

Figure 1: Approximate study area. Rhodamine WT tracer was injected at the Port of Stockton aerator for 25 hours on September 1 and 2, 2004.



Figure 2: Rhodamine WT tracer injection into Port of Stockton aerator upwelling bubble flow.

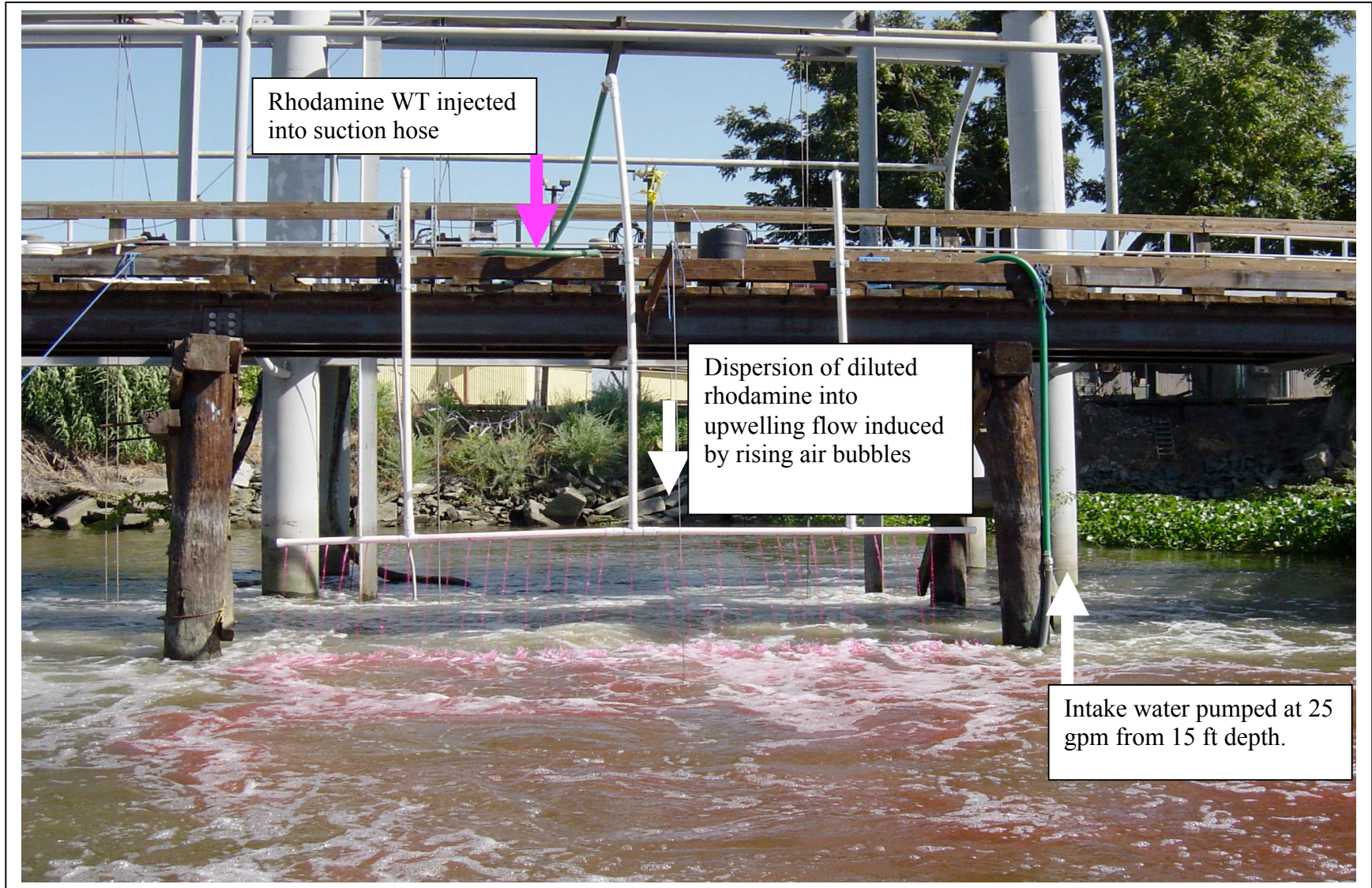


Figure 3: Rhodamine WT dilution and dispersion system. Intake water was drawn from 15 ft and injected with concentrated rhodamine at 25 mL/min. The highest measured concentrations of rhodamine WT in the San Joaquin River were approximately 10 $\mu\text{g/L}$.

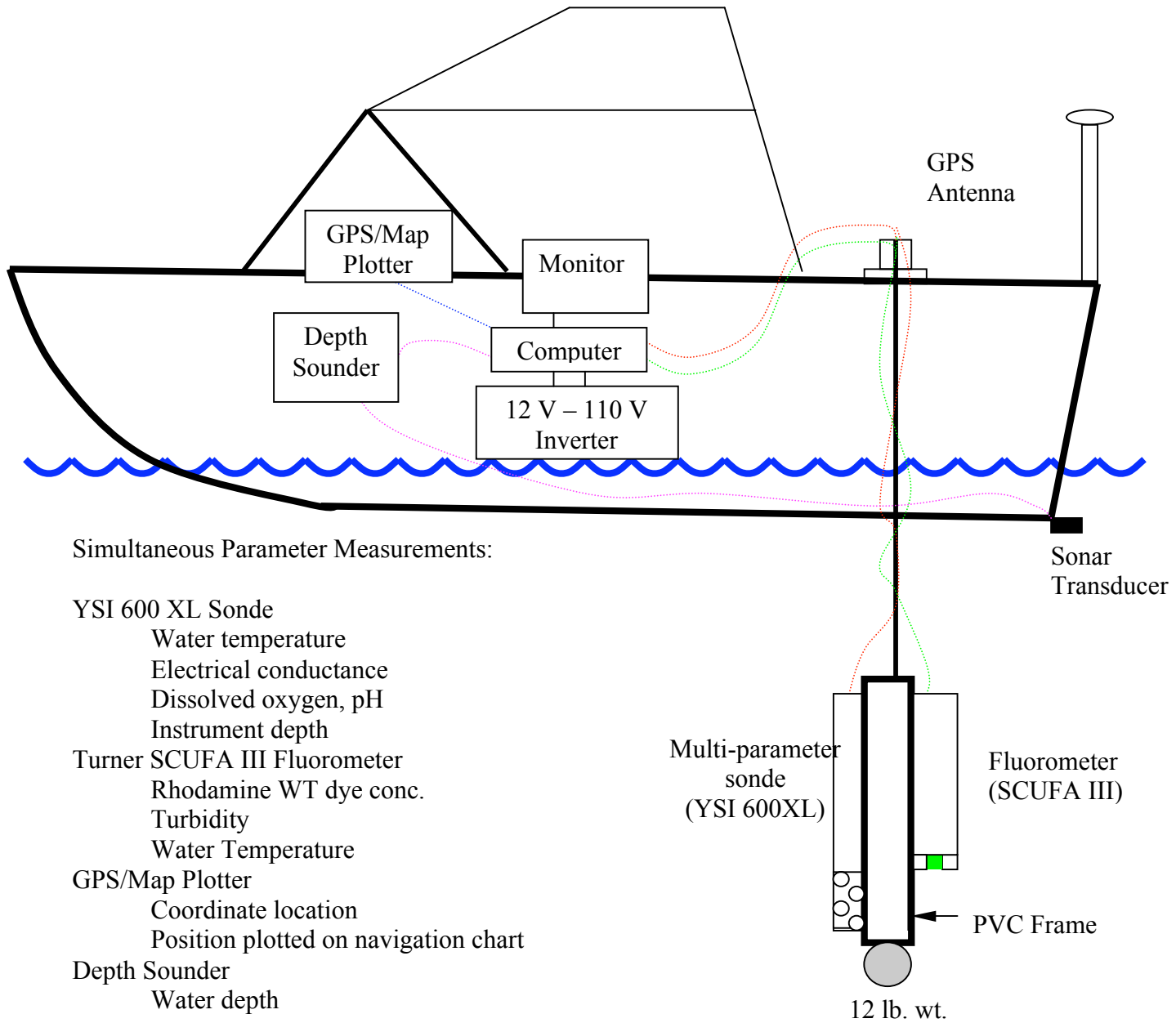


Figure 4: Rhodamine WT and water quality monitoring system.

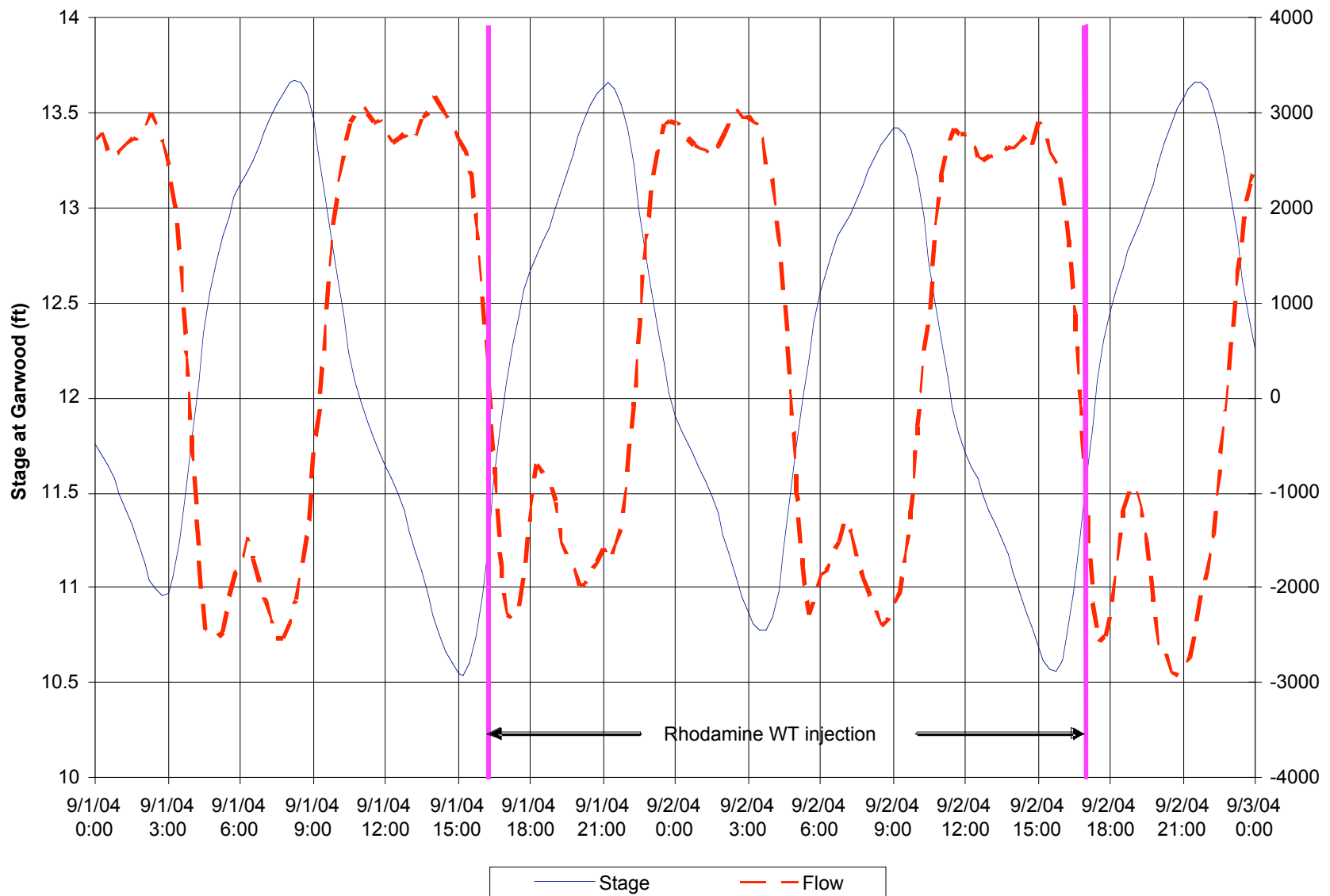


Figure 5: San Joaquin River stage and flow measured at the USGS gage at the Garwood Bridge site near the City of Stockton wastewater outfall.

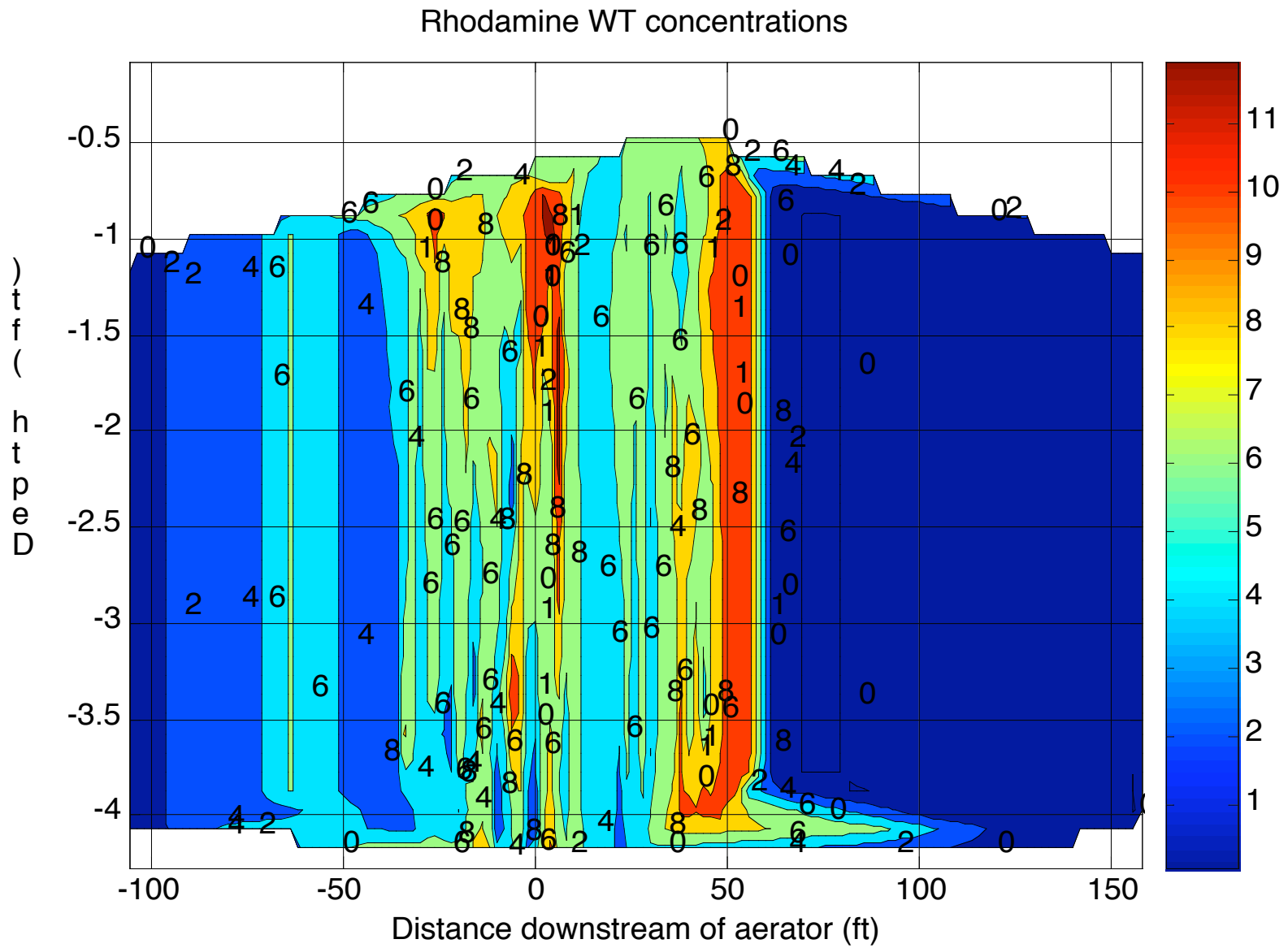
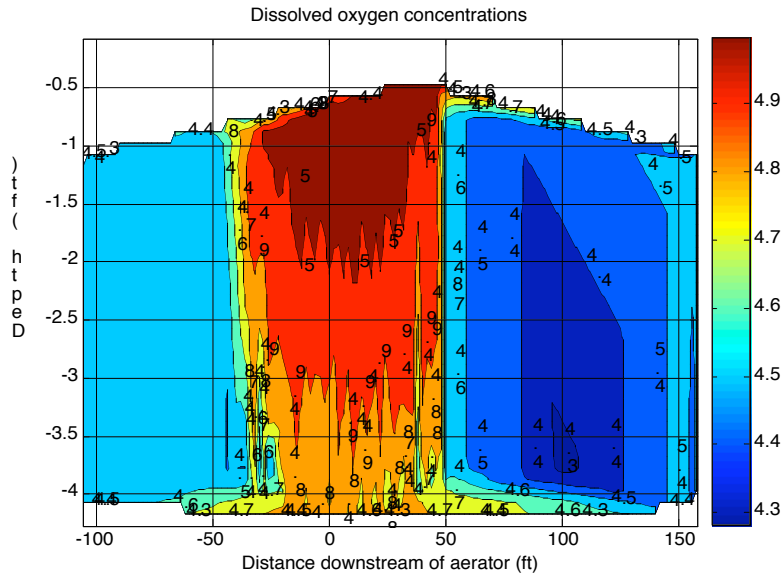
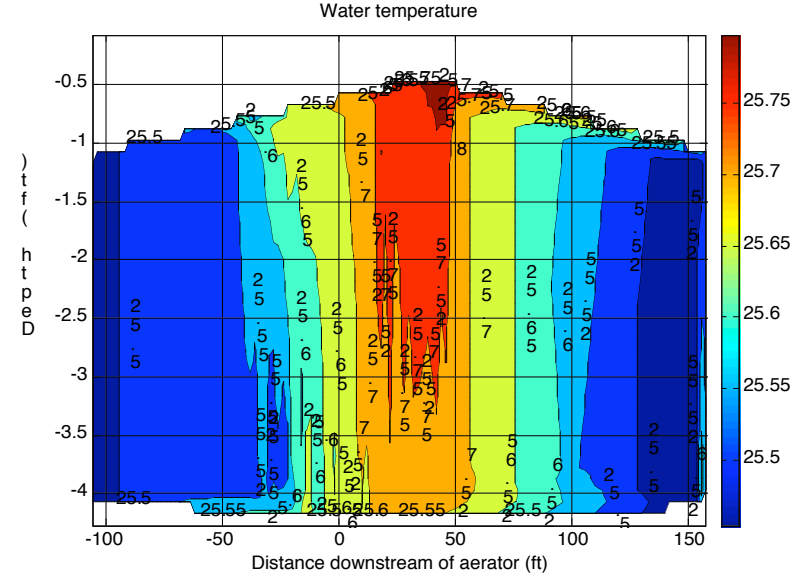


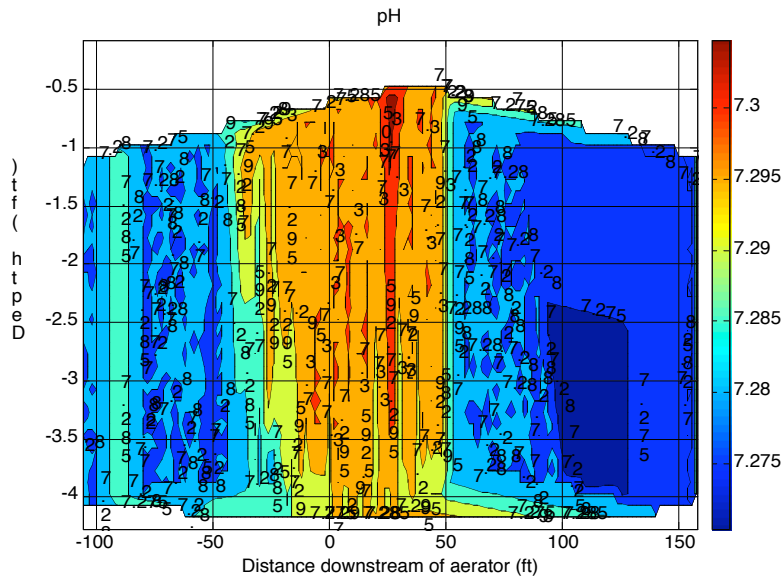
Figure 6: Rhodamine WT concentrations ($\mu\text{g/L}$) in the lateral surface flow induced by the jet aerator.



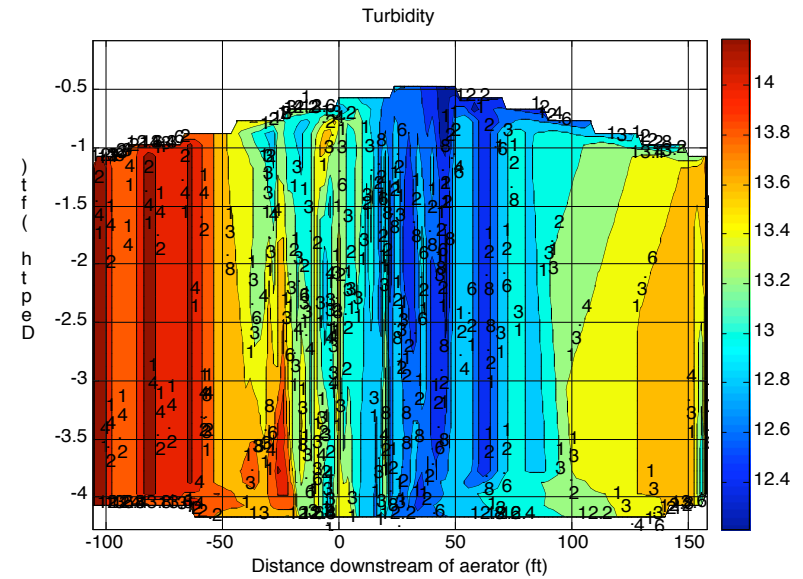
a)



b)

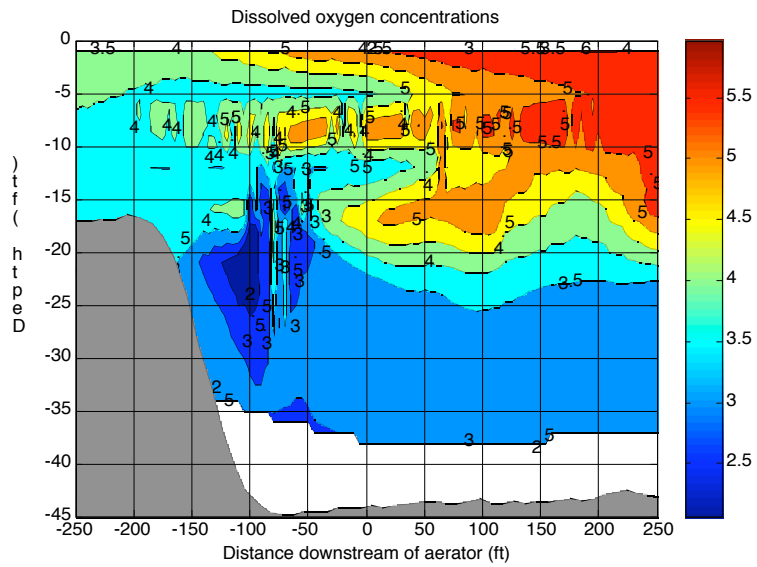


c)

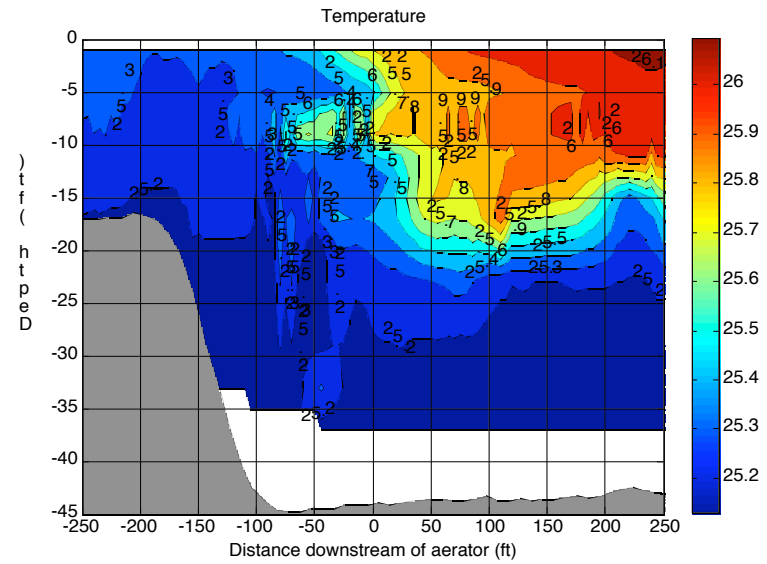


d)

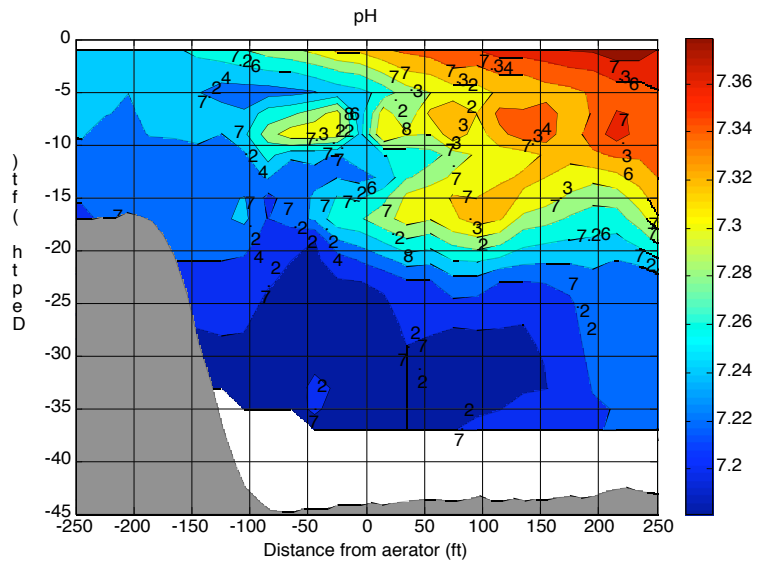
Figures 7a,b, c, d: Dissolved oxygen (mg/L), water temperature (°C), pH, and turbidity (NTU) in the lateral surface aerator flow approximately 50 ft in front of the aerator at 17:00 on September 1, 2004.



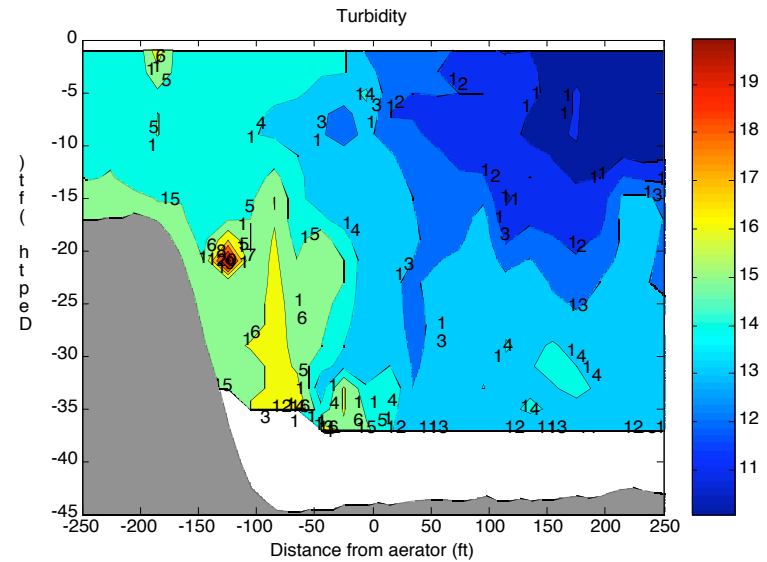
a)



b)



c)



d)

Figures 8 a, b, c, d: Longitudinal profiles of dissolved oxygen (mg/L), water temperature (°C), pH, and turbidity (NTU) along the centerline of the San Joaquin River at 17:30 on September 1, 2004.