

Friends of Sausal Creek Water Quality Monitoring Program

The Friends of Sausal Creek monitor water quality to assess the health of that part of the overall watershed. We collect high quality reliable baseline data that may be used to identify pollution sources. We collect data at four locations along the creek: near the mouth of the creek at the oyster monitoring site, in Dimond Park just downstream from the culvert underneath El Centro, at one of the newly created rapids in our restoration reach, and along the tributary Palo Seco Creek a short walk up from Joaquin Miller Court. No specific skills are required. A pair of rubber boots is nice to have for wading into the creek. As of September 2002, the Friends generally monitor the first Saturday of the month beginning at 9:00 a.m. at the Fruitvale Bridge. For more information, contact Mark Lane, (510) 219-8036.

The FOSC Water Quality Monitoring Team routinely collects data on dissolved oxygen, electrical conductivity, salinity, temperature, and pH. Following is a brief description of each water quality parameter and why it is important.

Dissolved Oxygen (DO)

What is Dissolved Oxygen?

- It is the amount of oxygen dissolved in water.

Why is it important?

- Most aquatic organisms need oxygen to grow. Some species require high DO such as trout and stoneflies. Other species do not require high DO, like catfish, worms, and dragonflies.

What are generally the biggest causes of low DO?

- Increases in water temperature
- Algal blooms
- Human and animal waste

Electrical Conductivity/Salinity

What is Electrical Conductivity/Salinity?

- Conductivity is the ability of water to conduct an electrical current. Dissolved ions in the water are conductors. The major positively charged ions are sodium, calcium, potassium, and magnesium. The major negatively charged ions are chloride, sulfate, carbonate, and bicarbonate.
- Salinity is a measure of the amount of salts in water. The salts in sea water are primarily sodium chloride.

Why is it important?

- Conductivity can affect the quality of water used for irrigation or drinking. Most aquatic organisms tolerate a range of conductivity.
- Conductivity will vary depending on the source of the water: groundwater, municipal waste water, rainfall. Conductivity can indicate groundwater seepage or a sewage leak.

Temperature

What is Water Temperature?

- A measure of the average kinetic energy of water molecules.

Why is it important?

- Temperature affects water chemistry and the functions of aquatic organisms. It influences the amount of oxygen dissolved in water, the rate of photosynthesis by aquatic plants, and the metabolic rates of organisms.

pH

What is pH?

- pH is a measure of how acidic or basic (alkaline) the water is.

Why is pH important?

- Many chemical reactions inside aquatic organisms (cellular metabolism) necessary for survival and growth of organisms require a narrow pH range.
- At extreme ends of the pH scale (2 or 13) physical damage to gills, exoskeleton, and fins occurs.
- Changes in pH may alter the concentrations of other substance in water to a more toxic form.