Study blames algae bloom on golf courses

Freeport-McMoran disputes findings its developments affect Barton Creek

By Mike Todd

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Springtime algae blooms along Barton Creek are caused by golf courses and residential development near the creek and could get worse, according to a city report.

The report, prepared by the city Environmental and Conservation Services Department at the urging of environmentalists, recommends steps to control blooms like one last April that carpeted a three-mile stretch of Austin's favorite creek with green slime. A similar bloom covered 1.3 miles of the creek in 1992.

Algae is natural and controlled by factors including temperature, light, stream flow and nutrients. The aquatic plants feed on nitrogen and phosphorus, commonly produced by decaying organic matter or chemical fertilizer.

A "bloom" is a sudden growth of a single species, indicating an increase in nutrients. The species that clogged Barton Creek is cladophora, which grows in strands up to six feet long and attaches to rocks. It typically is found downstream of treated sewage effluent discharges, according to the city report.

According to the report, the biggest culprit in the Barton Creek bloom was nutrients from a tributary that drains the Fazio Golf Course on the Barton Creek Properties development. The golf course is irrigated regularly, using a mixture of lakewater and treated effluent from the development's private sewage system.

"Most discharges with nutrient concentrations elevated sufficiently to trigger algae blooms in Barton Creek are from tributaries which drain golf courses or high-density residential development," the report stated.

Environmentalists said the find-

ing proves them right.

"It's pretty indisputable," said Earth First! member Tim Jones, who made videotapes that alerted the city to the bloom in April. "We've been trying to prove for two years that the golf courses were polluting the creek."

Freeport-McMoRan Inc., which owns the property and proposes massive additional development there, disputes the findings.

"We have reviewed the report and its conclusions and find it to be at best speculative, superficial and seriously flawed," Freeport project manager Barry Allison said in a letter to Mayor Bruce Todd.

In an interview, Allison said the report lacked the same scientific rigor the city requires of private engineering and cannot support the conclusion that Freeport's development caused the algae bloom.

The author of the report, city environmental coordinator Nancy McClintock, declined to comment Friday on the criticism. She said she had not seen Allison's letter but the Environmental and Conservation Services Department would prepare an official response this week.

The City Council ordered the report in July soon after endorsing a parkland-for-development agreement with Freeport.

Allison said the report mentions several sources of nutrients in the water but sampled few of them. The city pointed the finger only at Freeport's golf courses, he said.

"Recommendations speak neither to solutions nor corrective actions for any of those other nutrient sources but seem only to speak to speculative causes associated with golf courses," Allison's letter said.

He asked Todd to delay any public presentation of the report pending further research, saying its conclusions "will become part of the dogma associated with the

See City, B5



City report suggests ways prevent algae blooms Continued from B1 Barton Creek controversy."

been available to the public since then but city officials made no for-

mal announcement. The report's major conclusions: The bloom was triggered by an accidental discharge Feb. 7 of more than 400,000 gallons of effluent water from a recirculation

The report, dated Sept. 1, has

Barton Creek tributary. The bloom began there, extending to Lost Creek Boulevard. Nutrient concentrations in other nearby tributaries also were

pond on the Fazio course into a

elevated, helping maintain the algae bloom throughout the spring. All tributaries with high nutrients sampled on April 20 drain golf courses. A review of departmental data

and events of the past few years

suggest that slight changes in the Barton Creek nutrient balance "may result in continued and increasing incidents of algae blooms." The report recommended that the city, the state and Freeport:

Review effluent irrigation per-

mits for the Freeport and Lost

Creek golf courses in light of pre-

sent knowledge regarding the

Review landscape and irriga-

tion procedures. Nutrients from fertilizers and wastewater effluent are carried into the creek by runoff from watering.

Look for ways to improve golf

course irrigation and drainage sys-

tems "to ensure they are fail-safe,

no-discharge systems" and to

move drainage features away from tributaries.

creek's sensitivity.

Evaluate possibility of installing pollution-control devices in all areas where tributaries with high nutrient concentrations flow into Barton Creek. "The full cooperation of property owners adjacent to the creek

and the full energies of the City of

Austin will be necessary if annual

algae blooms are to be avoided in

the currently degraded reach and

beyond," the report stated.

Allison said Freeport already is doing more than its part to resolve

the problem, even though the company doesn't accept blame for the algae. "Had they bothered to ask us . . . they'd find that many of those things already have been done," he said. Freeport's facilities contribute

only a small part of the nutrients that feed algae, Allison said. He said lawns, septic tanks and ranching throughout the watershed are the real culprits. "The reality remains that (most) construction in that water-

shed was built with no water-quality controls whatsoever," he said. "The answer is that all of those developments, every single one, need

to be retrofitted."