**Tracy Research Technical Report Abstract**

* ***Tracy Technical Bulletin 2015-5***
Tracy B. Vermeyen and Bryan Heiner. 2016. *Hydraulic Evaluation of Hydrolox Traveling Screen in the Secondary Channel of the Tracy Fish Collection Facility.* June 2016. Tracy Fish Collection Facility Studies. Technical Bulletin 2015-5. U.S. Bureau of Reclamation, Mid-Pacific Region and Denver Technical Service Center. 28 pp.

A hydraulic field evaluation of Hydrolox screens installed in the secondary channel of the Tracy Fish Collection Facility was conducted on August 11 and 12, 2015. Three-dimensional velocities were collected 3 in from the screen face using a SonTek/YSI acoustic Doppler velocimeter mounted inside a lead sounding weight during high tide. Average approach velocity across all four screens was 0.37 ±0.14 and 0.34 ±0.11 ft/s for secondary channel velocities of 2.52 and 1.82 ft/s, respectively. Approach velocities increased along the four Hydrolox screens in the downstream direction. As the secondary channel velocity increased, the uniformity of approach velocities decreased in both the longitudinal and vertical directions. Sweeping velocities along the screens increased in the downstream direction and reached a maximum at the entrance to the holding tanks. Screen performance may be improved by incorporating baffles to restrict flow through screens with higher approach velocities, thereby producing more uniform approach velocities across the entire screen structure. Observations of the debris collection system before and after each hydraulic test revealed good performance of all components for a relatively light debris load of primarily Egeria (Egeria densa). Headloss across the Hydrolox screens was not recorded because the water level sensor downstream from the screen was not operational.