

# United States Department of the Interior



## FISH AND WILDLIFE SERVICE

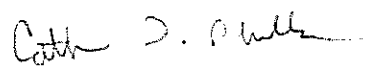
National Fish Hatchery & Technology Center  
500 East McCarty Lane  
San Marcos, TX 78666  
(512) 353-0011, ext. 223  
Fax (512) 353-0856  
Catherine\_Phillips@fws.gov

3 February 2010

Dr. Robert Gulley, Steering Committee and TWDB,

When the San Marcos NFHTC received word that we would receive funding for the fountain darter drought projects, we began collecting data. It was very important to begin doing so immediately during the period of low-flow, because we did not know when the next opportunity would be to collect critical low-flow data on the fountain darter, non-native snails, and the parasite. Therefore, we already have some drought information starting in August when flows in the San Marcos were between 86-100cfs and flows in the Comal between 163-179cfs (USGS). When we started the project in the San Marcos River (movement in the fountain darter), we saw greater numbers of invasive *Melanoides tuberculatus* and *Marisa cornuarietis* at the study site than previously observed. We have no information on how non-native snail populations respond following a period of low flow and whether or not this corresponds with higher levels of parasites found on resident fountain darters. Therefore, we added a snail component to the San Marcos River project at no cost to the EARIP. That being said, it is very important to not only collect data during low flow events, but also during a period of recovery following a drought to determine if and how the fountain darter recovers from habitat alteration during drought. We had some high water events in October (328 cfs in the San Marcos system and 4290 cfs in the Comal system) and continued to collect data following these events to determine how floods also affect the species of concern. Therefore, it is critical for us to continue collecting data. Data collected during the drought (summer and fall 2009) will be added to the data collected currently as we follow this species through a period of habitat recovery. This study needs to be continued through the next dry period (summer/fall 2010), and at which time, if above average amounts of rain continue, the data collection portion of this study will be completed.

Sincerely,

A handwritten signature in cursive script, appearing to read "Cath T. Phillips".

Catherine T. Phillips, PhD  
Fish Biologist