bent grass, herb of grace, prickly lettuce, sweetclover, Spanish sunflower, and Brazilian pepper. The non-native value recorded this year is higher than the 7.6 percent measured in 2019 and currently does not meet the non-native cover standard required in the HMMP of less than 5 percent. This increase indicates that site maintenance and weed control efforts were not sufficient to adequately manage non-native vegetation on the site; however, maintenance was limited during the stay-at-home orders issued in March 2020 as a result of COVID-19. Due to the fact that all the residents of Laguna Woods are in the high-risk category, maintenance was dramatically scaled back. As the economy began to re-open and landscape staff could return to work, site maintenance was resumed in June 2020.

With continued care and training by GRF maintenance staff, preferably under the direction of a biologist knowledgeable in native plant identification, and increased weeding of non-native plant species, the cover of native vegetation is expected to continue surpassing the performance standard of 80 percent and non-native cover can likely be brought into compliance below 5 percent by spring 2021.

### 4.2 UNVEGETATED AREAS

Unvegetated areas indicated as “no plant” in Table 6, averaged 27.2 percent, which is above the fifth-year standard of 20 percent for the site. This indicates the restoration area is not meeting the performance criteria for Year 6 as allowed by the HMMP. These unvegetated weed-free areas should be continually maintained to allow native seed germination and existing plants to increase in size, thereby increasing the overall cover of native species naturally with time.



#### **4.3 GROUND COVER**

The majority of ground cover (70.4 percent) is characterized as “litter” or “bare ground” substrate, and only 29.6 percent is “rock.” This indicates that most of the ground cover is available to allow native seed germination and expansion from growth of existing native plants.

#### **4.4 RECOMMENDATIONS**

Native vegetative cover was measured at 102 percent, which is 22 percent over the required fifth-year standard. Non-native species cover was 8.8 percent, higher than the less than 5 percent performance standard. Chambers Group makes the following general recommendations to progress the site toward achievement of all the performance standards:

- GRF maintenance staff should increase the monitoring of weeds on the site and conduct weeding on an as-needed basis under the direction of a biologist knowledgeable in native and non-native plant identification. Weeds should be removed before they reach the flowering and fruiting stage, to reduce increasing the weed seed bank on the site. Improved weed management will help the site reach the performance standard for non-native vegetation on site.
- When weed removal is necessary, hand-pull non-native weed species from within the creek channel. Chemically treat aggressive non-native perennial grass species (i.e., Bermuda grass) within the restoration area and within a 3-foot buffer around the restoration site. Only herbicide approved for use within aquatic areas should be used (e.g., Roundup Custom or approved equal).
- Maintain the demarcated restoration site boundaries to continue the minimization of mowing of native vegetation by the Laguna Woods landscape crew.
- Add signs around the site that notify residents of ongoing habitat restoration to avoid unauthorized trimming of native vegetation.
- No additional planting is recommended at this time.

## SECTION 5.0 – REFERENCES

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## **APPENDIX A – PLANT SPECIES OBSERVED**

## APPENDIX A – PLANT SPECIES OBSERVED

Scientific Name	Common Name	Observed				
		2016	2017	2018	2019	2020
<b>MAGNOLIIDS</b>						
<b>SAURURACEA</b>	<b>LIZARD’S-TAIL FAMILY</b>					
<i>Anemopsis californica</i>	yerba mansa	X	X	X	X	X
<b>ANGIOSPERMS (EUDICOTS)</b>						
<b>APIACEAE</b>	<b>CARROT FAMILY</b>					
<i>Apium graveolens</i> *	celery	X	X	X	X	X
<i>Foeniculum vulgare</i> *	fennel	X				
<b>ASTERACEAE</b>	<b>SUNFLOWER FAMILY</b>					
<i>Ambrosia psilostachya</i>	western ragweed		X	X	X	X
<i>Artemisia californica</i>	California sagebrush	X	X	X	X	
<i>Artemisia douglasiana</i>	mugwort	X	X	X	X	X
<i>Baccharis pilularis</i>	coyote brush		X	X	X	X
<i>Baccharis salicifolia</i> subsp. <i>salicifolia</i>	mule fat	X	X	X	X	X
<i>Erigeron bonariensis</i> *	flax-leaved horseweed	X	X	X	X	
<i>Erigeron canadensis</i>	horseweed		X	X	X	X
<i>Hedypnois cretica</i> *	Crete hedypnois		X		X	
<i>Lactuca serriola</i> *	prickly wild lettuce			X	X	X
<i>Pluchea sericea</i>	arrow weed			X	X	X
<i>Pseudognaphalium luteoalbum</i>	cotton-batting plant	X	X	X	X	X
<i>Pulicaria paludosa</i> *	Spanish sunflower	X	X	X	X	X
<i>Sonchus asper</i> subsp. <i>asper</i> *	prickly sow thistle	X	X	X	X	
<i>Taraxacum officinale</i> *	common dandelion			X	X	X
<i>Xanthium strumarium</i>	cocklebur	X	X	X	X	X
<b>BRASSICACEAE</b>	<b>MUSTARD FAMILY</b>					
<i>Cardamine californica</i>	milk maids				X	
<i>Hirschfeldia incana</i> *	shortpod mustard	X			X	
<i>Lepidium didymum</i> *	wart cress	X		X		
<i>Nasturtium officinale</i>	water-cress	X	X	X	X	X
<i>Sisymbrium irio</i> *	London rocket	X			X	
<b>CAMPANULACEAE</b>	<b>BELLFLOWER FAMILY</b>					
<i>Lobelia erinus</i> *	midnight blue lobelia	X				
<b>CARYOPHYLLACEAE</b>	<b>PINK FAMILY</b>					
<i>Polycarpon tetraphyllum</i> var. <i>tetraphyllum</i> *	four-leaved allseed					X
<b>CHENOPODIACEAE</b>	<b>GOOSEFOOT FAMILY</b>					
<i>Chenopodium album</i> *	lamb's quarters	X	X			
<b>CONVOLVULACEAE</b>	<b>MORNING-GLORY FAMILY</b>					

Scientific Name	Common Name	Observed				
		2016	2017	2018	2019	2020
<i>Convolvulus arvensis</i> *	bindweed	X	X	X	X	X
<i>Dichondra micrantha</i> *	Asian ponyfoot	X				
<b>EUPHORBIACEAE</b>	<b>SPURGE FAMILY</b>					
<i>Chamaesyce maculata</i> *	spotted spurge		X	X	X	X
<i>Euphorbia albomarginata</i>	rattlesnake weed		X	X	X	
<i>Euphorbia peplus</i> *	petty spurge			X		
<i>Euphorbia serpyllifolia</i> subsp. <i>hirtula</i>	hairy thyme-leaved spurge					X
<b>FABACEAE</b>	<b>LEGUME FAMILY</b>					
<i>Acmispon americanus</i> var. <i>americanus</i>	Spanish clover	X				
<i>Medicago polymorpha</i> *	bur clover	X	X	X	X	X
<i>Melilotus albus</i> *	white sweetclover	X	X	X	X	X
<i>Melilotus indicus</i> *	yellow sweetclover			X		
<b>MALVACEAE</b>	<b>MALLOW FAMILY</b>					
<i>Malva parviflora</i> *	cheeseweed	X				
<b>MYRSINACEAE</b>	<b>MYRSINE FAMILY</b>					
<i>Lysimachia arvensis</i> *	scarlet pimpernel	X		X	X	X
<b>OLEACEAE</b>	<b>OLIVE FAMILY</b>					
<i>Fraxinus</i> sp.*	ornamental ash		X	X	X	X
<b>OXALIDACEAE</b>	<b>OXALIS FAMILY</b>					
<i>Oxalis pes-caprae</i> *	Bermuda buttercup	X				
<b>PHRYMACEAE</b>	<b>LOPSEED FAMILY</b>					
<i>Mimulus guttatus</i>	common monkey-flower	X		X		
<b>PLANTAGINACEAE</b>	<b>PLANTAIN FAMILY</b>					
<i>Bacopa monnieri</i> *	herb of grace				X	X
<i>Kickxia elatine</i> *	fluellin	X	X	X	X	X
<i>Plantago lanceolata</i> *	English plantain	X			X	
<i>Plantago major</i> *	common plantain		X	X	X	X
<i>Veronica anagallis-aquatica</i> *	water speedwell	X		X		
<b>PLATANACEAE</b>	<b>SYCAMORE FAMILY</b>					
<i>Platanus racemosa</i>	western sycamore	X	X	X	X	X
<i>Plantanus acerifolia</i> *	London plane tree	X	X	X		
<b>POLYGONACEAE</b>	<b>BUCKWHEAT FAMILY</b>					
<i>Persicaria lapathifolia</i>	water pepper	X	X	X	X	X
<b>PORTULACACEAE</b>	<b>PURSLANE FAMILY</b>					
<i>Portulaca oleracea</i> *	common purslane	X	X	X		
<b>ROSACEAE</b>	<b>ROSE FAMILY</b>					
<i>Rosa californica</i>	California wild rose		X	X	X	X
<b>SALICACEAE</b>	<b>WILLOW FAMILY</b>					




Scientific Name	Common Name	Observed				
		2016	2017	2018	2019	2020
<i>Salix gooddingii</i>	black willow	X	X	X	X	X
<i>Salix laevigata</i>	red willow	X	X	X	X	X
<i>Salix lasiolepis</i>	arroyo willow	X	X	X	X	X
<b>ANGIOSPERMS (MONOCOTS)</b>						
<b>ARECAEAE</b>	<b>PALM FAMILY</b>					
<i>Washingtonia robusta</i> *	Mexican fan palm		X	X	X	X
<b>ASPHODELACEAE</b>	<b>ASPHODEL FAMILY</b>					
<i>Aloe sp.*</i>	aloe		X			
<b>CYPERACEAE</b>	<b>SEDGE FAMILY</b>					
<i>Cyperus eragrostis</i>	tall cyperus		X	X	X	X
<i>Cyperus esculentus</i>	yellow nut-grass		X	X	X	X
<i>Cyperus involucratus</i> *	umbrella-plant		X	X		X
<i>Eleocharis macrostachya</i>	common spikerush			X	X	X
<b>JUNCACEAE</b>	<b>RUSH FAMILY</b>					
<i>Juncus bufonius</i>	toad rush		X	X		
<i>Juncus patens</i>	spreading rush		X	X	X	X
<b>POACEAE</b>	<b>GRASS FAMILY</b>					
<i>Agrostis stolonifera</i> *	redtop	X	X	X	X	X
<i>Bromus diandrus</i> *	ripgut grass	X		X		
<i>Bromus japonicus</i> *	Japanese brome	X		X		
<i>Bromus madritensis</i> *	foxtail chess			X	X	
<i>Cynodon dactylon</i> *	Bermuda grass	X	X	X	X	X
<i>Distichlis spicata</i>	saltgrass		X	X	X	
<i>Echinochloa crus-galli</i> *	barnyard grass	X			X	X
<i>Festuca perennis</i> *	Italian ryegrass	X			X	
<i>Hordeum murinum</i> *	glaucous foxtail barley	X		X		
<i>Leptochloa fusca</i> subsp. <i>uninervia</i>	Mexican sprangletop		X	X	X	
<i>Melica imperfecta</i>	coast range melic		X		X	
<i>Stipa miliacea</i> *	smilo grass			X	X	
<i>Polypogon monspeliensis</i> *	annual beard grass		X	X	X	X
<i>Vulpia microstachys</i>	small fescue			X		
<b>TYPHACEAE</b>	<b>CATTAIL FAMILY</b>					
<i>Typha domingensis</i>	slender cattail		X	X	X	X

\*Non-Native Species

## **APPENDIX B – SITE PHOTOGRAPHS**



## APPENDIX B – SITE PHOTOGRAPHS

	<p><b>Photo 1.</b></p> <p>Photo station 1. Photo depicts the north side of the Creek facing northeast (upstream).</p>
	<p><b>Photo 2.</b></p> <p>Photo station 2a. Photo depicts the north side of the Creek at the end of the asphalt near the bench. Photo faces southwest (downstream).</p>
	<p><b>Photo 3.</b></p> <p>Photo station 2b. Photo depicts the north side of the Creek at the end of the asphalt near the bench. Photo faces southeast, across the creek.</p>





**Photo 4.**

Photo station 2c. Photo depicts the north side of the Creek at the end of the asphalt near the bench. Photo faces northeast (upstream).



**Photo 5.**

Photo station 3. Photo taken on the bridge facing southwest (downstream).



**Photo 6.**

Photo station 4a (across the creek from photo station 2). Photo depicts the south side of the Creek at the end of the asphalt near the bench. Photo faces northeast (upstream).





**Photo 7.**

Photo station 4b  
(across the creek from  
photo station 2).  
Photo depicts the  
south side of the  
Creek at the end of  
the asphalt near the  
bench. Photo faces  
north, across the  
stream.



**Photo 8.**

Photo station 4c  
(across the creek from  
photo station 2).  
Photo depicts the  
south side of the  
Creek at the end of  
the asphalt near the  
bench. Photo faces  
southwest  
(downstream).



**Photo 9.**

Photo station 5a.  
Photo depicts the  
south side of the  
Creek (2019) at the  
westernmost edge of  
the restoration site.  
Photo faces  
southwest  
(downstream).



**Photo 10.**

Photo station 5b.  
Photo depicts the south side of the Creek at the westernmost edge of the restoration site. Photo faces north (upstream).



**Photo 11.**

Photo station 5c.  
Photo depicts the south side of the Creek at the westernmost edge of the restoration site. Photo faces northeast (upstream).

## **APPENDIX C – TRANSECT DATA**



## APPENDIX C – TRANSECT DATA

Appendix C Vegetative Cover Field Data	Transects										
	1		2		3		4		5		Ave Cov
	Hits	Cov	Hits	Cov	Hits	Cov	Hits	Cov	Hits	Cov	
		(%)		(%)		(%)		(%)		(%)	
RAW DATA											
Native Species											
Ambrosia psilostachya	2	4.0	0	0.0	0	0.0	0	0.0	13	26.0	6.0
Acmispon glaber	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0.0
Anemopsis californica	0	0.0	1	2.0	0	0.0	2	4.0	1	2.0	1.6
Artemisia douglasiana	0	0.0	6	12.0	7	14.0	1	2.0	6	12.0	8.0
Baccharis pilularis	0	0.0	0	0.0	3	6.0	0	0.0	0	0.0	1.2
Baccharis salicifolia	7	14.0	16	32.0	0	0.0	5	10.0	9	18.0	14.8
Cyperus eragrostis	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0.0
Eleocharis macrostachya	0	0.0	1	2.0	0	0.0	0	0.0	0	0.0	0.4
Juncus patens	0	0.0	1	2.0	2	4.0	0	0.0	0	0.0	1.2
Platanus racemosa	6	12.0	0	0.0	0	0.0	0	0.0	0	0.0	2.4
Rosa californica	3	6.0	0	0.0	6	12.0	4	8.0	7	14.0	8.0
Salix gooddingii	3	6.0	0	0.0	0	0.0	3	6.0	5	10.0	4.4
Salix laevigata	13	26.0	19	38.0	11	22.0	7	14.0	10	20.0	24.0
Salix lasiolepis	0	0.0	23	46.0	26	52.0	19	38.0	3	6.0	28.4
Typha domingensis	1	2.0	0	0.0	0	0.0	2	4.0	0	0.0	1.2
Xanthium strumarium	0	0.0	1	2.0	0	0.0	0	0.0	0	0.0	0.4
Non-Native Species											
Agrostis stolonifera*	0	0.0	0	0.0	0	0.0	1	2.0	0	0.0	0.4
Bacopa monnieri*	0	0.0	0	0.0	0	0.0	2	4.0	0	0.0	0.8
Cynodon dactylon*	2	4.0	5	10.0	2	4.0	1	2.0	2	4.0	4.8
Lactuca serriola*	0	0.0	0	0.0	1	2.0	0	0.0	0	0.0	0.4
Melilotus albus*	1	2.0	0	0.0	1	2.0	0	0.0	0	0.0	0.8
Melilotus sp.*	0	0.0	0	0.0	0	0.0	1	2.0	0	0.0	0.4
Plantago lanceolata*	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0.0
Pulicaria paludosa*	1	2.0	0	0.0	1	2.0	0	0.0	0	0.0	0.8
Schinus terebinthifolius*	0	0.0	1	2.0	0	0.0	0	0.0	0	0.0	0.4
No Plant	15	30.0	1	2.0	6	12.0	14	28.0	9	18.0	18.0
Ground Cover											
Rocks	25	50.0	2	4.0	3	6.0	18	36.0	26	52.0	29.6
Litter	7	14.0	31	62.0	36	72.0	21	42.0	13	26.0	43.2
Bare Ground	18	36.0	17	34.0	11	22.0	11	22.0	11	22.0	27.2
CALCUALTIONS											
Absolute Coverage											
Native Plant Cover	35	70.0	68	136.0	55	110.0	43	86.0	54	108.0	102.0
Nonnative Plant Cover	4	8.0	6	12.0	5	10.0	5	10.0	2	4.0	8.8
No Plant Cover	15	30.0	1	2.0	6	12.0	14	28.0	9	18.0	18.0
Ground Cover											
Rocks	25	50.0	2	4.0	3	6.0	18	36.0	26	52.0	29.6
Litter	7	14.0	31	62.0	36	72.0	21	42.0	13	26.0	43.2
Bare Ground	18	36.0	17	34.0	11	22.0	11	22.0	11	22.0	27.2
Total cover		108.0		150.0		132.0		124.0		130.0	128.8
Cov = Coverage, Ave = Average											
* Non-native plant species											

## **APPENDIX D – CRAM SUMMARY ASSESSMENT REPORT**



## Basic Information

eCRAM ID	7581
Assessment Area Name	Aliso Creek Trail Repair Project
Project Name	Aliso Creek Trail Repair Project at Laguna Woods
Assessment Area ID	20905
Project ID	401 12C-038
Wetland Type	riverine confined
CRAM Version	6.1
Visit Date	2020-06-24
AA Category	mitigation
Practitioners	Lisa Louie (lead practitioner)
Other Practitioners	Heather Clayton, Joanna Kipper
County	Orange
Ecoregion	south coast
AA Centroid Latitude	33.59982
AA Centroid Longitude	-117.70776
AA Size (Hectares)	0.11815
Approximate Length of AA	100
Average Bankful Width	7.5
Flowing water at time of assessment?	Yes
Apparent Hydrologic Flow Regime	perennial

Tidal Stage	not recorded
Is this a public record?	Yes
AA Comment	

### Metric Scores

Attribute	Buffer And Landscape Context	25.00
	Stream Corridor Continuity	D [3]
	Percent Of AA With Buffer	D [3]
	Average Buffer Width	D [3]
	Buffer Condition	D [3]
Attribute	Hydrology	33.33
	Water Source	C [6]
	Channel Stability	D [3]
	Hydrologic Connectivity	D [3]
Attribute	Physical Structure	50.00
	Structural Patch Richness	B [9]
	Topographic Complexity	D [3]
Attribute	Biotic Structure	66.67
	Number Of Plant Layers Present	A [12]
	Number Of Co-Dominant Species	A [12]
	Percent Invasion	A [12]
	Plant Community Score	12
	Horizontal Interspersion And Zonation	C [6]
	Vertical Biotic Structure	C [6]

### Index Score 44

**Stressors** 16 total, 9 with significant negative effect - indicated below with \*

#### Attribute Biotic Structure

- Excessive human visitation\*
- Lack of treatment of invasive plants adjacent to AA or buffer
- Lack of vegetation management to conserve natural resources
- Mowing, grazing, excessive herbivory (within AA)
- Pesticide application or vector control
- Predation and habitat destruction by non-native vertebrates (e.g., Virginia opossum and domestic predators, such as feral pets)
- Treatment of non-native and nuisance plant species\*
- Tree cutting/sapling removal\*

#### Attribute Buffer And Landscape Context

- Passive recreation (bird-watching, hiking, etc.)
- Transportation corridor\*
- Urban residential\*

#### Attribute Hydrology

- Engineered channel (riprap, armored channel bank, bed)\*
- Flow obstructions (culverts, paved stream crossings)\*
- Non-point Source (Non-PS) discharges (urban runoff, farm drainage)

#### Attribute Physical Structure

- Grading/compaction (N/A for restoration areas)\*

## Vegetation management\*

This report was created on Thursday July 16, 2020, 11:23 AM using the SFEI eCRAM Mapper at [www.cramwetlands.org](http://www.cramwetlands.org)

The data provided in this report is for informational purposes only and may not be sufficient for the purposes of fulfilling the requirements of a regulatory permit. Please see "Using CRAM (California Rapid Assessment Method) To Assess Wetland Projects As an Element of Regulatory and Management Programs" CWMW, Oct. 13, 2009.







## STAFF REPORT

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**DATE: November 30, 2020**

**FOR: Landscape Committee**

**SUBJECT: Tree Removal Request: 4003-1D (Shaw) - One Olive tree and four Aleppo Pine trees.**

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### **RECOMMENDATION:**

Approve the removal of One Olive tree and four Aleppo Pine trees.

### **BACKGROUND:**

Mrs. Shaw purchased the unit in October 2012, and is requesting the removal of one Olive tree, *Olea, europaea*, and four Aleppo Pine trees, *Pinus, halapensis*. The reason cited for the removals is future view obstruction. There are six additional signatures on the Mutual Request Form in favor of the tree removal.

These trees have never been trimmed as they are volunteers. The average height of the trees is approximately eight feet with an average trunk diameter of approximately five inches. The trees are approximately 60 feet from the rear of the unit and located on a slope. (Attachment 1).

### **DISCUSSION:**

At the time of inspection, the trees were found to be in fair condition with no pests, decay, or damage to the trunks. These trees are volunteers; they were not intentionally planted. Volunteer trees tend to develop poor root structure as well as unbalanced canopies which leads to more maintenance in the future.

The original planting design for trees in this area was to screen the lower buildings from the upper buildings. There are an ample amount of trees in the area to provide the screening. Given the current size of these trees, it would be a financially beneficial to remove them now rather than allowing them to grow and require future trimming.

### **FINANCIAL ANALYSIS:**

The cost to remove all three trees is estimated at \$1,700. The cost to trim the trees would be \$800 every three to five years and the estimated combined value of the trees is \$1,400 based on the tree inventory data.

**Prepared By:** Bob Merget, Landscape Manager

**Reviewed By:** Kurt Wiemann, Director of Landscape Services

ATTACHMENT(S)

**Attachment 1:** Photographs

ATTACHMENT 1

