

Pollution numbers for creek alarming

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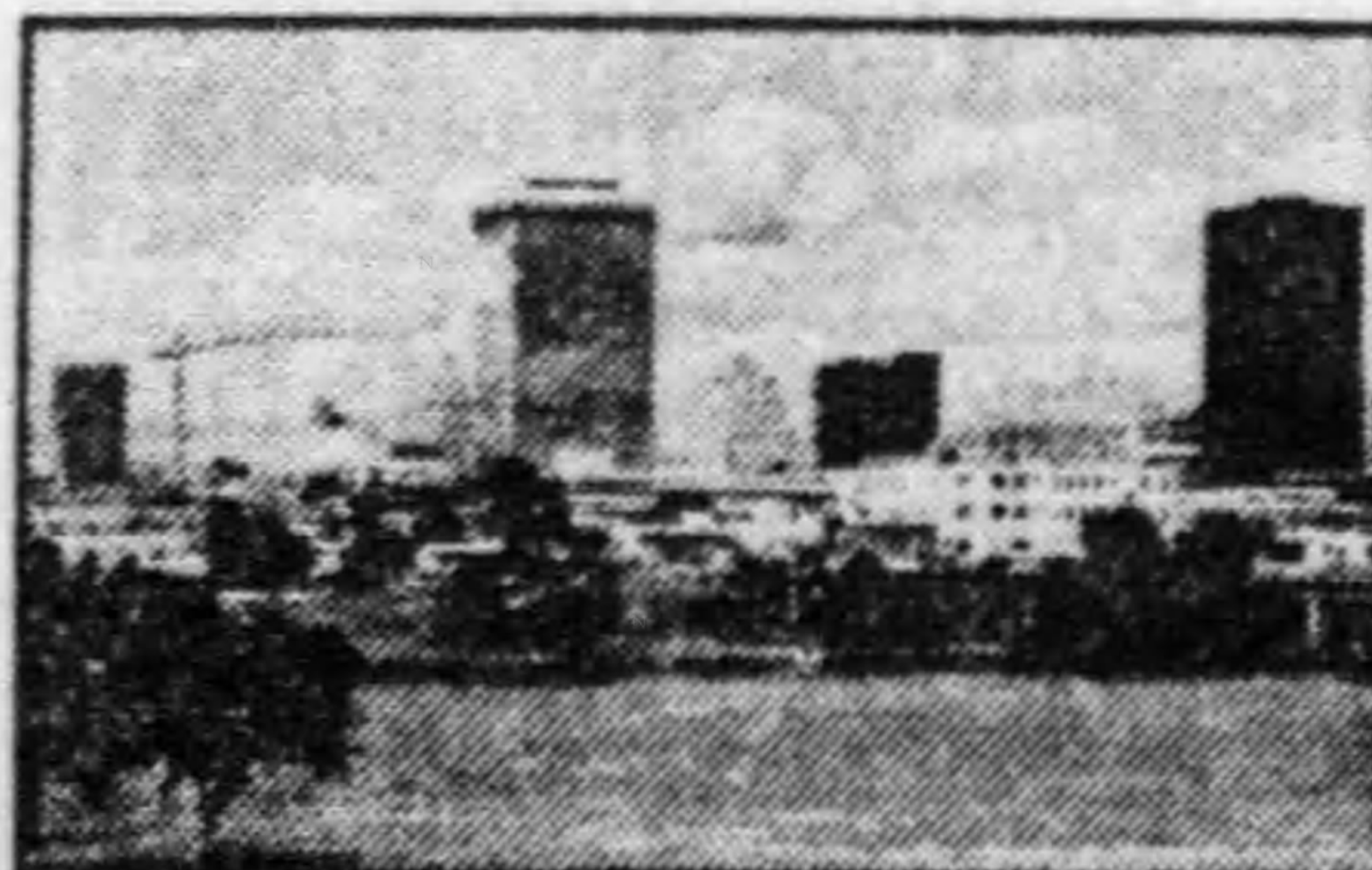
Is Barton Creek polluted?

Good question. One that should be asked, say, of the consulting firm being paid \$135,551 by the city to study the present and future impact of urban growth on the creek's water quality.

Nice try. It should be so easy.

The Barton Creek studies done for the city by Espey, Huston & Associates, which have already produced two thick volumes and are continuing, will not tell you whether the creek's water is too polluted for swimming.

And swimming, as everybody knows, is what Barton Creek is all about . . . and tubing, rafting, kayaking and canoeing as well, when the flow permits.



AUSTIN

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Duke Altman, who heads the Barton Creek project for the consulting firm, said such questions "were not within the scope of the study."

The firm did take a few water samples, Altman said, but those weren't taken from the creek;

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instead, they were taken from draws running into the creek to test the quality of rainfall runoff before entering the creek. Other than that, the firm used existing data furnished by the U.S. Geological Survey, which is conducting its own study of the creek.

But the Espey Huston tests and the U.S. Geological Survey tests are concerned solely with "storm events," meaning major rainfalls, to measure "urban runoff," the rainfall runoff from paved and unpaved surfaces, as well as sewage leaking from septic tanks, sewer lines and treatment plants.

Altman and his co-workers took the U.S. Geological Survey information and the results of their own sampling and used a complex series of equations to determine the amount and quality of runoff that flows into Barton Creek now and will flow into the creek in the future under two fictional development scenarios. These exercises result in a set of numbers called "Runoff Weighted Average Annual Constituent Concentrations."

This table shows levels of nutrients, metals, chemicals and bacteria in the water under mathematically created circumstances. But the numbers, Altman notes, deal only with storm events and have no relation to periods of base flow, which occur most of the time in Austin.

Even so, the numbers produced are alarming.

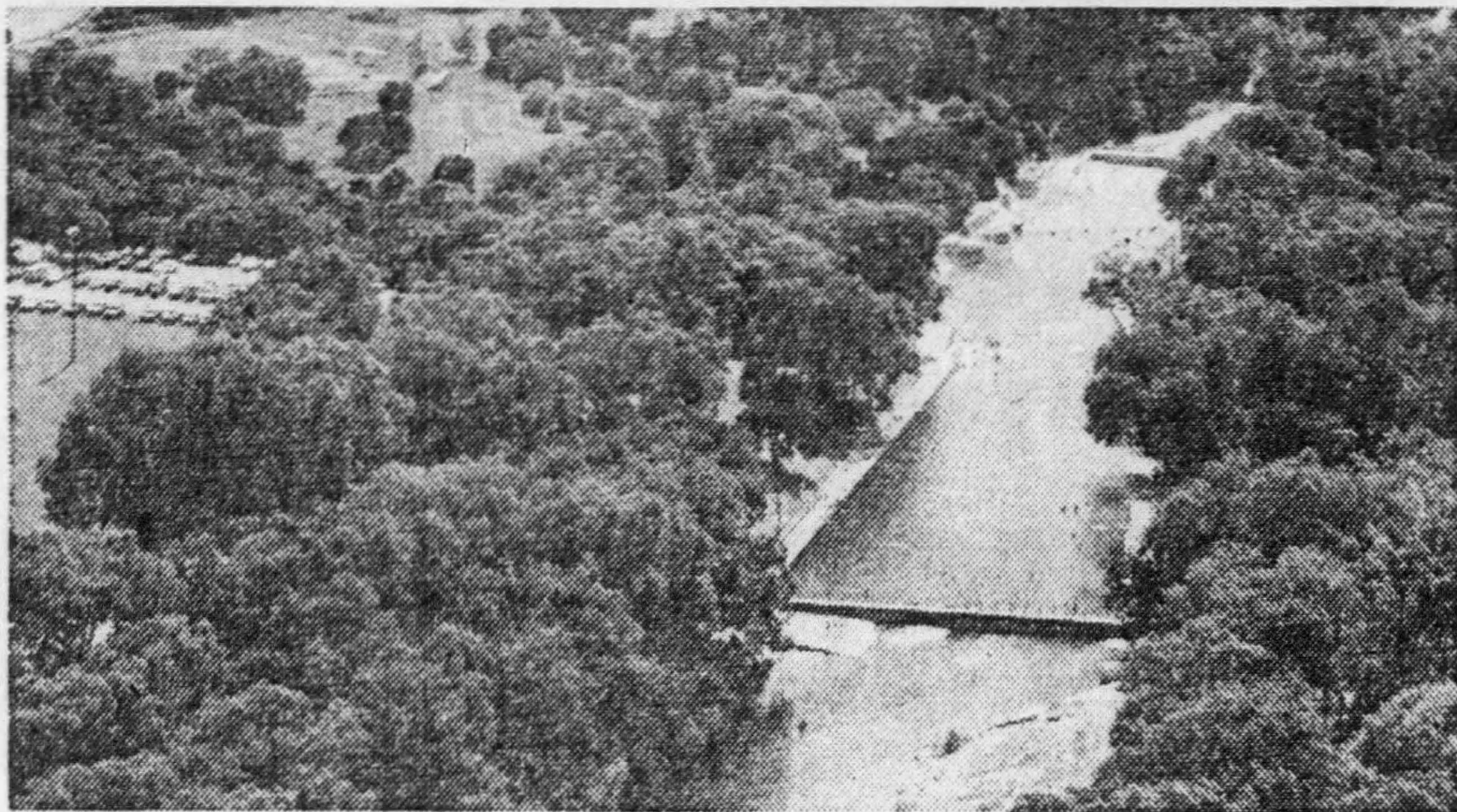
Consider fecal coliforms, for example. These bacteria are associated with the fecal matter of humans and animals and get into the creek from natural sources, septic tank overflow and sewer line leakage. Fecal coliforms are not harmful themselves, Altman said, but are signals to the presence of bacteria and viruses that are harmful.

The Texas Department of Water Resources rules state that water used for contact recreation (where there is a good chance of swallowing water) should contain no more than 200 fecal coliforms per 100 milliliters average from at least five samples over a period of 30 days or less. Also, no more than 10 percent of the samples should exceed 400 fecal coliforms per 100 milliliters.

The state rules for water for non-contact recreation (such as boating) are 10 times higher — 2,000 fecal coliforms per 100 milliliters average with no more than 10 percent of the samples exceeding 4,000 fecal coliforms.

Altman's chart shows that the average annual runoff under existing conditions along Barton Creek will produce fecal coliform counts of 5,200 per 100 milliliters. After the next level of urban development, the chart predicts counts of 9,100 per 100 milliliters. After still more development, the count would be 16,000.

Altman's projections for single "storm events" produce even higher counts, 7,602 under existing conditions, 22,700 at the next development level, 43,400 at the highest development level. The U.S. Geo-



Barton Creek, Barton Springs pool: Are they polluted?

logical Survey's actual measurements during 1975-77 produced an average fecal coliform count after storms of 11,808, with individual counts as high as 70,000.

But Altman steadfastly denies that any of this means the creek is or will become polluted. Pollution, he says, would not occur under state standards unless the readings are repeated in enough samples over the 30-day period.

"What would you tell your own kids if they wanted to swim in Barton Creek?" Altman was asked.

"I guess I don't have to deal with that," Altman said, noting he has no children.

No agency, however, is taking the kind of samples needed to determine how safe Barton Creek is for swimming day to day; not the city's environmental resource management division, or the Austin-Travis County Health Department, or the Texas Department of Water Resources. And the U. S. Geological Survey's regular monitoring station is at the creek's confluence with Town Lake, where the readings are distorted and nobody swims anyway.

In 1976, the Texas Department of Water Resources took five samples from each of five Barton Creek stations during a base-flow period and found all fecal coliform counts well below the 200 per 100 milliliter average guideline for contact recreation water.

But nothing has been done since to test base flow. The *American-Statesman* took some samples from one recent base-flow day (Sept. 24) to the Texas Department of Health laboratory and was told those creek samples, taken just upstream from a small dam above Barton Springs Pool, contained fecal coliform counts of 160 and 210, considerably higher than the 1976 readings and right at the state maximum for contact recreation waters.

More development on septic tanks upstream, more leakage from private sewage treatment plants (the Espey Huston report cites Lost Creek development for this) and more leakage from the city's own sewer line under the creek probably

have increased the fecal coliform counts.

(According to a formula listed in the Espey Huston report, the city's own line is leaking at least 1,740 gallons per day of raw sewage into the creek bed. The report calls this formula "conservative." Curtis Johnson, director of the city's water and wastewater system, says the line has not harmed the creek.)

The state health department declined to run a series of tests for the *American-Statesman* for the same reason cited by some of Austin's private labs for refusing to test Barton Creek samples: fear of being drawn into controversy.

Is Barton Creek polluted?

Still a good question. Nobody knows, or at least nobody's saying. Certainly it is right after a storm. Certainly, as more development occurs, it will become even more polluted. Even the Espey Huston report predicts increased urbanization will add enough nutrients to the creek to produce the green blobs familiar in other city creeks. And the report's fictional second level of development would produce enough DDT in the creek to cause "possible severe impact on the aquatic life in receiving water bodies," meaning Town Lake.

Is Barton Springs Pool polluted? That's easier. The answer is no, at least not by bacteria. Both the 1976 Texas Department of Water Resources report and the *American-Statesman's* own samples found fecal coliforms practically non-existent in Barton Springs.

Of course, it helps that the city built an expensive bypass to carry the creek's water around Barton Springs and that only an estimated 30 percent of the springs' recharge is from the creek. But the future of Barton Springs Pool's water quality is tied to the impact of massive development now taking place on the recharge zone from which the springs draw their water, development that includes the MoPac extension and the new Barton Creek Square mall.

Next: A long-range idea for Barton Creek.