The Interagency Ecological Program’s (IEP) Environmental Monitoring Program (EMP) has historically monitored discrete water quality and nutrients in the San Francisco Estuary. The objectives of the EMP are to: (1) obtain consistent and accurate monthly data at established monitoring stations, (2) to provide and document information necessary to achieve compliance with salinity, flow, and dissolved oxygen standards, and (3) to report this information for the purpose of management and conservation of the upper San Francisco Estuary. This dataset is a subset of the larger EMP dataset that includes discrete water quality data collected from 2000-2018. Beginning in 2000, 11 stations were sampled for a full suite of water quality analytes while the remaining 11 were sampled for chlorophyll a and pheophytin a only, totaling 22 stations sampled each month. By 2018, that number increased to 28 stations sampled each month with the full suite of water quality analytes collected at every station. The EMP collects discrete water quality measurements 1-meter below the surface of the water and 1-meter above the bottom of the channel during high slack tide. Over the period of record, the following water quality parameters have been added: pH, total organic carbon, dissolved organic carbon, dissolved calcium, a rating score for the blue-green algae, Microcystis aeruginosa, and near bottom measurements.