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During 1991 and 1992, I studied environmental contamination of the aquatic communities at Imperial National Wildlife Refuge on the lower Colorado River. I collected composite samples of sediment, detritus, aufwuchs, aquatic plants, invertebrates, and fishes from 2 river sites, 5 backwater lakes, and 2 seepage lakes.

Selenium concentrations ($\mu\text{g/g}$, dry weight) were elevated in sediment (geometric mean = 0.93, range = none detected (ND) to 4.1); detritus (4.50, 0.4-27.4); aufwuchs (4.85, 2.6-10.2); *Najas marina* (5.66, ND-21.0); *Corbicula* spp. (10.54, 5.8-26.5); *Procambarus clarkii* (7.70, 1.5-35.8); whole fishes (6.70, 1.6-17.2); and fish fillets (9.72, 5.8-22.6). Ninety-four percent of whole fishes and invertebrates (n = 185) contained concentrations of selenium that exceeded 3 $\mu\text{g/g}$, a concentration recommended by the U.S. Fish and Wildlife Service to protect aquatic birds from chronic selenium toxicity. Biological samples from seepage lakes had significantly lower (p \leq 0.05) selenium levels than similar samples from backwater lakes. Selenium is incorporated into plants in backwater lakes and enters consumers primarily through the detrital food web.