

The Rescue of McConnell Springs Historic Site: A Partnership Between Local Government and the Citizens of Lexington, Kentucky

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Abstract

McConnell Springs comprises the initial area of discharge for a significant karst system situated in the heart of the urban-industrial district of Lexington, Kentucky. This feature, consisting of a series of sinks and rises, is fed by underground drainage from a large portion of south and southwest Lexington. It ultimately discharges from a small cave three-quarters of a mile west of the springs. The major feature of this grouping of karst landforms is a large blue hole.

The location is historically significant for several reasons. Circumstantial evidence suggests that the springs may be the site of a 1775 explorers' camp where the name for the future community of Lexington was proposed. During the War of 1812 the flow from the springs powered the largest gunpowder mill in Kentucky and later supplied water to a bourbon whiskey distillery. In addition, during the late 19th century, the springs were a major focus in the controversy to provide the city with a public waterworks.

Almost precisely a century later, the site again became embroiled in public controversy. The site of the springs was farmland during much of the 20th century. After World War II, Lexington's accelerated urban growth spread to surround it, creating a hidden oasis of water and greenery. One consequence of the adjacent industrial development was increased dumping of trash and fill dirt at the edges of the depression that contained the springs. This situation reached crisis magnitude following the 1985 purchase of the property by a developer who intended to turn the entire parcel into an industrial park. In violation of local ordinances, the developer attempted to eliminate the springs by dumping and grading. Enforcement of the Lexington ordinances resulted in the bankruptcy of the developer and preserved the springs site from further degradation. Attendant publicity stimulated citizen interest in the springs. Through private donations, a 20-acre tract surrounding the springs was purchased and donated to the city as a park. Today, many Lexington citizens are actively involved in restoring the springs tract.

Introduction

Historically, urban development has often resulted in the contamination or disruption of ground water systems and the physical obliteration of significant karst features as well as caves and cave ecosystems. Prior to the general increase in public awareness of environmental issues that evolved from the late 1960s, this situation was of

little concern to anyone other than a handful of cave explorers and karst scientists. Not until the late 1980s did urban planners in karst regions begin to acknowledge the significance of the relationship between karst systems and development. In addition, citizen concern over such issues as ground water contamination, the decline of city centers, resource conservation, endangered species and ecological integrity, historic preservation,

and environmental education, have led in recent years to the preservation of several karst systems or features located in urban regions. Such was the case in Lexington, Kentucky, where a karst system, whose most visible manifestation was known as McConnell Springs, was spared from a developer's bulldozers to become a cherished city historic site and natural preserve.

This achievement, accomplished at literally the eleventh hour, was not brought about easily or quickly. Nearly two decades passed between the first proposal, in 1975, for the city to acquire the springs tract, and the realization of that goal in 1994. During that period the springs were increasingly threatened by encroaching industrial development. Given the location of the site, scarcely a mile from the city center, the wonder is that the land was not developed long before. As it is, the 21.5 acres of the McConnell Springs site comprise a startling oasis of water and greenery in the midst of urban Lexington, surrounded on all sides by concrete, steel, brick, and asphalt.

What motivated the citizens of Lexington to stir themselves to preserve these particular springs, when, in the past, so many similar features had been destroyed in Lexington and communities similarly situated on karst terranes, to create landscapes conformable to the designs of urban and suburban developers? What was so noteworthy about these springs that they were rescued where others were condemned? The purposes of this paper are to discover the characteristics of McConnell Springs that aided in their preservation, to describe the process by which these features were brought under protective management, and to examine the management issues that arose subsequent to acquisition. We hope that the lessons in this situation might be applied to preservation of significant karst features elsewhere.

Description of the Springs

Less than a mile from the commercial center of Lexington, Kentucky, is a little oasis of water and vegetation that, until recently, was virtually unknown to most of the residents of the city. In this depression, enclosing about 21.5 acres, water boils up from the ground to form a deep pool 20 feet across, cold as the earth's bones, blue-green in color. Having escaped from subterranean confinement, the flowing water seems uncertain, even shy, for it sinks quietly back into the ground within a hundred feet of its emergence; only to bubble vigorously up again through the rocks at the base of a small bluff an equal distance away.

Liberated once more, it flows along placidly for about three hundred feet in a shallow stream edged with watercress, overhung by trees, until, suddenly agitated, it gathers itself to swiftly

plunge again into safety and darkness. Here the valley ends abruptly. For yet 1,800 feet more this stream shelters in the bedrock security of its underground conduit, finally issuing into the sunlight from the low mouth of Prestons Spring Cave, remaining at last on the surface of the earth to mingle with other waters on the way to the sea.

The springs themselves are but the most visible point of a major ground water system that drains much of south Lexington. The precise boundaries of this basin are not known with certainty, but an approximation has been made by hydrogeologists, derived from available data. Using the concept of normalized base flow (Quinlan and Ray, 1995), the recharge area for McConnell Springs has been calculated at 2.6 square miles, derived from a winter base flow measurement of 1.46 cubic feet per second (Ray, 1995). By comparison, the recharge area estimated from local topography and dye trace data (Spangler, 1983) is 3.8 square miles. The area enclosed within the hypothetical boundaries encompasses much of urban Lexington as well as portions of the industrial area and some of the city suburbs (Figure 1). The old city landfill is situated just north of the springs but does not contribute drainage to the McConnell Springs basin.

Although there is no heavy industry within the projected basin boundaries, the quality of the waters of McConnell Springs are at risk from urban non-point runoff, leaking underground storage tanks, lawn and garden chemicals, and the waste

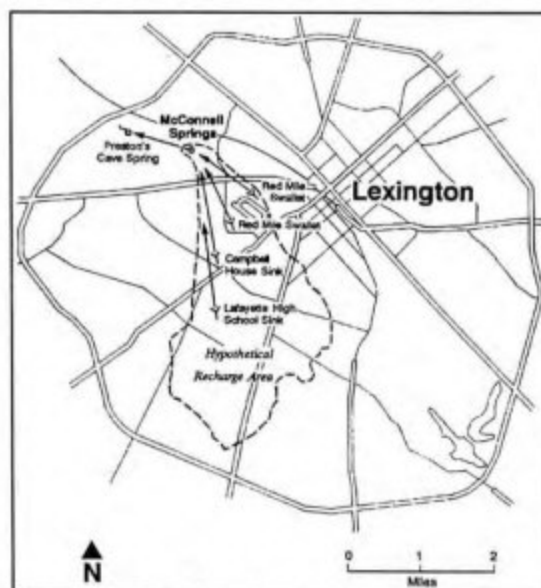


Figure 1. The hypothesized recharge area of McConnell Springs, estimated at 9.8 km² by Spangler (1983). The recharge area encompasses a substantial portion of the urban and suburban landscape of western and southwestern Lexington.

products of existing light industries. Despite this risk, no significant contamination has been detected to date. The water quality of the springs is currently being monitored on a quarterly basis as a sampling station in the Kentucky Division of Water's ground water monitoring network.

Historical Significance

The Naming of Lexington: McConnell Springs achieves historical significance due to its close association with the events of three important periods in the development of the city and the region: the early exploration and settlement of Kentucky (late 18th century), the establishment of interstate commerce and industry in the Bluegrass (early 19th century), and the beginnings of modern infrastructure development in Lexington (late 19th century).

When the first explorers crossed into the lands now known as Kentucky, they were impressed by the numerous springs that were present throughout the karstlands of the region. Many of the more prominent springs became landmarks in the wilderness, and served as campsites and rendezvous. Close on the heels of the explorers came men with compass and chain who were determined to claim parcels of this rich new land and to establish stations and towns. The presence of a good water supply in the form of a flowing spring always enhanced the appeal of a tract and such were the first to be claimed and settled. A whole new language was evolved to describe karst features in deeds and depositions that referred to "blue holes," "sinking springs," and "cave springs." Stockades were built beside the best of the springs, and often grew into towns (O'Dell, 1993a).

In late spring 1775 a group of men were camped at a sinking spring, on lands claimed by William McConnell, near the middle fork of Elkhorn Creek (later Town Branch). The camp was used as a base from which to explore the surrounding countryside and choose the land they intended to claim. News of the April battle of Lexington, Massachusetts, came to the camp from Fort Boonesborough. Some thought had been given to the desirability of settling a town in the vicinity of the spring, so that when this news arrived, "Lexington" was chosen to name the future community in commemoration of the event. It would, however, be four more years before the establishment of Lexington was actually undertaken.

From our vantage point two centuries later, there is some confusion as to exactly which spring among the many along Town Branch was the site of the camp in 1775 where this christening occurred. Many accounts were written of the occasion, not all of which were in agreement as to details. Recent research, particularly that by local historian Carolyn M. Wooley (Wooley, 1975), indi-

cates the location now known as McConnell Springs. Not all scholars of Kentucky history agree, but it is this site that has been officially so designated.

Gunpowder: William McConnell, for whom the springs are named, built a crude cabin near the springs in 1776 as part of his improvements to secure legal title to the land. Apparently he did not reside there for very long, if at all. McConnell died in 1805, a respected member of the Lexington community, and his property was divided among his heirs. In February and March 1810 the McConnell heirs sold a total of about 184 acres, including the springs, for \$4,125 to Samuel and George Trotter (O'Malley, 1996). The Trotter brothers, among the wealthiest residents of Lexington, were merchants and entrepreneurs willing to risk substantial capital on new ventures. With a second war with Great Britain appearing inevitable, the Trotters had decided to build a gunpowder factory and purchased the springs property specifically for this purpose (O'Dell, 1990).

The manufacture of gunpowder was not a new industry in the Bluegrass. The first gunpowder factory in the state had been established by Richard Foley in 1793 near Lexington, and many other powder mills were built in subsequent years. The proliferation of gunpowder mills in Kentucky was made possible by the abundance of saltpeter (calcium or potassium nitrate) found in the many rock shelters and caves of the state. Lexington, as commercial center, became a focus for trade in saltpeter, the main ingredient used to make gunpowder, which was exported in quantity to the east as well as used in local manufacture. By 1810 there were at least 63 gunpowder factories in Kentucky. As war approached, many more people sought to take advantage of the steadily-increasing prices for gunpowder and saltpeter by building powder mills and mining saltpeter (O'Dell, 1989, 1996).

Samuel and George Trotter were the largest wholesale and retail merchants in Kentucky during that era and it seemed that nearly everything they ventured prospered greatly. The "Trotter Powder Works" became the largest powder mill in Kentucky and supplied gunpowder for many important engagements of the War of 1812. The Trotter mills, through Samuel's political connections (and on the superior merit of the powder) landed two large military contracts for gunpowder totaling 140,000 pounds. Trotter powder was used in the battles of the Northwest Territory, including the famous battle of Thames River (Canada) against the British and the Indian forces under Tecumseh,¹ and was also sent south to Andrew

1. Samuel Trotter's younger brother, George, was one of the commanding generals in the battle of Thames River.

Jackson and used in the celebrated Battle of New Orleans. At a time when the United States was desperate for military supplies, gunpowder manufactured at McConnell Springs filled a vital need (O'Dell, 1990).

A powder mill was not simply a large building in which gunpowder was manufactured. Because of the ever-present explosion hazard, each step involved in making gunpowder was usually carried out in a separate building spaced away from the others so that a conflagration in one would not result in the loss of all. At the Trotter Powder Works in 1820, in addition to buildings used in other process steps, there were five separate structures containing stamp mills. These stamp mills each contained a series of mortars and pestles, connected by a camshaft that ran the length of the building, used to pulverize and incorporate the raw ingredients. Trotter reported that these were:

- Two powder mills by water power carrying 40 heavy pestles or pounders
- Two by horse power carrying each 40 pestles
- One by oxen power carrying 16 light pestles used for beating up powder dust (1820 Census).

The two mills operated "by water power" evidently were turned by the flow from McConnell Springs. There is what appears to be the remnants of an old earth and stone dam on the stream, but archaeological investigations conducted in 1995 were not able to determine the precise layout of the buildings (O'Malley, personal communication, 1996). Although much of the stone fencing remains that dates from early in the 19th century, subsequent land uses and the encroachment of fill dirt on the property hindered the investigation.

After the end of the War of 1812, demand for domestic gunpowder declined dramatically and most western powder mills ceased operation. The Trotter Powder Works, however, remained a viable operation for many years. Not until 1833, when Samuel Trotter died during the severe cholera epidemic that then gripped Kentucky, did the mills cease operation. Trotter's will left the powder mill operation to his sons, but they declined to continue the business (O'Dell, 1990; Fayette Will Book L:115). The springs flowed placidly along, as they had for untold millennia, for nearly half a century before they again achieved a significance in the history of the community.

Water Supply: During the latter 19th century, the issue of water supply became of paramount importance to the citizens of Lexington. Throughout the early settlement period, the community was provided with water carried by hand from a series of minor springs along the banks of Town Branch creek. As the frontier town grew into a city,

springs were no longer sufficient and many wells were dug. In time, these also proved inadequate and many individual and public cisterns were constructed. With continued community growth, cisterns, too, proved insufficient as well as unreliable. The situation reached crisis proportions in the 1880s when fire insurance rates took a drastic upward hike due to the inability of public or private cisterns to control fires in the city.

Up to this point, water supply had been largely an individual matter; there had been no such thing in Lexington as a public water system piped to homes and business. Certain citizens with the foresight to envision a future Lexington with a greatly-expanded population and industry urged the construction of a municipal water system. The issue became controversial, dividing the news media and the civic authorities into opposed camps. It took several years to resolve the conflict in favor of those who supported a public system, during which various sources were proposed as a basis for a city water supply. One of the sources that was frequently urged was McConnell Springs, which at the time was known as Wilson Springs for the current property owner.

From our modern viewpoint it seems rather ludicrous that a spring of the size of McConnell Springs, with a winter base flow less than two cubic feet per second, could even be considered as the primary water source for an entire city. One must take into account, however, that at the time there was little general comprehension of the origins and flow of groundwater. Many persons believed that the numerous springs of Lexington all tapped a huge subterranean lake, of which McConnell Springs was simply a convenient and inexhaustible outlet. Nevertheless, the opposing groups surveyed the blue hole spring for its potential, and came to contrary conclusions. One newspaper reported that the spring was bottomless, cold and clear, and would be "delightful" to the citizens of Lexington in their homes; the rival newspaper sent its own team out who concluded that the spring was a little rill "scarcely sufficient to wash the filth from the gutters of Broadway." The spring was never put to the test, for wiser heads ultimately decided to construct a large reservoir and, later, to pump directly from the Kentucky River (Dugan, 1953; O'Dell, 1993b).

The springs again faded into obscurity, forgotten save by those few that used the water for various purposes. A nearby distillery and a slaughterhouse ran lines to the spring and withdrew sufficient water for their respective purposes (O'Dell, 1987). During most of the twentieth century, the property around the springs was a dairy farm and well-maintained. Then, in the 1960s, the farm operation ceased and the farmland began to revert back into a wilderness of brush and trees.

There the tale of the springs remained, until Lexington suddenly remembered its heritage in the face of threatened destruction of the springs.

Saving the Springs

In 1974 James R. Rebmann, an experienced cave explorer, had recently been employed as a planner by the merged government of Lexington and Fayette County. He first learned of McConnell Springs in that year when documentation came to his desk proposing the inclusion of the springs site in the National Register of Historic Places. He made a visit to the site and immediately recognized the springs tract as having great significance not only for its historic associations but also for its aesthetic appeal and potential as an outdoor educational laboratory. At this time the site, owned by Lexington Concrete Products, Inc., was about 80 acres. Although Jim vigorously promoted the acquisition of the springs for a city park, and this concept was endorsed by the local Historic Commission, it was not then acted upon. The idea lay dormant for another decade.

Lexington, surrounded by thoroughbred horse farms, has long possessed a national reputation as a desirable place to live. In consequence, the city has remained dynamic, sustaining growth and a strong economy in an era when many similar communities have been plagued with a dwindling tax base. Ironically, those very aspects that have symbolized the attractiveness of Lexington, the picturesque Bluegrass countryside with tree-lined lanes and high-spirited horses capering in manicured paddocks, have been increasingly threatened by suburban development. Although city planning in Lexington began in the 1930s, following the merger of city and county administration in 1974, the new Lexington-Fayette Urban County Government was better able to manage development. While admittedly political and economic pressures have often thwarted sensible development, county-wide planning has in many instances been able to control and channel land use.

One important tool available to the Urban County Government for this control is the so-called Lexington Sinkhole Ordinance, adopted October 23, 1985. Lexington is one of a handful of communities in the nation that possesses the legal means to protect karst landscapes from uncontrolled development. Previously, land developers in Lexington generally ignored the presence of karst landforms and rearranged the landscape to conform to artificial designs. Sinkholes were eradicated *en masse*; long-established drainage patterns interrupted, often later causing flooding problems; and the foundations of structures erected over buried sinkholes often cracked and twisted due to uneven settlement. There was no

legal recourse to the consequences of ill-planned development on unsuitable karst terranes (Watkins and O'Dell, 1994; Crawford, 1988; O'Dell, 1988; Quinlan, 1986).

As a result of a long-standing interest in cave conservation, coupled with professional training in urban planning, Jim Rebmann had a strong awareness of the hazards of uncontrolled development on karst terranes. Jim was one of the prime architects in creating and bringing about the enactment of the Sinkhole Ordinance. This ordinance requires developers to take cognizance of the karst aspects of a proposed development before approval will be given by the urban county government. Sinkholes and adjacent land may be classified to exclude any surface development such as filling of low places or erecting structures upon sinkholes (Watkins and O'Dell, 1994; O'Dell, 1988; Rebmann and Dinger, 1985; Lexington-Fayette Urban County Government, 1985). The passage of the Sinkhole Ordinance later proved to be one of the most important factors in the preservation of McConnell Springs.

At about the same time as the passage of the Sinkhole Ordinance, the Lexington Concrete Products company went out of business and the facility was left vacant. Subsequently, illegal dumping in the area around the springs increased. The property was purchased for \$3.1 million in November 1985 by a company that intended to develop the 66 acres surrounding the springs as the Cahill Industrial Park. The five acres containing the springs were offered to the city as a donation contingent upon the city's purchase of an additional 15 acres at a price between \$50,000 to \$75,000 per acre.²

The asking price for the adjoining 15 acres was far too high in the opinion of many persons. Furthermore, Rebmann felt that there was a strong possibility that, pending hydrogeological studies to the contrary, this additional tract was an integral part of the sinkhole system. If that was true, then by the provisions of the Sinkhole Ordinance those 15 acres could not be developed as part of the industrial park and would therefore be worth considerably less. As it stood, though, a year later, the city government under Lexington Mayor Scotty Baesler was "not very interested" in purchasing the land.³

By 1987 numerous citizen groups and governmental agencies had expressed their support for the proposal, including local chapters of both the Sierra Club and the Audubon Society, the Bluegrass Land and Nature Trust, Kentucky Historic Commission, and the Kentucky Nature Preserves

2. A later appraisal indicated about \$12,000 per acre.

3. Lexington *Herald-Leader* October 1, 1987

Commission. The Lexington *Herald-Leader* gave its editorial benediction to the concept. Even with the support of these groups, the city administration balked at the proposed acquisition. For three more years the matter rested in an impasse, until finally, early in 1991, the pot came to a boil.

Just after Christmas 1990 city officials issued a stop-work order against a local contractor who had been dumping large quantities of dirt and rock so close to the springs that they would soon have been obliterated. The contractor stated that he had been requested by the property owner to dump the fill at that location. Eight to ten acres of trees had also been graded away from the locale. The Sinkhole Ordinance and another environmental tool, the Erosion Control Ordinance, were used to halt the actions of the developer. Despite prior assurances from the development company that the springs would not be harmed, apparently their destruction had been intended. By midsummer 1991, the contractor had been required to grade the fill back away from the springs and install erosion control fences.⁴

By year's end, the plans to convert the site and surrounding land to an industrial park had evaporated. Blocked from being able to develop the 20 acres around McConnell Springs by enforcement of the Sinkhole Ordinance, the selling price of the remaining parcels had to be increased. Unfortunately, the high cost exceeded the demand, and only one parcel was sold. The company had borrowed money to develop the land and defaulted on the \$1.2 million mortgage. In January 1992, First Security National Bank foreclosed on the loan. At a forced sale held February 10, 1992, 68 acres including McConnell's Springs were purchased by top bidder First Security for \$802,000.⁵

The debate on city acquisition of the land resumed, at a far greater intensity. The *Herald-Leader* was now an active promoter of acquisition, and kept its readers informed of developments. Stimulated by the heavy publicity, Lexington citizens became increasingly interested in the controversy. Rebmann's name was constantly linked with the preservation efforts reported in the media, and one Versailles woman called him and offered to donate \$50,000 toward purchase of the springs. Other, lesser, but equally appreciated, offers of financial aid were made by other local citizens and companies.

Lexington Mayor Baesler continued to have reservations about the feasibility of the concept, although several council members had expressed their support. In March 1992, the mayor and some of the council met with officials of First Security. Afterward interviewed by the press, Baesler stated that an inspection by the city showed some "potential problems." No one knew what might be buried on the site after years of illegal dumping. There

might be "environmental horrors," hazardous materials that would make the cleanup prohibitively expensive. Baesler believed that the potential cost to the city might rule out any idea of purchase.⁶ After this, events occurred in rapid succession. Increasingly, citizens and organizations voiced their support of the acquisition of McConnell Springs. The local chapter of Trout Unlimited, a group that promotes trout habitat and trout fishing, became interested in taking on the cold, spring-fed stream as a project for an urban fishery. Lexington Directions, a civic group fostering charitable and educational activities, approved a unanimous resolution to give their support to the acquisition efforts. The Lexington Environmental Commission sponsored a cleanup of trash from around the springs, in which more than 50 University of Kentucky fraternity and sorority members took part.⁷

In July 1992, First Security Bank and Trust offered the springs tract to the city for \$100,000.⁸ Still the Urban County Government dithered, and failed to act. By spring 1993, Lexington had a new mayor, Pam Miller, who was strongly in favor of the acquisition. The council authorized funding for an environmental assessment prior to beginning negotiations.⁹ By September the assessment was complete: McConnell Springs was free of environmental problems.

At this time First Security Bank notified Jim Rebmann that an offer had been received from a developer to purchase some of the industrial land adjacent to the McConnell Springs site. Through prior talks with Rebmann, the bank was aware that the land the developer wanted to purchase was included in the planning for McConnell Springs for use as a parking lot and nature center. The bank (under new ownership as Bank One) gave notice that some definite action must be taken to acquire the site within the next 30 days. The bank agreed to reserve the 3.5-acre additional tract for the parking lot and nature center if the government would agree to make a down payment of ten percent of the purchase price for this smaller parcel.

Jim contacted the anonymous donor who had been willing to give \$50,000 toward purchase of the Springs. Unfortunately, due to the long delay, her donation had been allocated to other worthy causes. Even so, she was still willing to contribute \$10,000 to the cause. Then, at a meeting of the Board of Directors for Lexington Directions, Jim

4. Lexington *Herald-Leader* January 2; June 11, 1991

5. Lexington *Herald-Leader* February 12, 1992

6. Lexington *Herald-Leader* March 14, 1992

7. Lexington *Herald-Leader* March 23 & 29, 1992

8. Lexington *Herald-Leader* July 7, 1992

9. Lexington *Herald-Leader* March 26, 1993

asked for and received a \$5,000 donation from the organization. A few days later, Isabel Yates, a member of Lexington Directions and of the Urban County Council, volunteered to head a fund-raising effort to buy the property.

Two months later, the citizens of Lexington received a gift from Bank One. In a ceremony at the site on November 22, the Urban County Government was handed a ceremonial deed to 21.5 acres of land surrounding the springs, with the stipulation that the additional 3.5 acres must be purchased by the end of the year for \$130,000. In order to acquire this land from the bank for parking and a visitor center, an organization called the Friends of McConnell Springs was created from Lexington Directions. The Friends soon came to include a diverse group of citizens and Urban County Government officials.

At the end of the year, the goal had at last become reality. McConnell Springs now belonged to the city of Lexington. In the months ahead, the Friends of McConnell Springs and individuals within the organization would be presented with several conservation awards for making possible the rescue of the site. Yet this parcel of land was unlike any other greenspace or parkland property in the city, and provided challenges in development and management that could not be accomplished by traditional means of parkland administration and maintenance.

Developing the Mission of McConnell Springs

McConnell Springs occupies a unique niche in the hierarchy of Lexington's public lands. Although the property is owned by the city, and the Department of Parks and Recreation is responsible for its maintenance, it is the Friends of McConnell Springs, through its Board of Directors and advisory committees, who make the decisions as to how the property will or will not be developed. In addition, the Friends, having raised the initial funds necessary to acquire the acreage adjacent to the springs, continues to raise funds for the development of the property.

The establishment of this organization, the Friends, provided an immediate structure and hierarchy for future development and management of the land. The Friends of McConnell Springs is able to tap a vast pool of skilled and unskilled volunteer labor, including not only citizens of Lexington but also many residents of other communities who share a common interest in the state's heritage. On the Board of Directors and the various advisory committees are representatives of local and state government, planners, architects, geologists, botanists and biologists, and members of various environmental, civic, and preservation

special-interest groups. Certainly, drawing as it does from such a diversity of viewpoints, the management of the Springs is not always in perfect agreement, but all hold in common the concept of management for the long-term preservation of McConnell Springs.

From the beginning, the Friends have sought to encourage maximum public participation in evolving this vision of the future of the Springs. To increase public awareness of the needs and goals of the Springs, and to produce a comprehensive master plan representing a consensus of public opinion for present and future guidance, a design *charette* was held in Lexington from July 22 through 24, 1994. A *charette* is an intense design process which assembles a team of professionals to examine a narrowly-focused design issue. The McConnell Springs charette brought together 31 design professionals and 120 interested members of the public to build a common vision of the Springs' future. During the intensive two-day process, recommendations and concerns offered by the public in facilitated focus groups were integrated by the design professionals with other design issues to produce a conceptual master plan for the site (Friends, 1994).

In addition to addressing administrative concerns such as parking, maintenance, and security, charette participants developed a set of long-term primary objectives for the property. These objectives were: preservation of the land from further physical and environmental degradation, restoration of the vegetation and of certain historic structures, development of the property to enhance accessibility and utility, and development of educational programs based upon the most significant conceptual aspects of the property. To a great extent, all these objectives are interrelated.

Of these objectives, the first, preservation, was in large part achieved through the acquisition of the property by the city of Lexington. Although this now assures that the property will no longer be threatened by urban expansion, the elements of the property must be protected from future degradation in detail. For example, there are two large bur oaks on the land of McConnell Springs that date from the pre-settlement era and survived the many vicissitudes of the property's subsequent history. In another example, the tract contains numerous dry-stack rock fences, constructed by Irish stone masons during the early 19th century. Over the years, these fences have been gradually disintegrating, pushed down by frost heaving, vegetative growth, and vandalism.

Features such as these need to be protected from further harm, and in some cases, such as the rock fences, it is possible to restore them to their original condition. One of the major goals of the management is, over time, to restore the rock

fences. It has also been proposed that some of the 1812-era powder mill structures be reconstructed. The existing traces of these, however, are faint, and it is uncertain whether such an ambitious project will be undertaken any time soon.

At present, the existing vegetative cover in most of the property is in sad shape. Only a small part of the land has mature woodlands, mostly along the stream course, and even these are relatively young. Much of the rest consists of scrub or nearly barren land scraped clean just prior to acquisition. Much of the vegetation present is not native to the region but represents volunteer growth of foreign species, such as *Euonymus coloratus* ground-cover. According to pioneer accounts, the Bluegrass region during the settlement area was part woodland, part grassland, a savannah-like biome. The consensus of charette participants was that the property should be restored to a condition representing, as near as possible, the pre-settlement vegetation.

This in itself presents numerous management challenges. Much of the existing vegetation is seen as undesirable, but there has been substantial debate as to replacement species that should be used. In addition, removal of the vegetation is not only an enormous task in a physical sense, but exposes the land surface to soil erosion hazards. Recently, a new sinkhole developed in the area at the end of the property where the stream sinks for the last time, and the growth of this sink has been exaggerated by the denuded condition of the slope here—the result of overenthusiastic volunteers who stripped all “undesirable” vegetation away from the margin of the old sink. Renovating the vegetation will have to be a slow and carefully-considered process to avoid problems of this sort.

Unfortunately, the most prominent feature of the property, the springs themselves, is one over which the management has very little control. Increasingly, managers of karst systems such as Mammoth Cave and Carlsbad Cavern National Parks have come to understand that the ground water systems in their charge are strongly influenced by land use practices outside the legal boundaries of the property. Such is the case with McConnell Springs. The springs are, in effect, only a way station along the course of a drainage system that occupies much of the central and south Lexington urban area. Although land use activities elsewhere cannot be controlled by the managers of McConnell Springs, risks can be reduced by educating the general public in the recharge area about the vulnerability of the springs and by maintaining close liaison with state and local environmental agencies.

The educational role of McConnell Springs is perhaps one of the most exciting challenges that

faces the management. During the charette, several important themes were developed that participants felt should be represented at McConnell Springs. These themes fall into overlapping categories of environmental and cultural. The Springs are, foremost, a splendid and rather unusual example of a karst hydrologic system, displaying in one place several different manifestations of karst landforms. This presents a fine opportunity to expose the public to interesting lessons in local hydrogeology and to develop an awareness of the sensitivity of ground water to human activity. Next, the Springs provide an outdoor laboratory for the study of Bluegrass flora and fauna, particularly in regard to the transformation of wilderness to an urban environment. The various uses made of the land over two centuries provides a study of sequent occupation, and the role of the springs in certain aspects of local and regional history helps focus upon the rich historical heritage of the Bluegrass.

The charette envisioned a number of structures designed to enhance the educational aspects of the property, including an environmental education center and an amphitheater. Construction of these structures, located on the 3.5-acre addition, is currently in progress, and should be completed by the end of 1996. More than \$180,000 in donations was raised by the Friends for this construction. Other improvements in progress include a series of trails that wind and loop through the area of the springs, providing non-intrusive access to each of the major features: pond, blue hole, artesian head (second resurgence), and final sinking of the stream. A portion of these trails are to be constructed to allow access by disabled persons; others would be primitive hiking paths (Figure 2).

The Friends of McConnell Springs has been active in promoting educational activities focused on the Springs, even though facilities on-site are not yet ready. Among these have been guided tours, annual roundtable lectures on regional history, training classes for teachers and Scout leaders, and public service television presentations on the history of the Springs. One of the most interesting events was a series of two hands-on seminars in autumn 1995 on the art of dry-stack rock fence construction, taught by a master stone mason from Scotland. Several sections of the rock fences at McConnell Springs were repaired.

The most important issue identified concerning the development and maintenance of McConnell Springs is how to protect the integrity of the land and ecosystem while at the same time furnishing access to potentially large numbers of visitors. Much of the appeal of the site lies in its apparently secluded nature, providing a tranquil oasis of greenery and flowing water in the heart of the city. In recent decades, parklands and preserves across

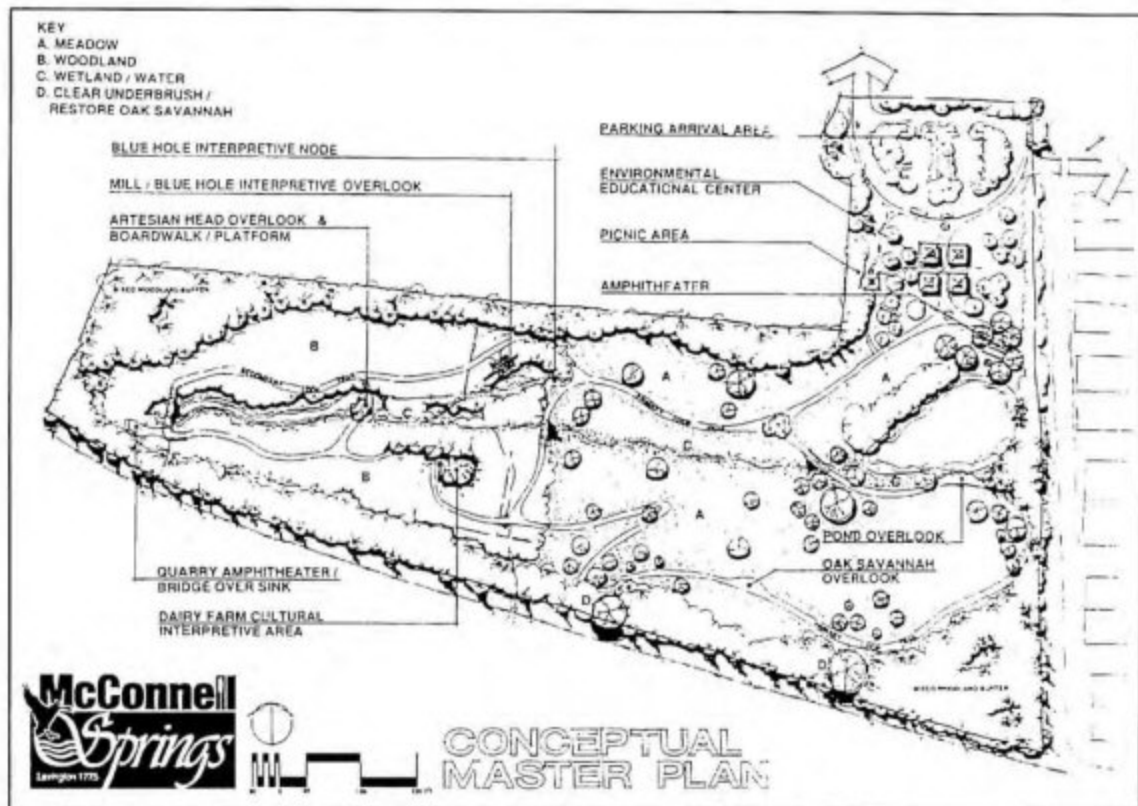


Figure 2. McConnell Springs conceptual master plan. From McConnell Springs Resource Management Plan (1994).

the nation have become increasingly congested as more and more people seek to temporarily escape the urban environment. One board member noted that the mission of McConnell Springs is somewhat analogous to that of a library or archive; each is charged with preserving a valuable resource, but at the same time must make that resource available to the public.

There is often considerable difficulty in adapting ideals to practice. Having achieved the initial goal of saving the McConnell Springs site from impending destruction, it has since become apparent that there is considerable diversity of thought in regard to how the site should be managed. From various planning discussions in committee and subcommittee have emerged two opposing management philosophies. One school holds that the site should be managed much as other city parks, concerned primarily with accessibility and maintenance. The opposing school supports the practice of minimum-impact modifications and management that do not overwhelm the natural features.

It is here that opposing value systems and perceptions of the purposes of the site come into conflict, which might perhaps be summed as "utilization" and "preservation," although each phi-

losophy, in the case of the Springs tract, incorporates elements of the other. The utilization supporters wish to preserve the tract from urban development, and the preservation supporters wish to encourage public use; the conflict arises from differing interpretations of "preservation" and "use."

It is because of these differing viewpoints that the development of a master plan such as that arising from the McConnell Springs design charrette is important, in that it provides guidance based on a consensus of an involved public. Certainly, over time, planning can evolve in new directions, to take cognizance of evolving circumstances. Planning and development should always, however, reflect the mission of the organization in all its parts.

Conclusion

What was it about this place, this McConnell Springs, that stirred so many people to work for its preservation? Countless other features of Lexington, of equal aesthetic or historic significance, have in the past been destroyed without attracting the interest generated by this little wetlands

tucked in a corner of the industrial section of the city. In the 1970s, entire blocks of historic homes in downtown Lexington were razed to make room for a hotel and box-like convention center complex. The few feeble protests at the time were wholly ineffective. Historic connotations alone are apparently not enough to stimulate vigorous citizen protest.

Yet, when in 1992 Calumet Farm, on the outskirts of the city, went into bankruptcy and was placed on the auctioneer's block, a wave of dread passed through the citizens. Calumet, home of Derby winners, with its trim white fences and lush green paddocks, had long been the quintessential Bluegrass horse farm. A vast collective sigh of relief was uttered by the population when the new owner gave public pledges to do nothing to harm the visible image of the farm.

Paris Pike, connecting Lexington and Paris, has long been considered one of the most dangerous roads in the Inner Bluegrass. At the same time, outlined with historic rock fences and shaded by a canopy of trees, it was also one of the most scenic drives in the region. For more than a decade, plans were constantly aired to widen the highway to four lanes and reduce the threat to life and limb. For more than a decade, these plans were met with vigorous opposition by those who wished to preserve the fences and trees. In 1995, a compromise was announced. The highway would be widened, and the rock fences would be rebuilt, at great expense, along the margins of the new road.

What do McConnell Springs, Calumet Farm, and Paris Pike have in common? What attributes of sufficient power do such features possess to protect them from harm, that the historic homes of South Hills could not grasp to forestall demolition? The answer may perhaps be found by discovering what each symbolizes to both local government and to the people of the city.

In 1932, Carl Becker noted that "history" has two manifestations, the actual and the ideal. The actual series of events is an absolute; the ideal is relative, a construct that is constantly evolving with an increase or refinement of knowledge. The actual series of events, according to Becker, "exists for us only in terms of the ideal series which we affirm and hold in memory" (Becker, 1932, p 222).

This dichotomy between the actual and ideal was echoed six decades later by Perry (1996). While Becker had made a distinction between the actual and the ideal based on the extent of available knowledge, Perry goes further in contending that, while the history of a site is fixed, "its meaning and significance mutate according to the concerns of the age or the visitor" (Perry, 1996, p 423). For any age, it is the interpretation of past events through the looking-glass of contemporary perspectives that produces an accepted "reality."

In a 1990 paper on the landscape of the Kentucky Bluegrass, Raitz and Vandommelen address the concept of the creation of symbols for popular consumption that represent "selected slices of reality." According to the authors, "Many place images are based on very narrow, carefully selected segments of real landscapes. These landscape segments contain artifacts and bits of physical environment that can be abstracted to yield a few visual elements that are then used to symbolize the broader reality." (p 110)

Regional image is created through the use of symbols of selected landscape features. Hence, the image projected of Kentucky to the greater world is one of manicured paddocks, tree-shaded lanes, and sleek horses, even though such represents conditions for only a tiny segment of the state. This is the regional image for contemporary Kentucky, reinforced through local and national media, theme parks, and most notably, in widespread architecture constructions that carry a stylized horse-farm motif.

Just as present-day Kentucky is represented by symbols and themes that represent only ideals, so is regional and local history idealized for popular consumption. The popular tradition of the early history of the state consists of the image of hardy white pioneers striving against a wilderness to create settled places. The major theme of McConnell Springs, as the site of the naming of a yet-to-be-created Lexington, fits perfectly into this tradition, and so enhances the regional image that image-makers wish to maintain.

Raitz and VanDommelen note that the process of creating a regional image can involve an entire community of individuals or a much smaller elite who direct the symbol-creation process. The authors divide the symbol-making elite into two functional groups, patrons and interpreters. Patrons create or contribute artifacts to a prototype landscape. They may finance and direct design and construction, they may be innovators who create a new form or function, or they may be borrowers who bring in ideas from elsewhere. Interpreters are architects, planners, or promoters who "select and filter elements of a prototype landscape for reproduction and adaption in new formats, contexts, and locations." (p 111) Patrons and interpreters have interacted in the past and continue in the present to "create and articulate" the landscape image for the Kentucky Bluegrass.

This process can be clearly seen in the creation of McConnell Springs as a symbolic artifact. The "elite" associated with the Friends of McConnell Springs comprises representatives of business, industry, and local government as "patrons," and historians, planners, architects, and scientists as "interpreters." These individuals are working to-

gether to produce at McConnell Springs a landscape symbolic of cherished local traditions. The themes involved are idealized: taming the wilderness, winning independence from Britain, building a great city.

Whether or not McConnell Springs was in fact the actual site of the naming of Lexington has largely become a dead issue. Lacking evidence to the contrary, the belief that "this is the place" has been officially embraced by the Friends of McConnell Springs and the Urban County Government and so will no doubt be accepted as true history by future generations. As an ethical issue, this is somewhat troubling; yet it is an issue that cannot be resolved with our present state of knowledge. As interpreters are unable to determine the "correct" locale with absolute certainty, McConnell Springs becomes the symbol of the event and this symbolism in turn becomes the perceived reality.

McConnell Springs, Calumet Farm, and Paris Pike all represented powerful symbolic artifacts of the Bluegrass landscape that conformed with the visions of the elite who maintain the regional image. The historic homes of South Hills were endowed to a far lesser extent with this cloak of symbolic sanctity, and had not the same aesthetic appeal. Even so, they might have been preserved had not their continued existence come into conflict with the enhancement of another cherished Kentucky tradition—basketball. In the eyes of the nation and of many residents, basketball, as played by the University of Kentucky Wildcats, is as potent a symbol of Lexington and the Bluegrass as all of the other regional images. The concept of preserving the historic homes of South Hills could not begin to compete effectively against the desire to construct a major sports arena and hotel/retail complex. When symbol competes against symbol, the less powerful image loses.

The story of the rescue of McConnell Springs and its transformation into a symbol of Lexington's heritage is a drama that may perhaps be enacted again and again in other contexts to preserve other threatened karst features. It has usually been the case that the initial group formed to preserve a particular karst feature or system consists of "cavers" or karst researchers, who are the first to recognize both the value of the feature and the threat. Representatives of such a group are often ineffective when acting alone in the role of interpreters to a community, simply because their perspectives and estimations of "significance" frequently differ from that of the general public. Preservationists should act to enlist the support of the community elite, both of potential patrons and other interpreters of relevant professions, as well as working at the grassroots level.

It is the interpreters who inform and educate potential patrons and the general public as to the

significance of a site. This significance may be historical, aesthetic, scientific or environmental in nature, or a combination of many elements. It is not enough that a site simply be "significant," but it must have some particular significance that is, or can come to be, valued by the general population and by those having authority to act. By endowing a site with a meaning symbolic to the local population, the perception of the worth of the site is greatly enhanced. In addition, the preservation of a site must project the concept of a continuing future value to the population. Finally, the site must be perceived as of such worth that it is capable of overriding proposed or potential alternative land uses.

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