

## **Jardin de STEM Project – Aquaponics Lab/Science Learning Center**

### **Newsletter Release 10-24-19**

#### **Overview**

ELAC received a major five-year grant (October, 2016 – September, 2021) from the Department of Education (Title V, HSI STEM) for the Jardin de STEM project which includes developing a supportive summer academy and cohort design to accelerate progress through the initial year of STEM study; and to deliver sustainable pathways for STEM careers for Hispanic students.

#### **Expected Outcomes**

Activities include an Aquaponics lab, maintained by students, and to be used as a thematic core in all STEM disciplines to teach the biology, chemistry, and physics of food science. Two years of intensive coursework will culminate in research at major research laboratories in the region.

#### **Partner**

ELAC is partnering with the Lucille and Edward R. Roybal Foundation (Roybal) to provide technical assistance services to operate and maintain the garden. Through an MOU with ELAC, Roybal will train ELAC faculty, staff, volunteers, and administers on taking proper care of an aquaponics garden/science learning center. Roybal will also participate in assisting with planned learning activities for students and community members including an anti-vaping program to give young people a positive alternative to addictive behaviors such as tobacco and marijuana.

#### **What is Aquaponics?**

Aquaponics is a method of raising fish and plants (usually vegetables) together. The fish waste nourishes the plants, and the plants clean the water, which is then returned to the fish. This type of gardening has its roots in 1,000 year old Aztec practices (chinampas gardens) The water is piped to growing beds where vegetables are planted in a non-soil medium (such as gravel).

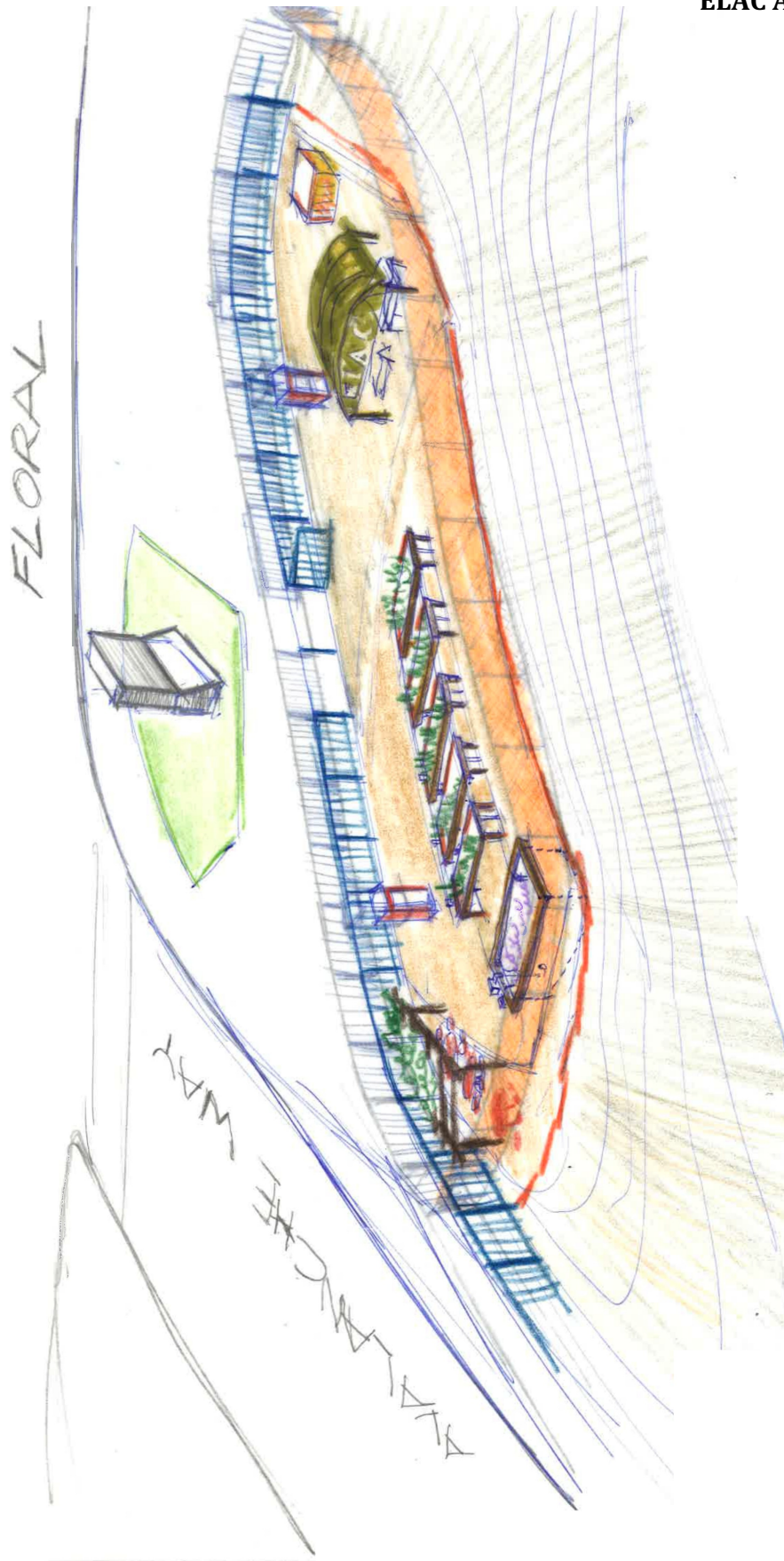
The ELAC Aquaponics garden offers many opportunities for students to analyze problems in chemistry, physics, biology, engineering, mathematics, and environmental science. Working with Roybal, students can experience real world healthy activities by assisting with operating and maintaining an aquaponics garden.

#### **Action Steps**

1. ELAC's aquaponics garden is located north of the stadium at the corner of Avalanche Way and Floral Drive (see diagram prepared by Abel Rodriguez, Director of Facilities)
2. The lab was constructed by an approved district building contractor with input from Riverbed Farm, builder and operator of a large aquaponics farm in Anaheim (see photo); and builders of several other gardens including the nearby Roybal Foundation near Atlantic and Beverly (see photo)

3. The Aquaponics lab was implemented during the Spring Semester, 2019

### ELAC Aquaponics Lab



**Roybal**



**Foundation Aquaponics Garden 9on Beverly Blvd., near Atlantic, used as a model for ELAC's aquaponics garden**



**Riverbed Aquaponics farm (Anaheim); covers 1 acre, 50 planting beds, 10 fish ponds, and an event center**

