

**PEER REVIEW OF THE SCIENCE DEVELOPED IN THE EDWARDS AQUIFER
RECOVERY IMPLEMENTATION PROGRAM**

I currently anticipate at least three scientific studies in the EARIP process that may have significant implications:

- The recommendations of the Science Subcommittee regarding the “k” charges. These recommendations are due on December 31, 2008.
- Study by Dr. Thomas Hardy on the impacts of flows and other factors, such as recreation impacts, flood flows, and non-native species, on the federally-listed species in and near the Comal and San Marcos springs.
- The recommendations of the Science Subcommittee on withdrawal limitations during critical periods (*i.e.*, the “j” charges”).

It is important to the EARIP process that all stakeholders are confident regarding the results of these studies. The use of independent peer review could enhance the acceptability of these studies to the EARIP stakeholders and others and improve prospects for making agreed-upon decisions based on the results of the studies.

Independent peer review can take a variety of forms. The two that are likely to be the most useful for the EARIP involve either the use of a consulting firm that contracts with a small group of academics or other experts to prepare written critiques of the science; or the use of a nationally-recognized independent scientific organization such as the National Academy of Sciences (“NAS”) to conduct an independent review of the science.¹ The differences between the two approaches are largely matters of time, cost and the nature of the analysis. The first approach typically takes a few months, costs \$20,000 to \$50,000, and results in a peer review report summarizing the comments on the scientific work by national experts along with the comments themselves. The review can include an opportunity to comment on the review. The number of reviewers and scope of the review are, of course, negotiable.

The second approach can take a year or more to complete and cost at least \$250,000. The product includes a critique of the work but often involves an in-depth evaluation of the issues themselves – in effect, a second, independent look at the questions. The review typically includes one or more workshops prior to the issuance of the final report. The imprimatur of NAS review carries great weight with regulatory and legislative bodies and the public.

¹ I am attaching descriptions of the two approaches that were distributed at the March EARIP meeting. See Agenda Attachment 3. The proposals of Battelle and the River Institute illustrate the first approach. The document from Battelle entitled “Frequently Asked Questions” provides a particularly good description of the process involved in the first approach. The material from the NAS website describes the second approach. The material from SEI describes both approaches.

I believe it is essential to begin the process of arranging for peer review of the Science Subcommittee's recommendations regarding the "k" charges. The EARIP has previously discussed peer review of the "k" charges and seemed to favor peer review if funding were available; however, the steering committee has not formally authorized the use of peer review for the "k" charges. I suggest that this issue be discussed at the next meeting and a formal decision be made regarding the use of peer review for the "k" charges. A recommendation supporting peer review of the "k" charges is included in the Science Subcommittee Issue Team report. *See* Attachment 4. Given the limited scope of the "k" charges and that the recommendations will be based on existing data rather than a new model or new scientific investigations, I believe the first approach (i.e., using a consulting firm to pull together a team of independent experts) is probably adequate. SAWS has expressed a willingness to contribute \$30,000 towards the EARIP's use of independent peer review I believe it can be accomplished for about \$30,000, but I cannot be sure until I know the length of the report and have a look at a good rough draft.

The EARIP has not specifically discussed peer review of the Hardy study and the Science Subcommittee's work on the "j" charges. FWS, however, has said that peer review of the Hardy study would enhance its utility to the agency in making the "jeopardy" determination, and the same logic that supports independent peer review of the "k" charges would seem to apply to both of these studies as well. I believe that we should begin having discussions in the EARIP regarding independent peer review of this work. By beginning those discussions now, we increase our chance of being able to obtain outside funding for the work from the Texas Legislature, a private foundation, or other sources.