

Shaft leak latest hiccup in water treatment plant construction

By **Marty Toohey**

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A 40-foot-wide shaft being excavated under environmentally sensitive land in Northwest Austin has sprung a leak, the latest complication in the construction of a \$500 million-plus water treatment plant.

The shaft cuts into porous limestone, through which spring water flows as part of the northern Edwards Aquifer. Although the leak is relatively small, and city officials say they soon will have it under control, the city's Watershed Protection Department has been surprised that initial patches have been only partly successful. If not fixed, the leak could create long-term problems for the Bull Creek watershed.

Chuck Lesniak, the environmental officer overseeing the project, said the city was aware before work began that water could leak into the shaft and prepared for the possibility. "Is that creating an environmental problem in the short term, say, the next 60 days? We think not. Longer term, it's harder to predict," Lesniak said.

The shaft, in the Four Points area near the intersection of RM 620 and RM 2222, is being built in conjunction with the controversial water treatment plant under construction near Lake Travis. When finished, the shaft will be 200 feet deep and allow construction crews to dig a miles-long tunnel that will carry water from the treatment plant to a distribution point near McNeil Road and U.S. 183.

The tunnel will run beneath a honeycombed layer of small limestone caverns and fissures that are part of the northern Edwards Aquifer. But to get down beneath the aquifer, which Lesniak said extends about 100 feet beneath the surface, crews need to dig the shaft through the limestone.

As the project was being planned, critics said crews could inadvertently hit a pocket and allow water to flow into the tunnel. They argued that this could disrupt the flows of the springs that feed nearby Bull Creek in ways that could not be predicted.

"It was never worth the risk," said Roy Waley, vice chairman of the Austin chapter of the Sierra Club. "If we lose the springs, we lose the creeks. If we lose the creeks, we lose the species" that live in the area and are threatened or endangered, such as the Jollyville salamander, golden-cheeked warbler and several cave bugs.

Mary Gay Maxwell, chairwoman of the city's Environmental Board, said that in most cases the amount of water now leaking would be of little concern. But she said it is an issue at the Four Points shaft because the springs that feed Bull Creek are especially sensitive to changes in flow.

"As far as I'm concerned, that's the wrong route" for the tunnel, Maxwell said. "It's the most sensitive one they could have chosen."

The battle lines around the treatment plant are still largely intact, even two years after construction began. Environmentalists have long argued that the city should invest in conservation measures; Austin officials have said the plant will serve the growing city's long-term needs.

This summer, opponents on the council successfully voted to have the city staff investigate the cost of halting plant construction for five or 10 years. Ultimately, the council decided against stopping construction.

City officials say the leaks will be fixed shortly and that the problem probably won't affect the timetable for the overall project.

As crews dig the shaft, they are also building a concrete ring around the inside of it, with a metal ring inside the concrete one. The idea is that the two rings will block water from seeping into the tunnel and that water would flow around the tunnel while leaving the aquifer unaffected.

"We're very confident this is a manageable issue," said Greg Meszaros, general manager of the Austin Water Utility.

When the leak was spotted a couple of weeks ago, the level of nearby wells that monitor the aquifer initially dropped by a foot or more, Lesniak said. The decline quickly tapered off to a few hundredths of a foot a day, although those readings could have been influenced by the recent rainfall.

Lesniak said city officials thought the leak had been plugged but were surprised when, a few days later, it became apparent there was still water seeping into the tunnel, probably from a number of places.

"This is not what we expected," he said. "But we'll get it fixed. We don't want any environmental impacts."

mtoohey@statesman.com; 445-3673

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