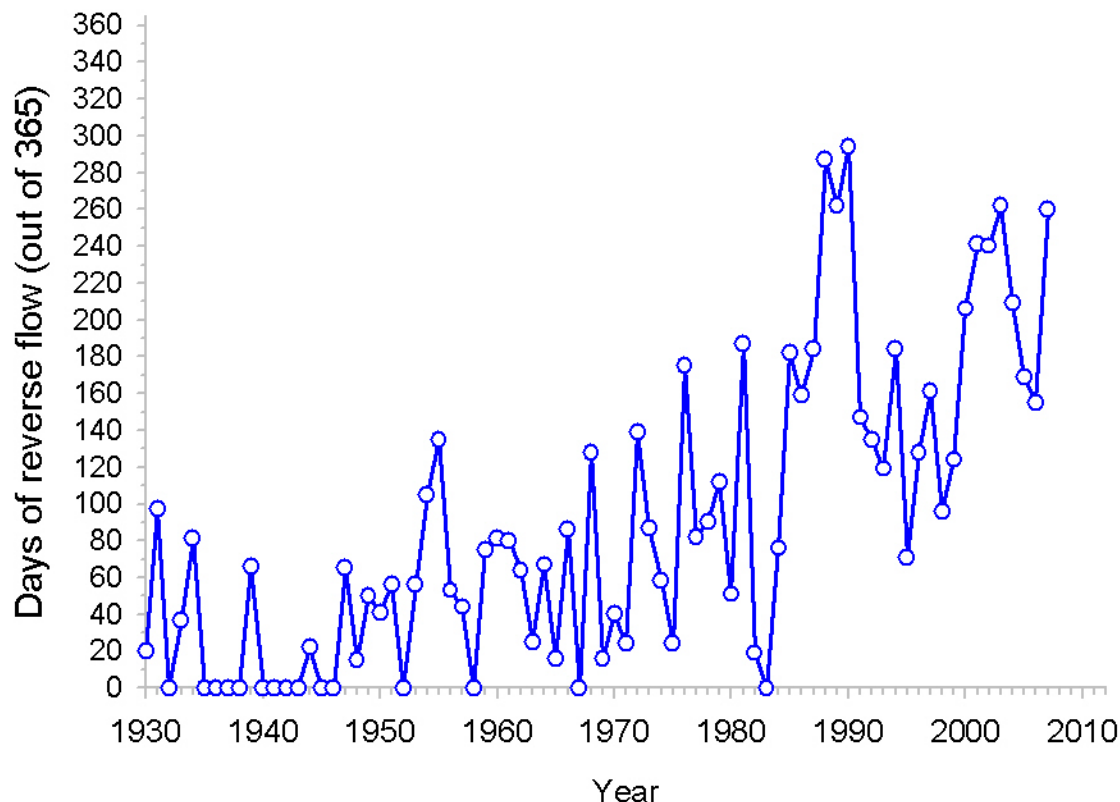


As exports from the Delta increase, San Joaquin River channels flow backwards toward the pumps for more than half the year



Water flows downhill – except in the lower San Joaquin River and the south Delta. The Old and Middle River are two side-channels (“distributaries”) of the San Joaquin River downstream of Vernalis in the south Delta. Historically, they flowed into the Bay-Delta estuary; however, with the increasing water exports at the CVP and SWP pumps in the south Delta, the water in Old and Middle rivers actually flows backwards, towards the pumps, for much of the year. This “reverse flow” effect illustrates the profound changes in Delta hydrology that have occurred because of the increasing water exports.