PROJECTS FOR IRVINGTON ENVIRONMENTAL "CHANGE"
2019-20

Tule Ponds at Tyson Lagoon, is a 17 acre open fresh water aquatic environment. Entrance is at 1999 Walnut Ave The Math Science Nucleus manages the wetland area for Alameda County Flood Control and Water Conservation District.

Our staff provide a safe educational experience to help restore and maintain the local environment. Keeping up a wetland in the middle of a city is difficult because of all the non native plants that invade the area. Native plants provide a haven for native animals and helps remove carbon from the environment.

Rules: A project will be assigned to your group. We expect students to do their project in a timely matter and not to abuse or break tools.

We provide gloves and tools for most projects. Tools should be used for their intended purpose. If tools are broken because of misuse, we will expect your group to replace that item.

You will need to sign in when you arrive. Irvington Students also have a project sign in, so it is easy to see how many hours you have accumulated. Work times are Saturdays 9 am-12 and 1-3 pm. There must be at least 2 members of your group to work. If a member is by themselves they can be assigned to another project for that day.

You can either have staff sign your Service forms the day you work or at the end of the project.

Community Service Projects Available:

1. **Animal habitat restoration (5 projects available)**

We have several areas where the animals take cover during the rainy season. You can help clean an area or rebuilt some of the structures that need cover

Problem: How can you control feral cat population? Service: build a feral cat home. 2. Raccoon and opossum population. How can you prevent raccoons and opossum from nesting in storm drains Service: build a home similar or get large pipe and hide with wood

http://www.petfinder.com/how-to-help-pets/building-feral-cat-shelters.html

2. **Trash from surrounding community via storm drains.**

Problem: How can you use the small creek to capture trash coming in from storm drains. Service: clear areas where cattails are to allow them to trap trash 2. How can

you prevent trash from BART from coming under the fence? Service: picking up trash or designing a way to prevent trash from coming under the fences

3. **Nectar areas for bees, butterflies, hummingbirds**

Problem: Bees 1. How can you create artificial areas for bees to live? Service: Designing bee area 2. How can you increase bee population? Service: planting native plants to attract bees

There are several areas that we maintain as Nectar gardens

a. Plant flowers in green house and then transplant
b. Clear areas and plant seeds
c. Remove weeds and develop ways to keep weeds out
d. Finding native seeds to include in our seed bank

4. **Invasive plant removal**

We have many non native plants that need removal including:

a. Blackberry
b. Curly dock
c. Pepperweed
d. English Ivy

Some native plants also need to be removed because they are aggressive growers

a. Cattails (including removal of seed heads)

Non native trees

a. White ash (seedlings)
b. Pivet (seedlings)
c. Buckthorn
d. Myroban (seedlings)

Birds 1. Is Tule Ponds providing enough habitat for nests? Service: planting trees, shrubs, or plants with seeds 2. Making habitat for Clapper Rail at Tule Ponds (removal of cattails)

5. **Butterflies**

1. Which butterflies like what host plants? Service: pick one butterfly and determine its cycle and then plant the appropriate host plant. 2. Expanding butterfly meadow, presently have unknown caterpillars (would be nice to identify)

6. **Hydrology**

   Comparing constructed and natural wetlands Service: clearing sections of creek for better flow

7. Pollution

1. How can the Tule Ponds at Tyson Lagoon educate the community on nonpoint pollution?

8. Amphibian Habitat

Working along the creekbed to increase the yellow legged frog habitat. (this is hand digging creek bed)

9. Reptile Habitat

Turtle (western pond) creating nesting area 2. Lizards (how can you create more habitat)

10. Fish Habitat - Native Fish

1. find out how to increase the native fish population (how can be rear fish and put them in Tyson Lagoon) - shallow warm lake (research on how to rear fish or where to get them (1 group)

11. Insects

1. Bug counts (identifying bugs and what plants they like)

12. Soil

What type of soil is produced by different native trees (determine pH). Service: Composting soil and put in flower bins 2. Comparing non native worms and native worms making compost Service: making worm bins