

Barton Springs Pool Sediment Toxicity Evaluation to Aquatic Life
Executive Summary
May 28, 2003

The Texas Commission on Environmental Quality (TCEQ), in conjunction with the U.S. Environmental Protection Agency (EPA), conducted an evaluation of the toxicity of sediments in Barton Springs Pool to aquatic organisms that live in the sediment. In the testing, two species of sensitive aquatic organisms, *Hyalella azteca* (a shrimp-like crustacean) and *Chironomus tentans* (an aquatic insect), were exposed to sediments from the pool for ten days and then evaluated for acute toxicity (survival) and growth by comparing them to organisms exposed to uncontaminated laboratory control sediments. In addition, the sediments were analyzed for contaminants including polycyclic aromatic hydrocarbons (PAHs), metals, pesticides, and polychlorinated biphenyls (PCBs). These types of analyses are usually conducted along with the toxicity tests and may help explain any impacts to aquatic life observed in the toxicity tests. The sediments were not acutely toxic to either species, although the more-sensitive species of test organism, *Hyalella azteca*, did not grow as well as the control organisms did during the ten-day test. However, no correlation was found between chemicals detected in the sediments and the decreased growth observed in the *Hyalella* test organisms. In fact, most pollutants were present at levels which are typical of urban waterbodies.

The TCEQ and the EPA agree that, based upon these results, Barton Springs Pool will not be included on the Draft 2002 Texas 303(d) List as impaired. However, because of the uncertainty raised by the decreased growth observed in the *Hyalella* test organisms, testing will continue to be conducted in the future to monitor the sediment and water quality of Barton Springs Pool, and the pool will continue to be listed as a concern. Similar contaminant and sediment toxicity testing is planned for Barton Creek this spring/summer. Also, the City of Austin, in conjunction with the TCEQ, is evaluating measures which will reduce pollutant inputs to Barton Springs.