Here we present the full set of model calibration figures for which error statistics are summarized in tables in the main text.

Water level comparison figures are provided for five stations in the estuary (Figures A4 through A8). As noted in the main text, the water level is predicted accurately, except for substantial inaccuracies near the false delta boundaries.

Tidal flow comparisons are provided at three locations (Figures A9 through A11). Tidal flows were predicted reasonably by adjustment of the “false delta” rectangles. Mean (tidally-averaged) flows are also predicted reasonably well at Jersey Point and Rio Vista but large errors are present in Threemile Slough.

Synoptic salinity comparisons are provided for all San Francisco Bay cruises conducted by the USGS during the simulation period (Figures A12 through A25). A large range of salinity is experienced over the simulation period and the trends in both longitudinal salinity variability and vertical salinity variability (stratification) are predicted quite accurately. The salinity conditions range from strongly stratified during the large flow events in 1997 to well-mixed in the fall of 1998.

Predicted X2 was estimated from the synoptic salinity observations and model predictions (Figure A26). Observed X2 varied from 39 km (in San Pablo Bay) to 90 km (in the western delta) during the simulation period and is consistently predicted accurately.

Continuous salinity comparisons are provided at eight stations, with top and bottom salinity sensor salinity available at most stations (Figures A27 through A40). Both tidal variability and seasonal variability of salinity are predicted accurately at most stations. Large seasonal variability is noted at all stations due to large variability in delta outflows during the calibration period (Figure A2).
Figure A1  Model domain, bathymetry and locations of freshwater input with distance from the Golden Gate shown by the yellow line

Figure A2  Net delta outflow during the calibration simulation period
Figure A3  Water level observation stations (red asterisks), continuous salinity observation stations (orange squares), and synoptic salinity stations (yellow circles) in model domain. The inset figure shows ADCP stations (purple triangles) and synoptic salinity stations (red circles) for the Entrapment Zone Study.
Figure A4 Observed and predicted water level at NOAA station 9414290, located at Fort Point. Top panel, tidal variability of water level during two spring-neap cycles; lower left panel, tidally-averaged water level variability of water level through the calibration period; lower right panel, predicted and observed water level during simulation period with cross-correlation statistics.

Figure A5 Observed and predicted water level at NOAA station 9414750, located at Alameda. See caption for Figure A4.
Figure A6 Observed and predicted water level at NOAA station 9414863, located at Richmond. See caption for Figure A4.

Figure A7 Observed and predicted water level at NOAA station 9415144, located at Port Chicago. See caption for Figure A4.
Figure A8 Observed and predicted water level at NOAA station 9415064, located at Antioch. See caption for Figure A4.

Figure A9 Observed and predicted tidal flows in the Sacramento River at Rio Vista. Top panel, tidal variability of flows during two spring-neap cycles; lower left panel, tidally-averaged variability of flows through the calibration period; lower right panel, predicted and observed flows during simulation period with cross-correlation statistics.
Figure A10  Observed and predicted tidal flows in the San Joaquin River at Jersey Point and Dutch Slough. See caption for Figure 9.

Figure A11  Observed and predicted tidal flows in the Threemile Slough. See caption for Figure A9.
Figure A12 Observed and predicted salinity profiles at synoptic sampling stations, interpolated along the axis of the San Francisco Estuary on January 13, 1997

Figure A13 Observed and predicted salinity profiles at synoptic sampling station locations, interpolated along the axis of the San Francisco Estuary on January 28, 1997
Figure A14 Observed and predicted salinity profiles at synoptic sampling station locations, interpolated along the axis of the San Francisco Estuary on February 26, 1997

Figure A15 Observed and predicted salinity profiles at synoptic sampling station locations, interpolated along the axis of the San Francisco Estuary on April 1, 1997
Figure A16  Observed and predicted salinity profiles at synoptic sampling station locations, interpolated along the axis of the San Francisco Estuary on April 22, 1997

Figure A17  Observed and predicted salinity profiles at synoptic sampling station locations, interpolated along the axis of the San Francisco Estuary on May 14, 1997
Figure A18 Observed and predicted salinity profiles at synoptic sampling station locations, interpolated along the axis of the San Francisco Estuary on June 10, 1997.

Figure A19 Observed and predicted salinity profiles at synoptic sampling station locations, interpolated along the axis of the San Francisco Estuary on July 15, 1997.
Figure A20 Observed and predicted salinity profiles at synoptic sampling station locations, interpolated along the axis of the San Francisco Estuary on August 5, 1997

Figure A21 Observed and predicted salinity profiles at synoptic sampling station locations, interpolated along the axis of the San Francisco Estuary on September 9, 1997
**Figure A22** Observed and predicted salinity profiles at synoptic sampling station locations, interpolated along the axis of the San Francisco Estuary on October 7, 1997

**Figure A23** Observed and predicted salinity profiles at synoptic sampling station locations, interpolated along the axis of the San Francisco Estuary on November 6, 1997
Figure A24 Observed and predicted salinity profiles at synoptic sampling station locations, interpolated along the axis of the San Francisco Estuary on January 6, 1998.

Figure A25 Observed and predicted salinity profiles at synoptic sampling station locations, interpolated along the axis of the San Francisco Estuary on March 17, 1998.
Figure A26 Observed X2, predicted X2, X2 estimated from the Monismith and others (2002) regression relationship and net delta outflow during the calibration period.

Figure A27 Observed and predicted salinity at the Oakland Bay Bridge bottom sensor during the calibration period. Top panel, tidal variability of salinity during two spring-neap cycles; lower left panel, tidally-averaged variability of salinity through the calibration period; lower right panel, predicted and observed salinity during simulation period with cross-correlation statistics.
Figure A28 Observed and predicted salinity at the Oakland Bay Bridge top sensor during the calibration period.

Figure A29 Observed and predicted salinity at the Presidio during the calibration period. See caption for Figure A28.
Figure A30  Observed and predicted salinity at the Point San Pablo bottom sensor during the calibration period. See caption for Figure A28.

Figure A31  Observed and predicted salinity at the Point San Pablo top sensor during the calibration period. See caption for Figure A28.
Figure A32 Observed and predicted salinity at the Martinez bottom sensor during the calibration period. See caption for Figure 28.

Figure A33 Observed and predicted salinity at the Martinez top sensor during the calibration period. See caption for Figure A28.
Figure A34  Observed and predicted salinity at the Port Chicago bottom sensor during the calibration period. See caption for Figure A28.

Figure A35  Observed and predicted salinity at the Port Chicago top sensor during the calibration period. See caption for Figure A28.
Figure A36 Observed and predicted salinity at the Mallard bottom sensor during the calibration period. See caption for Figure A28.

Figure A37 Observed and predicted salinity at the Mallard top sensor during the calibration period. See caption for Figure A28.
Figure A38 Observed and predicted salinity at the Antioch surface sensor during the calibration period. See caption for Figure A28.

Figure A39 Observed and predicted salinity at the Collinsville bottom sensor during the calibration period. See caption for Figure A28.
Figure A40  Observed and predicted salinity at the Collinsville top sensor during the calibration period. See caption for Figure A28.