Three-Dimensional Salinity Simulations in Tidal Sloughs

Edward S. Gross (ed@gross@baymodeling.com), Michael L. MacWilliams, David Ralston, Vincenzo Casulli, Jeff Koseff, Stephen Monismith, Ralph Cheng, Richard Smith, Oswald Lanz, Lisa Lucas.

Discussion

The model accurately simulated observed salinity at the USGS continuous monitoring stations (Buchanan et al., 1996; Simons, 2000) was applied to capture the vertical variability in salinity in the tidal sloughs under a full range of flow conditions. Observations indicate that salinity varies greatly over the tidal cycle and that vertical stratification is common in Coyote Creek and Artesian Slough. The model accurately predicts both the water level and salinity.

Conclusions

• Several South Bay tidal sloughs experience a large range of salinity during the tidal cycle. The model accurately predicts salinity in all of South San Francisco Bay tidal sloughs.

References


Edward S. Gross (ed@gross@baymodeling.com), Michael L. MacWilliams, David Ralston, Vincenzo Casulli, Jeff Koseff, Stephen Monismith, Ralph Cheng, Richard Smith, Oswald Lanz, Lisa Lucas.