Tracy Research Technical Report Abstract

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Cohen, A.N., and A. Weinstein. 2001. *The Potential Distribution of Chinese Mitten Crabs (Eriocheir sinensis) in Selected Waters of the Western United States with U.S. Bureau of Reclamation Facilities*. Volume 21. U. S. Bureau of Reclamation, Mid-Pacific Region and Denver Technical Service Center, and San Francisco Estuary Institute, Oakland, California. 61 pp.

Recent concern over infestation of the Chinese mitten crab, *Eriocheir sinensis*, at the Tracy Fish Collection Facility (TFCF) prompted this report. The TFCF is a Bureau of Reclamation (Reclamation) fish salvage facility located at the intake of the Delta Mendota Canal in the Central Valley of California near Tracy and recent mitten crab infestation has affected fish salvage operations. Habitat and hydrology in several estuarine watersheds containing Bureau of Reclamation water storage and diversion facilities were compared with the behavior and habitat literature regarding *E. sinsensis* to estimate the potential for spread of this nuisance species. The current literature and the evaluaton in this study suggest that the small Klamath and and Rogue Rivers estuaries are not suitable habitats for mitten crabs. The watershed with estuaries that will support mitten crab habitat include estuaries of the the Columbia, Willamette, Tulatin, San Francisco Bay and the Sacramento-San Joaquin Delta, the northern portions of the Texas Coastal Bend from Mataforda Bay to Corpus Christi. Mitten crabs are unlikely to migrate in significant numbers to Reclamation facilities on the Yakima or Columbia Rivers; however, the crabs may reach lower elevation facilities on the Tulatin River and Scoggins Creek. This infiltration may affect habitat or resources for anadromous salmonid populations in the main stems of the lower Columbia River system. In the Central Valley, mitten crabs may migrate as far as the base of Friant Dam on the San Joaquin River, and up to Keswick and Whiskeytown Dams in the upper Sacramento River watershed. While some crabs may be transported by way of Reclamation and state of California conveyence systems in the Sacramento-San Joaquin Delta, these factilities are not thought to be effective migration routes for large numbers of mitten crabs. The greatest effects from these crabs will likely be clogging of screens, pipes or valves in power, water conveyance, fish salvage, and fish passage facilities with resulting in diminished operating capacity for these facilities.