

# Citizen Science

From Classroom to  
the Community-  
monitoring  
government  
projects

By

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# CITIZEN SCIENTISTS Opportunities

- Develop Scientific Method for Management of Change
- Who needs what, how & why?
- Design, Develop : expensive and short-term
- Gov't agencies, professional design and execution
- Monitoring and Maintenance : inexpensive and long term
- Citizen scientists are the ones who maintain & measure successfulness of project
- Measure DD & Sausal Creek 2001



*Laney College*

LANEY  
COLLEGE





Physical Geography Lab Project

Location: Peralta Park  
Date: December 13, 2007  
Time: 1500 hrs PST  
Latitude: 37° 47' N  
Longitude: 122° 15'

Weather: Partly Cloudy  
Wind Speed: 0 mph  
Wind Direction: n/a  
Relative Humidity: 40%  
Temperature: 62 F  
Cloud Cover: 10%

Weather Station Information

Location: Lake Merritt

Latitude: 37° 47' 27" N

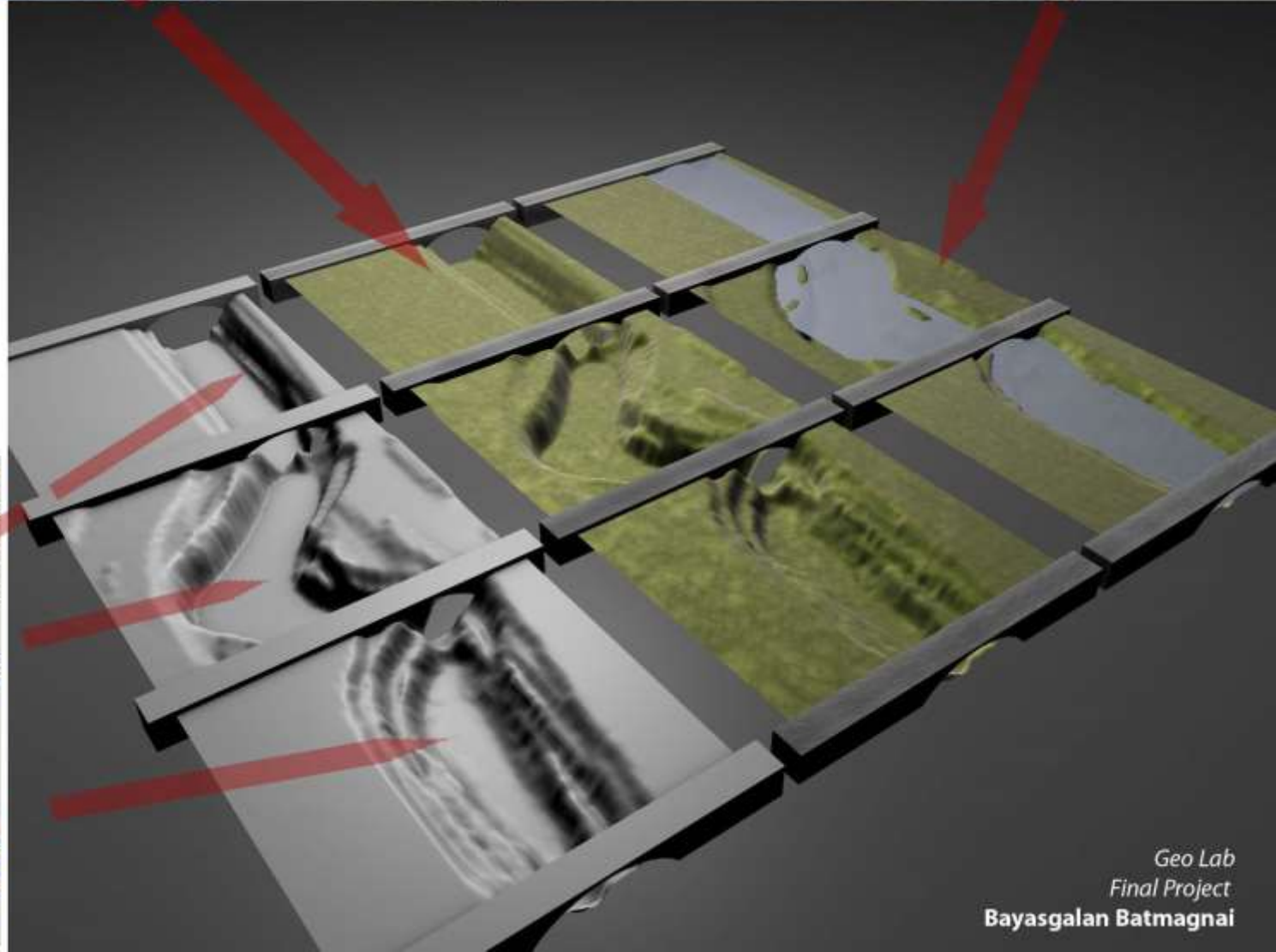
Longitude: 122° 15' 50" W

Direction of Flow: East to West

Temperature: 52 F

Type of Water: Salt

Pollution: Garbage

















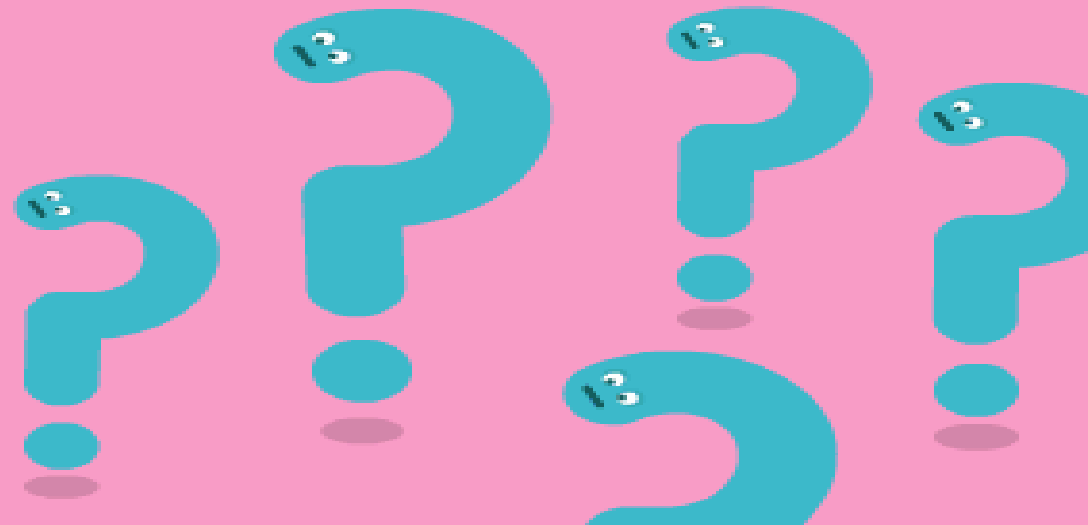
- WATER QUALITY MONITORING
- Pre and Post Opening of Estuary Channel

- Dissolved Oxygen
- Salinity
- pH
- Temperature
- Tidewater Depth
- Other Observations



# HYPOTHESIS

We believe that seasonal rainfall will lower the overall salinity and temperature, while increasing the dissolved oxygen and leaving the potential hydrogen relatively neutral.

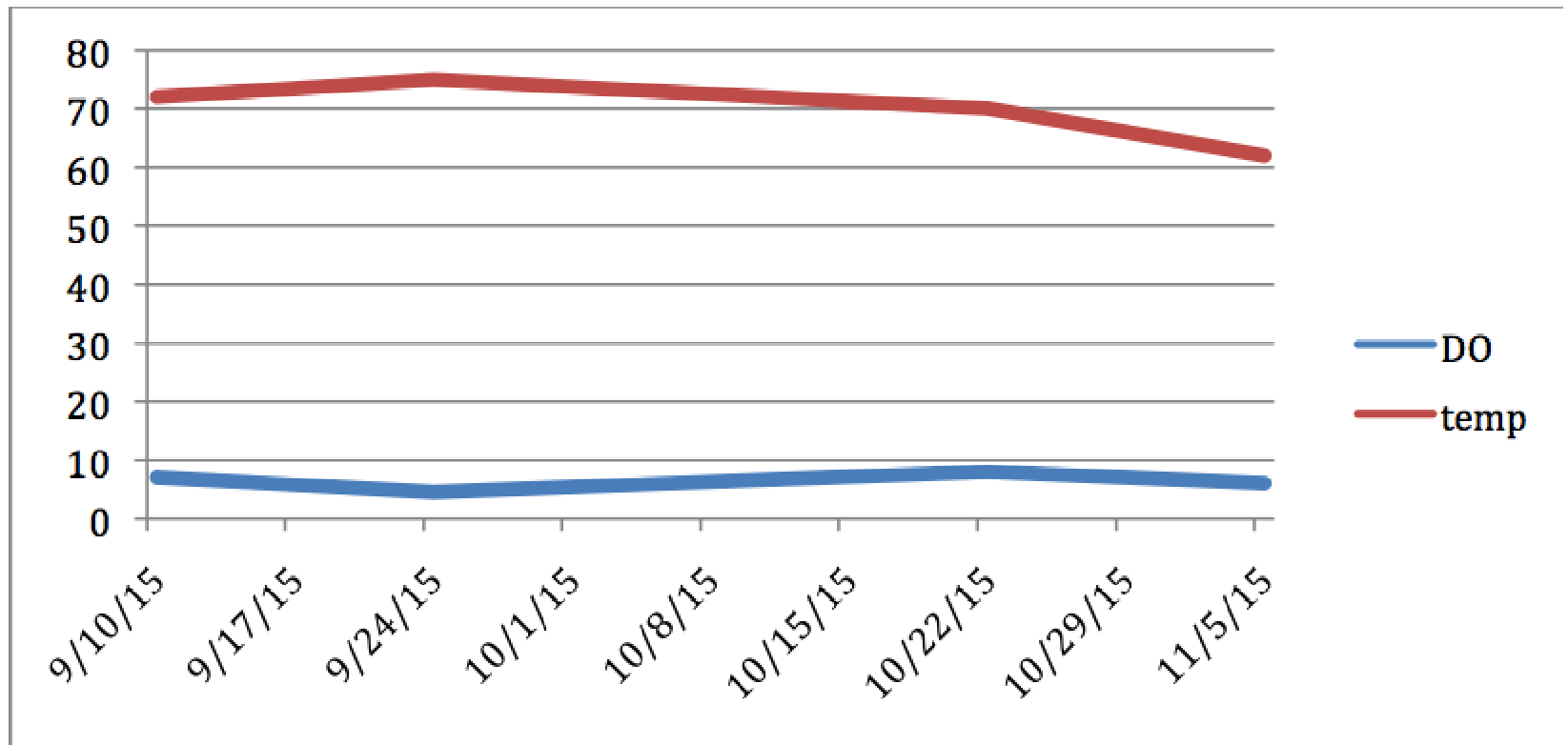








# Dissolved Oxygen & Temperature











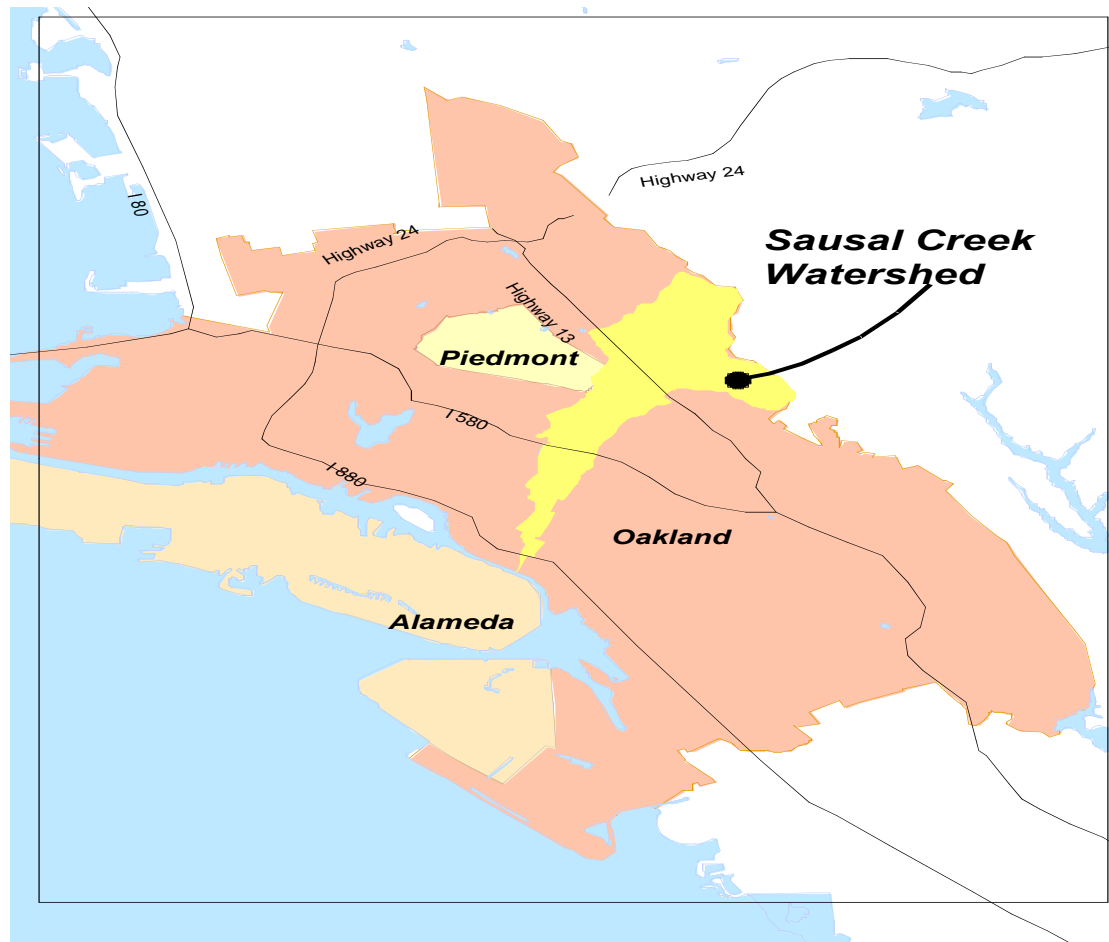






# Friends of Sausal Creek

PROMOTING WATERSHED AWARENESS



- Replace ceramic sewerline
- Redesign flow and revegetate
- Creating riparian habitat
- Stabilize creek banks via willow growth

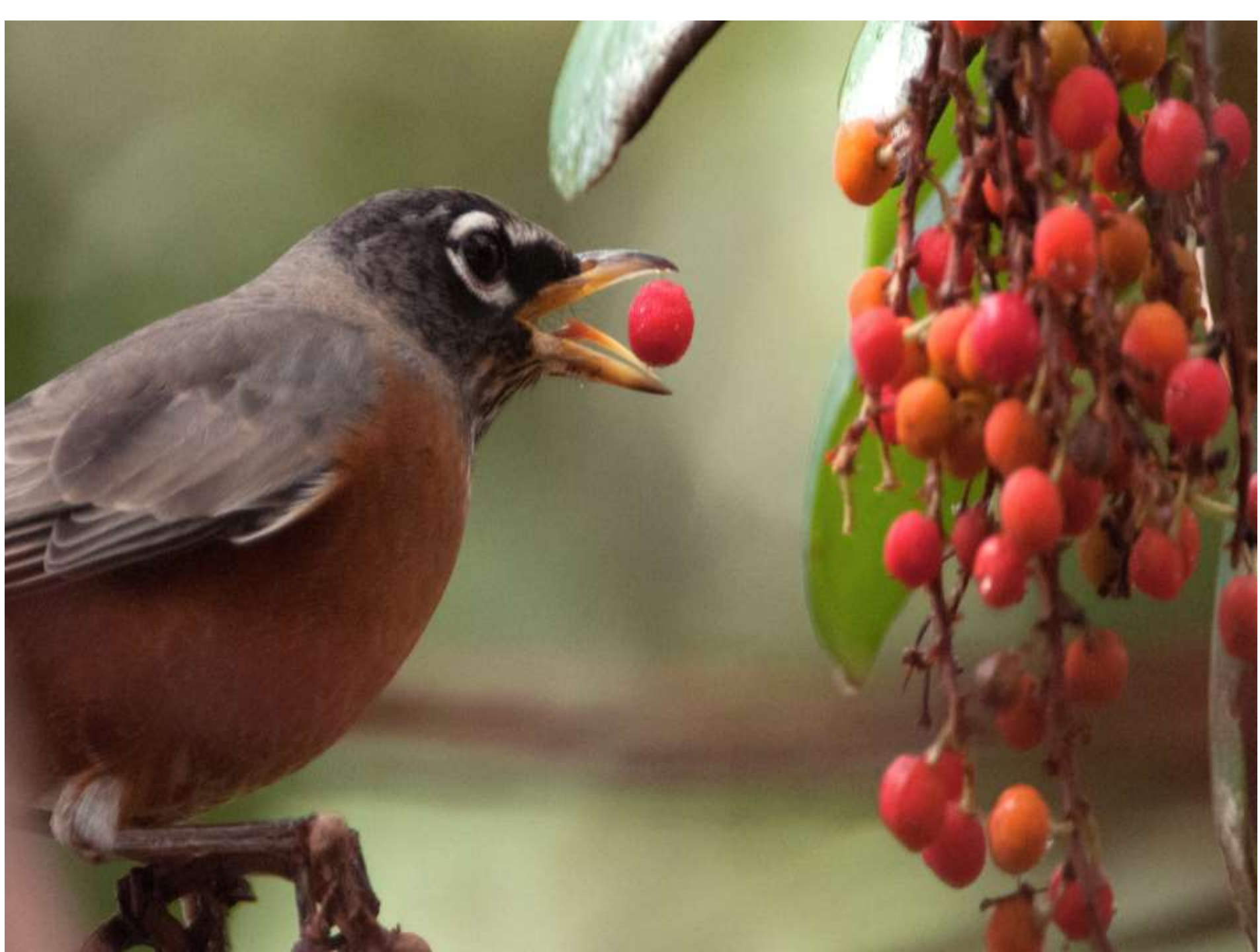














# BIRD MONITORING IN SAUSAL CREEK WATERSHED

Long-term Data Set - 16 years



# **MONITORING RESULTS**

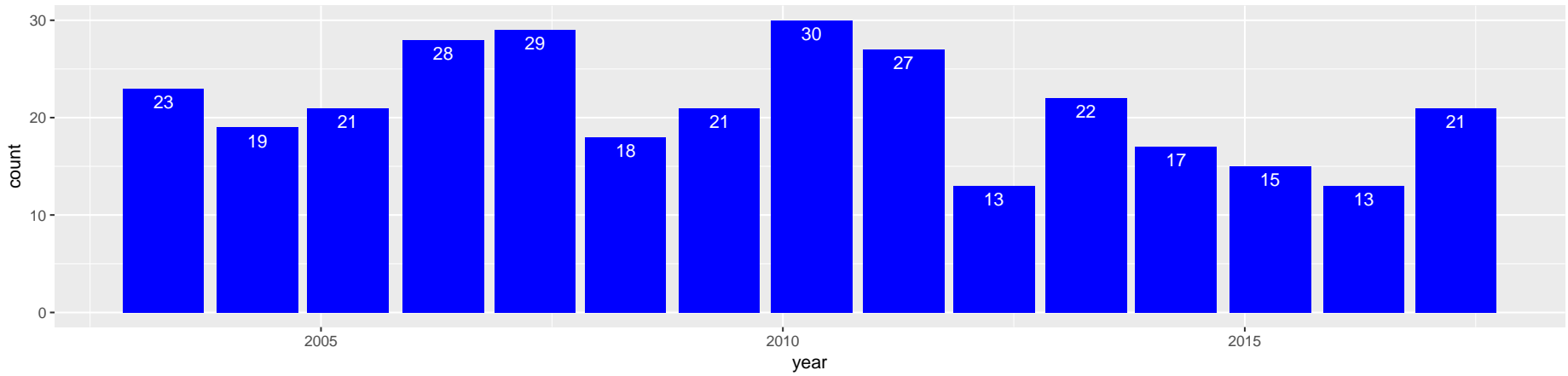
60 Watershed Surveys  
(2002 through 2018)

At 9 sites for Point Counts  
(10 minutes ea. site)

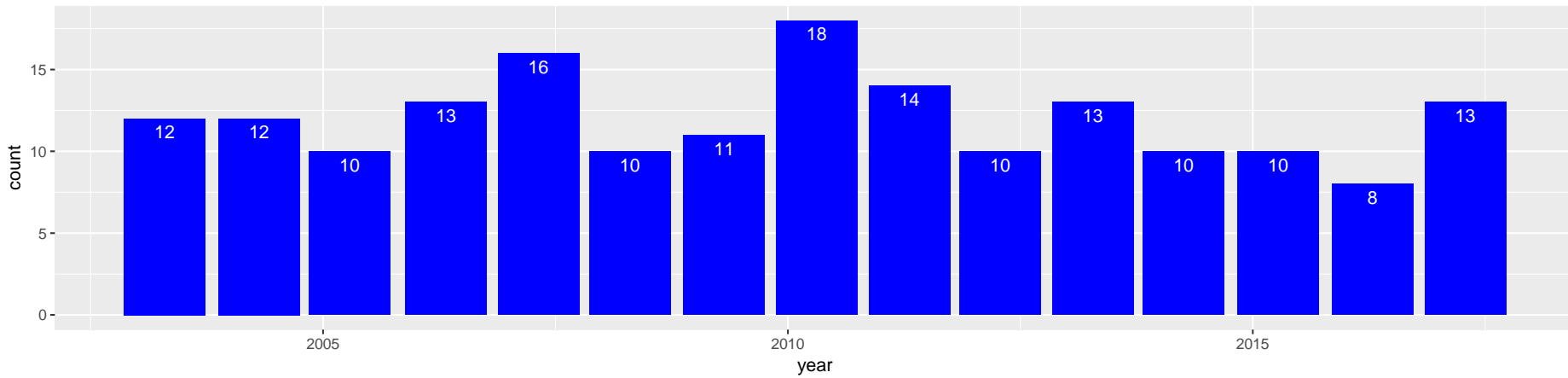
153 species

8523 individuals

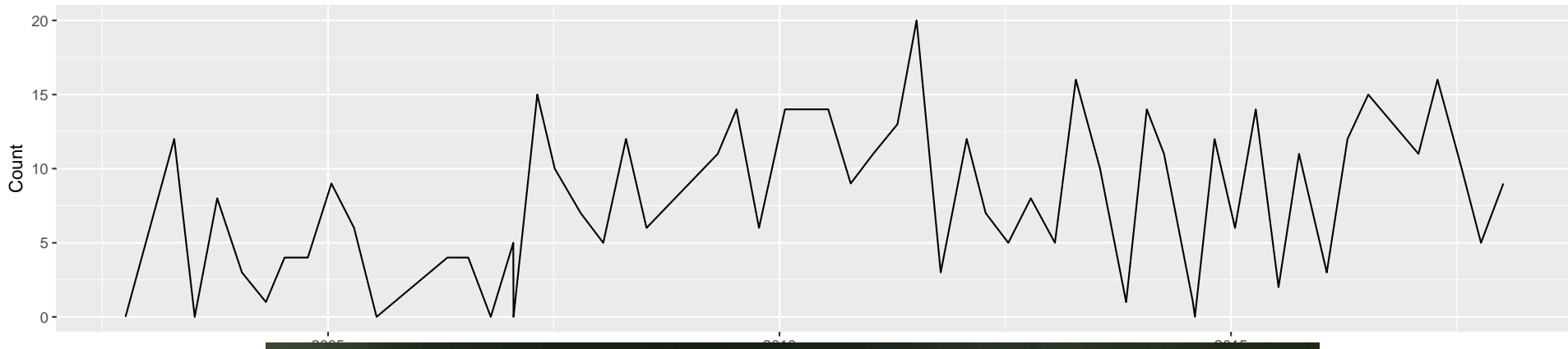
Spring counts: total # of individuals at Cinderella site



Spring counts: number of species at Cinderella site

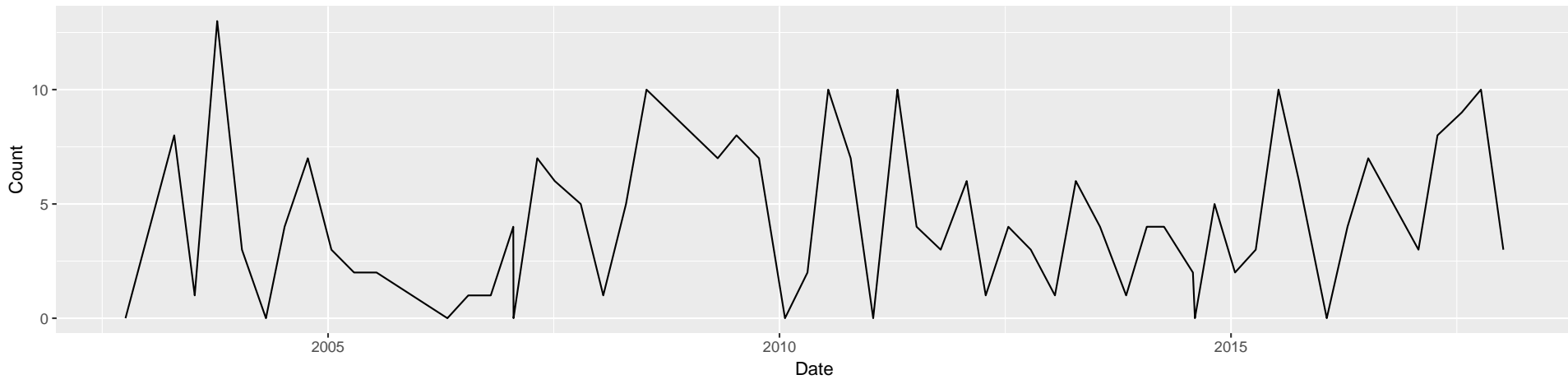


Song Sparrow

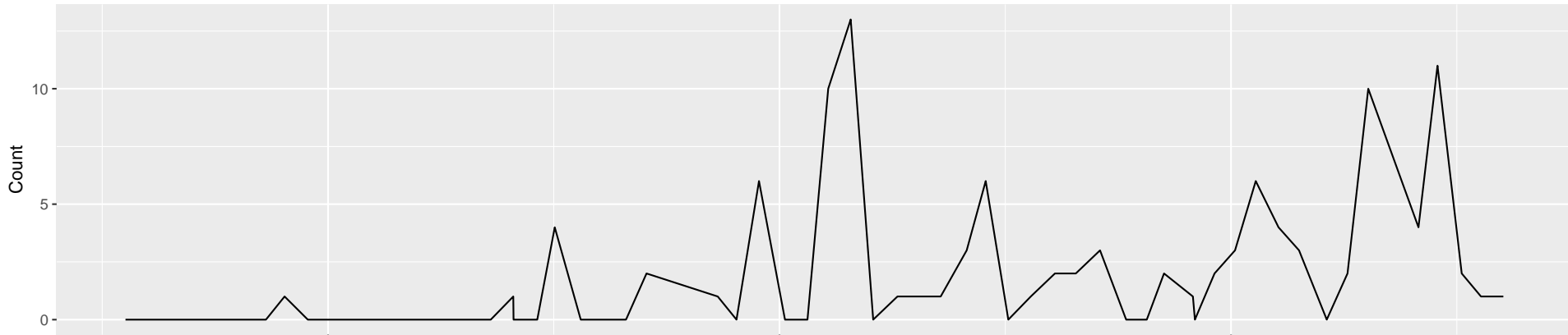




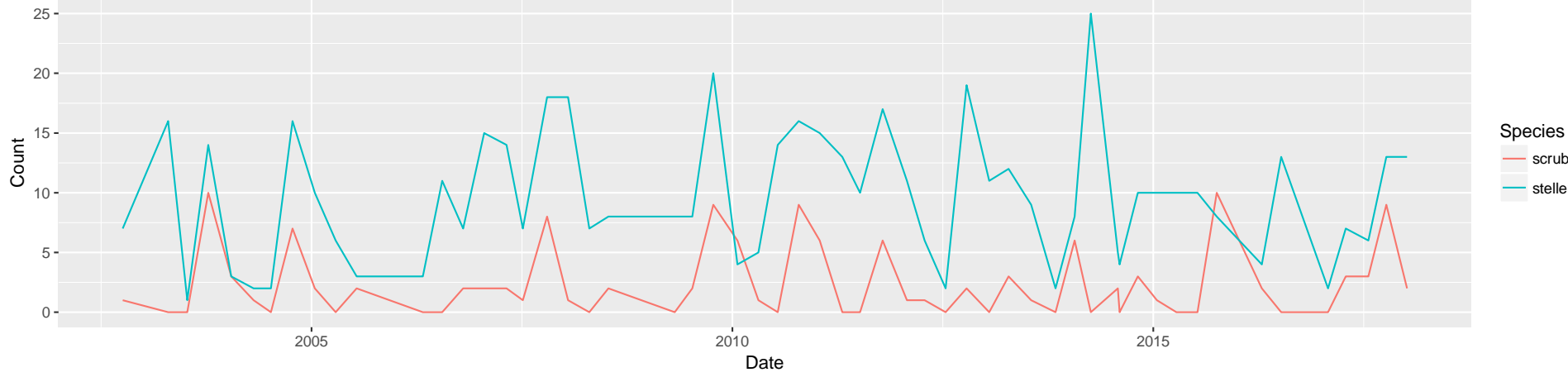
Spotted Towhee



American Crow



Steller's Jay and California Scrub-Jay





Peregrine  
Falcons  
on the  
Fruitvale  
Bridge



# Care and Maintenance of C-S

- FOSC volunteer experts are crucial to the health of the watershed and we need to both sustain the existing group and replenish the teams when numbers dwindle due to normal life transitions.
- The longitudinal nature of environmental monitoring requires committed volunteers who are adequately supported and trained from staff and volunteer experts.

