Date: July 8, 2014 **From:** Akitsu Kimoto

Subject: SCR Helicopter Flight 6-13-14

Background:

Brian Powell and Akitsu Kimoto took a helicopter flight up the Santa Cruz to find the flow extent on June 13, 2014. We left from Tucson International Airport around 9:30 am and flew north along the Santa Cruz River.

Summary:

The locations of the end of the flow are shown in Figure 1. We found that the flow from the Agua Nueva WRF ended at approximately 2860 feet upstream of the Ina Rd. (Figures 2.1 and 2.2) and the flow from the Tres Rios WRF ended approximately 5500 feet upstream of Trico Marana Rd (Figures 3.1 and 3.2). There was no diversion from or to agricultural fields in Marana. No tailwater contribution to the river was observed this year. There is no inflow from the Marana WWT. Trees at the upstream of Trico Marana Rd. (near the vegetation monitoring site #8) looked stressed most likely due to the lack of flowing water (Figure 4). RFCD staffs repeatedly observed that downstream of either Trico Marana Rd. or Sunders Rd. was dry (no flowing water in the river) before the monsoon season in 2014.



Figure 1 Location of WRFs and the End of Flow



Figure 2.1 End of Flow from the Agua Nueva WRF



Figure 2.2 End of Flow from the Agua Nueva WRF



Figure 3.1 End of Flow from the Tres Rios WRF



Figure 3.2 End of Flow from the Tres Rios WRF



Figure 4 Stressed Trees at the upstream of Trico Marana Rd. (near the vegetation monitoring site #8)