

**Report and Recommendation of the Additional Studies Workgroup**

**Meeting Activities**

**September 14, 2009 Meeting**

The Additional Studies Work Group consisting of Calvin Finch, Todd Votteler, Steve Raabe, Cindy Loeffler, Kirk Patterson, Jim Bower, Tyson Broad, Weir Labatt as an alternate for Matt Nelson and Rick Illgner met to consider three proposals: an aquifer optimization study for springflow supplementation study, a whooping crane study and a Guadalupe River gains/losses study that had been considered at the August 21, 2009 meeting. The proposals were prepared by SAWS, GBRA and EAA, and the estimated cost of the studies is \$150,000, \$440,000 and \$142,000 (\$107,000 for non-federal share) respectively. Also discussed was a proposal by Cheryl Gilpin for an algae investigation, estimated to cost \$156,000. The algae investigation was considered to be unnecessary and not recommended for funding.

SAWS offered to pay for costs in excess of the estimated \$150,000 cost of the optimization study. GBRA announced they were going to partner with SARA and asked the EARIP to fund one-half of the whooping crane study. The EAA also committed to fund one-half of the Guadalupe gains/losses study and asked the EARIP for up to \$70,000. There was considerable discussion on the other three studies. No decision was reached at the meeting. However, a compromise was suggested for further consideration in which the three studies would be considered as a package if SAWS, GBRA, and EAA agreed to provide one-half of the costs of the studies for which each prepared a proposal. A follow-up meeting was scheduled for September 23, 2009, to allow the study sponsors to consult with their respective agencies and to receive feedback from the hydrologists on the Science Subcommittee on the use of the MODFLOW model to evaluate retention times in the aquifer.

**September 23, 2009 Meeting**

The additional studies workgroup of Calvin Finch, Todd Votteler, Steve Raabe, Cindy Loeffler, Kirk Patterson, Jim Bower, Tyson Broad, Weir Labatt for Matt Nelson and Rick Illgner met to consider three proposals: an aquifer optimization study for springflow supplementation study, a whooping crane study and a Guadalupe River gains/losses study that had been considered at the September 14, 2009 meeting (Attachments 1, 2, and 3). Also attending the meeting were Adam Zerrenner, Kevin Connally, Carol Patterson, Patrick Shriver, Larry Hoffman, Robert Gulley and Dan Laroe. Adam Zerrenner was asked to attend this meeting to discuss FWS's analysis as part of the ESA and NEPA.

There was a briefing on the September 21, 2009, science subcommittee meeting regarding the discussion on use of the Edwards ModFlow model for recharge analysis. Dr. Gulley reported

that the hydrologists believed that the model could be used as a screening tool with caveats regarding uncertainty.

Adam Zerrenner set out the FWS's needs for information regarding the whooping crane. Adam indicated that the ESA and NEPA will require an analysis of the effects of the covered action of the EARIP HCP on the whooping cranes. The existing science will need to be reviewed to assist the Service in making the requisite determinations. He suggested that this evaluation would also assist the EARIP in deciding whether to include the whooping crane as a covered species in its HCP. Adam made clear that FWS took no position regarding the value of an additional study with respect to the whooping crane. To the extent that the EARIP was going to do the evaluation, Adam recommended that the EARIP start small and don't lose focus on the spring's species.

Patrick Shriver clarified the objective of the optimization study. He said that it was intended as a screening evaluation of recharge alternatives strictly for the purposes of springflow supplementation. It would provide the Steering Committee and Participants an alternative decision-support tool for considering recharge options that supplement flows during drought. Specifically, it would focus on strategies for springflow supplementation:

- Uses the model in the similar manner as it is being used to evaluate numerous other aspects of regional aquifer management
- Develops management options, which focus on improving endangered species habitat

SAWS was unwilling to fund a share of the optimization study because it believed the study should be paid for by the EARIP as it relates directly to the springs and spring species. There was considerable discussion on the value and implications of the whooping crane and Guadalupe River gains/losses studies. Motion was made by Weir Labatt and seconded by Kirk Patterson to recommend considering the following studies and amounts for funding by the EARIP:

<b>Study</b>	<b>Amount</b>
Aquifer Optimization for springflow supplementation	\$150,000
Guadalupe River gains/losses	\$33,500
Whooping Crane	\$200,000 - \$220,000*
Total	\$383,500 - \$400,500

\* the difference in cost is dependent on a reduction in the indirect costs

The motion did not receive consensus; therefore, a poll of the members was taken and the motion passed with eight members in favor (Todd Votteler, Steve Raabe, Cindy Loeffler, Kirk Patterson, Jim Bower, Tyson Broad, Weir Labatt and Rick Illgner) and one opposed (Calvin Finch). Calvin indicated the following concerns for additional research on the whooping cranes and the Guadalupe River gains/losses:

- Sufficient data already exists;
- SAWS is not interested in the expansion of geographic scope based on its interpretation of SB3 and its time limitations ; and

- SAWS continues to be focused on the sentinel springs species and believes that other State processes exist in which two of these studies would be better suited.

Following the vote, the group discussed the logistics of moving forward with the optimization study. Dr. Gulley was directed to approach Todd Engineers, LBG-Guyton Assoc., HDR Engineering and Southwest Research Inc. before the October 8, 2009 EARIP meeting to determine if the scope is clear, the timeframe and budget are reasonable.