



The Edwards Aquifer Habitat Conservation Plan e-newsletter, "Steward," is published to highlight the efforts underway to protect the Comal and San Marcos Springs and ensure a healthy habitat for the threatened and endangered species.

NAS Tours San Marcos River, Landa Lake

The National Academy of Sciences committee members studying the Edwards Aquifer Habitat Conservation Plan (EAHCP) have reviewed thousands of pages of research and data over the last two years. But, after



spending a few hours kayaking on the San Marcos River and Landa Lake last Wednesday, those scientists found their understanding of the Edwards ecosystem getting as clear as the spring-fed water in the system.

"The field trip was extremely valuable for evaluating this type of project," said Dr. Laura Ehlers, who is the NAS study director for the EAHCP project. "We learned more in a couple of hours on the river than we could in days in a

hotel room going through a stack of documents. The committee members now have a good feel for the scale of the project and real flavor for project constraints, such as the rivers and lake being in urban settings."

Before pushing off to make their way down the San Marcos River, EAHCP Program Manager Nathan Pence reminded the group that the paddling trip was to not only demonstrate some of the techniques being used in habitat improvement, but to point out some of the issues implementation teams are facing. Texas State University and City of San Marcos EAHCP team member Melani Howard explained that the committee would get an in-depth look at three of the 13 habitat protection measures her team is responsible for implementing. She took the opportunity to also point out some of the bank stabilization work recently completed where the NAS team was standing. With the short startup briefing concluded, the kayak flotilla took to the water.

Continued on page 2

NAS Committee River Tour - continued

The first stop was for a demonstration of how nonnative vegetation is being removed and then replaced with native species. In about 30-45 minutes, two scuba divers pulled out enough nonnative vegetation to fill the bed of a pickup. Howard then talked to the group about the types of native plants replacing the invasive ones, and some of the challenges faced with each plant. For example, some native plants do well at providing fountain darter habitat, but don't stand up well to nonnatives like hydrilla. Pence noted that those are the types of scenarios that the EAHCP would be seeking input on from NAS committee members. Stop two along the San Marcos River included a demonstration of a small machine used for dredging silt from the riverbed.

The afternoon was spent on Landa Lake in New Braunfels. There they found the same quality of Edwards water but with lower flow conditions of a reservoir rather than the rapid running of a river. Those conditions served up the issues of dissolved oxygen levels for the species, and whether the use of artificial aeration via machines could help.

"The informal discussions we had with the people who are restoring the native vegetation was a very important part of the trip for me," said Dr. Lora Harris, an environmental scientist at the University of Maryland, and a new member on the NAS team. "There is some creative thinking happening here to ensure that the native plants are healthy after planted, and I'm not sure I would have gathered that from a report. That kind of information will be very valuable as we review some of the ecological modeling taking place."

Harris' positive perspective flowed over into day two presentations at the Edwards Aquifer Authority headquarters in San Antonio. Pence led the daylong session with a detailed presentation on the NAS committee's charge and the team's progress accomplished in the first of three NAS reports. The EAHCP team took the 70 formal recommendations from the first NAS report and vetted those ideas with the EAHCP Implementing Committee, various workgroups and the public. Those meetings yielded a prioritized matrix of actions, which were the foundation for the next set of discussions with the NAS committee.

Dr. Danny Reible, NAS committee chair, was happy with how the EAHCP group addressed the NAS suggestions for improving the EAHCP work. "They put forth a very serious response to our recommendations," he said. "Our work is meant to be helpful to the process, and we were pleased with the elaborate effort undertaken to respond to our ideas."

"The NAS Committee is there to help us improve our Habitat Conservation Plan by making recommendations on how we're implementing the plan," Pence said. "These are some of the best scientists in the country on these types of ecological issues, and I have every confidence that our efforts in preserving the endangered species and habitats will only get better with their evaluations and insights."

The committee is chaired by Danny Reible from Texas Tech University and a member of the National Academy of Engineering. The other committee members include:

- Jonathan D. Arthur, Florida Geological Survey
- M. Eric Benbow, Michigan State University
- Robin K. Craig, University of Utah
- K. David Hambright, University of Oklahoma
- Lora Harris, University of Maryland
- Timothy K. Kratz, University of Wisconsin
- Andrew J Long, USGS, Tacoma
- Jayantha Obeysekera, South Florida Water Management District
- Kenneth A. Rose, Louisiana State University
- Laura Toran, Temple University
- Greg D. Woodside, Orange County Water District, California