SECURING A SAFE FUTURE FOR BARTON SPRINGS

A Position Paper

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THE SIX MAJOR POINTS

In order to protect and restore the quality and quantity of water in the Barton Springs Edwards Aquifer -- the groundwater supply in Texas most vulnerable to pollution -- and the streams contributing to the aquifer, the signatories to this document believe the following steps must be taken:

1. Development must be directed away from the Barton Springs Edwards Aquifer recharge zone and contributing areas.

   * Development should be directed towards less environmentally sensitive preferred growth areas in central and east Austin.

   * Based on what we now know about the extreme vulnerability of the aquifer and contributing streams to construction and urban runoff pollution, and the immeasurable economic benefits of a clean Barton Springs ecosystem, responsible corporate citizens must locate new facilities in less environmentally sensitive areas of our community.

2. Should any new development occur on the recharge zone and contributing areas, such development must be strictly controlled to prevent degradation of water quality.

   * Impervious cover should be **minimized** across the recharge zone and contributing areas. A positive and **necessary first step** is to adopt the revised Barton Springs "no degradation" watershed ordinance with amendments to strengthen its effectiveness. Exemptions, extensions of expiration dates for previously approved or "grandfathered" projects, and other weakening amendments should be rejected as contrary to the City Council's unanimous commitment to no degradation of Barton Springs.

   * Until **proven** effective in preventing water pollution, structural controls should be considered only marginally reliable in preventing degradation, and should be used primarily as a means of retrofitting existing developments and supplementing impervious cover and land-use restrictions.

   * Inside the city limits, Austin should use its land-use controls to prohibit or restrict inappropriate high risk land-uses (e.g. underground storage tanks). The LCRA and the Texas Water Commission should use their jurisdiction to control and minimize new development and clean up existing development.

3. The development of new or expanded infrastructure (roads, sewers, utility lines, etc.) must be restricted across the recharge zone and contributing areas, with the understanding that certain carefully managed construction may be necessary to correct existing problems, as, for example, at the Travis Country package plant.

4. Educational efforts directed at those already living or doing business on the recharge zone and contributing areas should be undertaken by the City of Austin, the Lower Colorado River Authority, the Barton Springs/Edwards Aquifer Conservation District, and others in an effort to teach people how to "**live lightly on the aquifer.**"

5. Remediation of water pollution problems caused by existing development on the recharge zone and contributing areas should be coordinated by the City of Austin, the LCRA, the BS/EACD, and others in order, first, to **identify** where the problems for water quality exist, and then, to **correct** these problems using appropriate retrofitting and other techniques.

6. Any acquisition of Barton Springs watershed for watershed protection should neither substitute for nor undermine the legitimate exercise of local, state and federal police powers to protect public rights in the water and wildlife of the Barton Springs ecosystem.

MAKING THE CASE FOR BARTON SPRINGS

Securing a safe future for Barton Springs is essential to conserving the cultural and natural heritage, public health, quality of life and continued economic prosperity of Austin. Barton Springs provided the essential elements of survival for Native Americans over 9,000 years ago. Early Spanish missionaries located at Barton Springs. The capital was moved to Austin in part because Barton Springs provided an abundant source of clean water and energy for milling. Since the Springs were donated to the City of Austin in the early 1900's, the Springs have been a meeting place for people from all walks of life, providing recreation, rejuvenation, and relief from the summer heat. Barton Springs and the scenic Hill Country watersheds contributing to the Springs provide the high quality environment that makes Austin attractive to tourists, businesses, and residents alike.

The Barton Springs Edwards Aquifer is a critical source of high-quality drinking water, an increasingly scarce resource. The southern portion of the Barton Springs Edwards Aquifer is a U.S. EPA designated "sole-source aquifer," providing the sole source of drinking water for approximately 30,000 residents of southern Travis and northern Hays counties. Barton Springs outflows are a major source of drinking water for central and east Austin via the Green Water Treatment Plant on Town Lake.

A clean free-flowing Barton Springs is critical to a clean, healthy Town Lake and Colorado River. During the critical low-flow period of mid-October to mid-March, when the LCRA restricts releases from the Highland Lakes, Barton Springs provides up to 80 percent of the flow to Town Lake and a majority of the intake of drinking water at the Green Water Treatment Plant.[1]

Unfortunately, the Barton Springs Edwards Aquifer is extremely vulnerable to pollution. The Texas Water Commission has determined that the Barton Springs Edwards Aquifer is the major groundwater supply in Texas most vulnerable to pollution.[2] Hydrologists and geologists familiar with the aquifer generally agree that the best and perhaps only way to protect water quality in the Springs, the aquifer, and the contributing streams is to minimize human development on the recharge and contributing zones.

Structural pollution control measures have thus far proven ineffective in protecting porous limestone aquifers from urban pollution.[3] George Veni, a Ph.D. candidate and specialist in karstic limestone aquifers, has observed that every limestone aquifer that has suffered significant development on its recharge and contributing zone has been polluted.[4] The U.S. EPA and others have observed that, once polluted, groundwater supplies often cannot be restored to pre-existing conditions.[5] Our only choice is to **prevent** pollution by minimizing opportunities for pollutants to enter the Barton Springs system.

Having flowed clean and pure for tens of thousands of years, Barton Springs, the Barton Springs Edwards Aquifer, and the streams contributing to the aquifer, have been polluted by urban development occurring upstream within the last twenty years. Regardless of the specific sources of pollution (highway construction, runoff from parking lots, golf course irrigation, leaking sewer lines), Barton Springs is being destroyed by urban development. Serious pollution problems in Barton Creek and Barton Springs from highway construction, Barton Square Mall construction, and golf course irrigation have been documented by the U.S. Geological Survey, the City of Austin, and others. [6] As explained below, the safest and probably only way to protect Barton Springs is to steer development away from the watersheds contributing to Barton Springs.[7] At the same time, existing urban pollution sources should be identified and remedied to the greatest extent possible.

Councilmember Max Nofziger has observed that in the 1990's we will either save or lose Barton Springs. As stewards of Barton Springs for future generations, we have a moral and legal duty to pass this natural treasure on to our children. The hour is late, and we must act now. This paper provides the justification for and the central elements of a plan that must be implemented now to secure a safe future for Barton Springs. Additional position papers on specific issues will be forthcoming.

FUNDAMENTAL FACTS

1. The Barton Springs Edwards Aquifer is the groundwater supply in Texas most vulnerable to pollution as determined by the Texas Water Commission.[8] This vulnerability to pollution is due in large part to the following physical characteristics of the aquifer and contributing watersheds:

> a. The aquifer is a limestone "karst" aquifer, where water enters through caves, faults, fractures, and sinkholes (mostly in creek bottoms) and flows through open channels before exiting at Barton Springs. Unlike sandstone aquifers, where water filters slowly through grains of sand, water in the Edwards moves quickly and without any natural filtration.
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> b. Although Barton Springs is the fourth largest spring in Texas, the aquifer is extremely small. As a result, there is very little capacity for sheer water volume to dilute pollutants that enter the aquifer.
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> c. The contributing watersheds along the Balcones Escarpment are characterized by steep slopes and thin to non-existent soils. Thus, pollution generated on the surface, including sediment exposed by construction activities, flows rapidly into adjacent streams, where it then plunges into the aquifer through faults, caves and sinkholes -- with little absorption or assimilation by plants and soils occurring along the way.

2. Studies by the City of Austin and the U.S. Geological Survey demonstrate that pollutant levels increase by orders of magnitude with increasing intensities of urban development.[9] While it is common sense that more people, more automobiles, and more landscaping chemicals translate directly into higher pollutant loadings, these studies clearly show the relationship between higher intensities of urban development and greater pollution.

3. Many experts agree that the best and perhaps only way to protect the Barton Springs Edwards Aquifer is to build elsewhere. Dr. Charles Woodruff, a consulting geologist that regularly works on behalf of developers has recommended:

> "impervious cover should be minimized across the recharge zone and its contributing area."[10]

Mr. Veni has testified that pollution control measures have proven to be ineffective, and that the Edwards should be protected by building downstream of the recharge zone.[11] Studies by the City of Austin and others have demonstrated that structural controls often do not work, especially if not maintained properly. Monitoring and maintaining the effectiveness of structural controls has proven difficult.[12]

GENERAL POSITION

Given the facts that establish the vulnerability of the Barton Springs Edwards Aquifer and the difficulty of protecting the aquifer from urban pollution, the ideal course of action is to prohibit any additional development on the recharge and contributing zones until the existing problems are resolved and effective pollution control measures are developed and proven.

Assuming the City of Austin and the State of Texas will not and cannot prohibit all new development, local and state officials, the citizens of Texas, and the business community must act pursuant to the six major points outlined above in order to maximize the likelihood that Barton Springs can be protected from further degradation.

Most immediately, the City of Austin should adopt the Barton Springs "no degradation" watershed ordinance on a permanent basis, with strengthening amendments to control construction runoff, enhance enforcement, and limit threatening development. Any effort to weaken the ordinance should be rejected as clearly contrary both to the City's commitment to "zero degradation" of Barton Springs and the overwhelming mandate of the citizens of Austin.

Once adopted, no variances or other exemptions should be granted, except for perhaps minimum variances that have no effect in weakening water quality protection. Once the "no variance" policy is established, City staff, commissions, and the Council will save considerable time and resources previously wasted in difficult battles with development interests.

The City of Austin should also begin directing businesses interested in locating in Austin into the preferred development areas in central and east Austin. The City's economic development office should make clear to companies interested in locating in Austin that the Barton Springs watersheds should not be considered for any kind of significant development. City economic development efforts should focus on attracting clean industry, creating jobs where jobs are most needed, and locating new facilities in those areas where the geography can better assimilate urban runoff.

To remedy damage that has already been done, the City should begin working with the Barton Springs/Edwards Aquifer Conservation District, the LCRA, and non-profit organizations to identify the worst problems and to remedy those problems. The City should explore (1) regulating or prohibiting the uses of certain chemicals in the Barton Springs watersheds, (2) educating residents on how to limit their impact on the aquifer, and (3) establishing a program for retrofitting developed areas and roadways with pollution control measures.

While land acquisition is one tool for private and public conservation of the Barton Springs watershed, it cannot substitute for the proper exercise of local and state police powers. Conversely, governmental entities must not abuse those police powers. Any consideration of public acquisition must be kept separate from local and state rulemaking. The City or other governmental entities should not target any specific tracts of Barton Creek for acquisition at this time unless the owner is willing to sell at a price which reflects the limited development potential of sensitive watershed and endangered species habitats. While acquisition should be considered where important watershed lands are currently available at low cost, consistent application and enforcement of a strong Barton Springs Non-Degradation Ordinance should be the top priority.

RESPONSE TO OPPOSING CLAIMS

Certain development interests have argued that the City of Austin should apply uniform nonpoint source water quality controls across the City's jurisdiction, and that those controls should be structural controls as contemplated in the urbanized watersheds. Such an approach ignores both the geographic differences found in Austin and the need for different approaches in the largely developed central city and the urbanizing fringes, and would be extremely inefficient in controlling NPS pollution. The EPA has recognized that preventing and controlling pollution through land use controls in developing areas is much more feasible and cost-effective than retrofitting highly developed areas.[13] The extremely vulnerable hydrology of the largely undeveloped Barton Springs watersheds should not be addressed the same as areas already developed and located in preferred development areas such as the central city.

Certain developers have argued that their property rights are protected by the Constitution, that City efforts to protect water quality are "confiscatory," and that the City must allow their developments to proceed or else buy their land.

The law does not support this position. Water, like wildlife, is a public resource. We, the people, "own" the water. The City of Austin and other governmental entities have a right and **duty** to exercise its police powers to protect this public resource and to protect public health as well.[14] **State and federal courts have consistently upheld the superior right of governments to exercise their legitimate police powers to regulate land uses to protect public health, public welfare, and public resources.**[15] The elected leaders of the City of Austin and other government officials have a duty to current and future citizens to protect the public rights to clean public waters. This is especially true in Barton Creek and Barton Springs, where there is a long tradition of public-use for drinking water, fishing, swimming and other recreation. **No one has a constitutional right to pollute.**[16] Given the vulnerability of the Barton Springs watersheds to pollution from development, development must be restricted to protect the public's right to a clean, healthy Barton Springs, Edwards Aquifer, and contributing streams.

Some have claimed that limiting development in the watershed in order to protect Barton Springs will cost taxpayers too much. In reality, restricting development that threatens Barton Springs will **save** taxpayer dollars. Construction on the Mopac South freeway has contributed pollution to Barton Springs, was built in violation of the National Environmental Policy Act, and has cost local, state, and federal taxpayers tens of millions of dollars. Construction of the proposed Outer Loop would add hundreds of millions more.[17] Construction of the Southwest Parkway may eventually cost taxpayers more than $100 million.[18] Construction of sewer lines and other infrastructure have burdened Austin with additional millions of dollars of debt. And highly speculative developments in the Barton Springs watershed, including The Uplands, Circle C, and the Estates of Barton Creek, which were funded by taxpayer-insured lending institutions, have already cost federal taxpayers in excess of $100 million.[19] Strict development controls in the Barton Springs watersheds would make such speculative ventures unlikely in the future; ending the web of public subsidies for development on the recharge zone and contributing areas would make much of the development less feasible.

Certain developers have also argued in favor of "performance standards" over the standards proposed by City staff, which combine design requirements with a performance requirement such that no increase in pollutant loadings occur. To date, these developers have not specifically defined the standards they want, nor have they shown how their desired standards could be enforced.

The preferred approach, adopted by City staff, is to focus on the source of pollution, not just the receiving waters, and demand that developers demonstrate that runoff pollution after development is no greater than pollution runoff for pre-development conditions. This keeps the focus where it should be: on the **source** of pollution. Limiting impervious cover has proven effective in limiting pollutant runoff and minimizes the risks of failure. Technological controls currently available and preferred by some development interests cannot remove some pollutants, and have a poor track record for sustaining their effectiveness through time.

ENDNOTES

1. Summary Report: Review of Barton Springs Water Quality Issues, City of Austin Environmental & Conservation Services Department, March 18, 1991.

2. Groundwater Quality of Texas: An Overview of Natural and Man-Affected Conditions, Texas Water Commission, March 1989 at p. 94.

3. See e.g., "Definitions of Technology-based and Performance-based Water Quality Controls," March 7, 1991, City of Austin Environmental and Conservation Services Department ("the use of structural controls to prevent degradation can only be considered to be marginally reliable").

4. Sworn testimony of George Veni before U.S. District Court Judge Walter Smith, Feb. 8, 1990 in Save Barton Creek Assn. et al v. Federal Highway Administration et al, transcript vol. 2.

5. See, e.g. "Throwing Good Money At Bad Water Yields Scant Improvement," Wall Street Journal, p. 1, May 15, 1991.

6. See, e.g. Hydrology and Water Quality of the Edwards Aquifer Associated with Barton Springs in the Austin Area, Texas, U.S.G.S. in cooperation with the City of Austin, 1986, at 85-90; Memoranda dated May 1 and May 16, 1991 of David Johns and Mike Lyday, City of Austin ECSD; 1990 Update to the Nonpoint Source Water Pollution Assessment Report for the State of Texas, Texas Water Commission, March 1991 at p. 14.

7. See testimony of George Veni, cited above.

8. See note 1, above.

9. Veenhuis and Slade, Relation Between Urbanization and Water Quality of Streams in the Austin Area, Texas, U.S.G.S. in cooperation with the City of Austin, 1990.

10. C.M. Woodruff, Jr., "Water Budget Analysis for the Area Contributing Recharge to the Edwards Aquifer, Barton Springs Segment," printed in Guidebook 6: Hydrogeology of the Edwards Aquifer--Barton Springs Segment, Travis and Hays County, Austin Geological Society, at p. 41.

11. See note 4 above.

12. See e.g., Parrish, John H., and Stecher, L. Steven, "Nonpoint Source Pollution Control in the City of Austin," City of Austin Environmental Services and Conservation Department, February 1991, at p. 6

13. U.S. G.A.O., Greater EPA Leadership Needed to Reduce Nonpoint Source Pollution, Oct. 1990.

14. See e.g. Wilkinson, Charles F., "The Headwaters of the Public Trust: Some Thoughts on the Source and Scope of the Traditional Doctrine" 19 Env. Law J. 425, 1989. The state's police power and the public trust doctrine provided the foundation for the federal Clean Water Act, which has as its purpose to make all streams safe for swimming and fishing. See e.g., City of Austin v. Teague, 570 S.W.2d 389 (Tx. Sup. Ct. 1978) regarding city police powers for regulating land uses.

15. See City of Austin v. Teague, cited in note 14 above.

16. See Lawrence, Nathaniel S., "Regulatory Takings: Beyond the Balancing Test," 20 Urban Lawyer 389, 1988.

17. See records from Save Barton Creek Assn. et al v. Federal Highway Administration.

18. Various articles in the Austin Chronicle.

19. See e.g. "Circle C improvements get financing," Austin American-Statesman, Feb.14, 1991, B1 noting that Circle C is seeking a write down of debt owed Gibraltar Savings from in excess of $100 million to $20 million. House Banking Committee investigations of Lincoln Savings & Loan noted a taxpayer loss in excess of $70 million associated with The Uplands project. Hearings of Oct. and Nov. 1989.

APPENDIX:

REGARDING BARTON CREEK PROPERTIES, INC.'S PROPOSED P.U.D.

This appendix is included not for the purpose of singling out any one project, but rather in recognition of the considerable public attention the proposed Barton Creek P.U.D. has attracted, and the large scale of the proposal. The response articulated in this appendix is based on a history of meetings and correspondence between Barton Creek Properties, Inc. ("BCP") representatives and a number of environmental group representatives.

BCP representatives have argued that environmentalists do not want to let them prove they can develop **and** protect Barton Creek. To the contrary, environmentalists have invited BCP to present their plans with enough specificity that we can analyze and respond to their proposals. To date, the PUD developers have refused to provide basic information necessary to evaluate their proposal. Similarly, while BCP representatives have spoken against the City's "no degradation ordinance," they have failed to provide a sound alternative or sufficient documentation for evaluating their criticism of the ordinance.

The facts are:

1. Environmentalists have for over a year requested information on the use of pesticides and fertilizers at the Barton Creek Country Club. Despite public promises that their "doors were open," the PUD representatives have failed to provide sufficient information to determine the kinds, loadings, and ultimate fate of their landscaping chemicals.

2. Despite Mr. Moffett's public statements that they have presented a "technical report" demonstrating they can protect the Creek, they have not done so. Plans for "wet ponds" and "phasing" have never been presented with the detail and supporting documentation necessary to understand what exactly is proposed and how it will protect Barton Creek. Environmentalists have repeatedly asked for details on the wet ponds and phasing proposals, but have received very little information. At the same time, Raymond Slade, a Barton Springs expert employed by the U.S. Geological Survey, has stated his belief that wet ponds will not work because it is impossible to locate the wet ponds so as to catch polluted runoff. Similarly, BCP representatives have promised that if any pollution occurred along the way, construction would be halted, but there has been as yet no way to hold them to this promise because of basic disagreements over what constitutes pollution, how much construction would be halted, and for how long.

3. While the BCP developers have insisted that they have proposed plans which "exceed" city ordinances and provide for "no degradation," every development proposal brought to the City has requested variances from the Comprehensive Watershed Ordinance

(CWO) and proposed higher levels of development than is allowed by the CWO. None of the proposals have presented any scientific information that would show that their claims of protecting the Creek can be met.

4. BCP representatives have insisted that their golf course and the Lost Creek golf course, both of which are operated by Club Corp., are not polluting Barton Creek, even though staff of the U.S.G.S., the Texas Water Commission, and the City of Austin have all identified the golf courses on Barton Creek as sources of existing pollution. Until BCP representatives recognize the existing problem, and take measures to remedy the problems, environmentalists will continue to find it difficult to even consider additional development.

In short, the environmental community stands ready to review and analyze any proposal by BCP to determine whether it will indeed cause no increase in pollutant loadings to Barton Creek and Barton Springs. However, until we have been provided the information requested, until existing pollution problems have been acknowledged and addressed, and until the BCP developers have produced detailed plans and supporting documentation demonstrating "no degradation," we must insist on strict compliance with the Barton Springs "no degradation" ordinance.

As an important related matter, the environmental community expects that the BCP developers will protect all suitable Golden-cheeked Warbler habitat unless and until a satisfactory regional conservation plan is adopted and implemented.