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Siegfried, S., Craft, D., Hiebert, S. and M. Bowen, 2000. *Continuous Monitoring of Fish Eggs and Larvae at the Tracy Fish Collection Facility, Tracy, California, February - June, 1994*. November 2000. Volume 6, Tracy Fish Collection Facility Studies. U. S. Bureau of Reclamation, Mid-Pacific Region and Denver Technical Service Center. 30 pp + Appendices and Figures.

Continuous egg and larvae sampling were used to estimate the abundance and temporal distribution of fish eggs and larvae at the Bureau of Reclamation's Tracy Fish Collection Facility (TFCF) during the spring 1994 spawning season. The purpose of this study was to evaluate the applicability of automated egg and larvae counting systems, compare continuous pump sampling to tow-net methods, and to provide a baseline egg and larvae data set for fishery scientists. More than 150 million egg and larvae were estimated to have been entrained at the TFCF from February 6 to June 6, 1994, and the observation of live eggs suggested spawning in the vicinity of the TFCF. For the entire study period, approximately 90 percent of entrained eggs and larvae were prickly sculpin, Cottus asper, 5 percent were striped bass, Morone saxatillis, and 3 percent were Shimofurl goby, Tridentiger bifasciatus. The remaining 2 percent were composed of 15 minor species. Prickly sculpin dominated February and March entrainment but diminished in April, after which Shimofuri gobies and striped bass were the dominant species. At the TFCF, more striped bass and prickly sculpin eggs and larvae were collected during night sampling. Striped bass eggs were more abundant than larvae in April and May while the converse was true in June. Comparison of continuous pump sampling data to townet sampling conducted by the California Department of Water Resources revealed that both methods detected the onset of spawning activity at around the same time. However, actual numbers of E&L collected, species relative proportions, and relative proportions of eggs to larvae were different for the 2 sampling methods. While both E&L collection methods have advantages and limitations, it appears that continuous pump sampling is a better method for estimating localized entrainment at the TFCF. Tow-netting, on the other hand, may reveal more representative information about regional spawning activity in the south Delta.