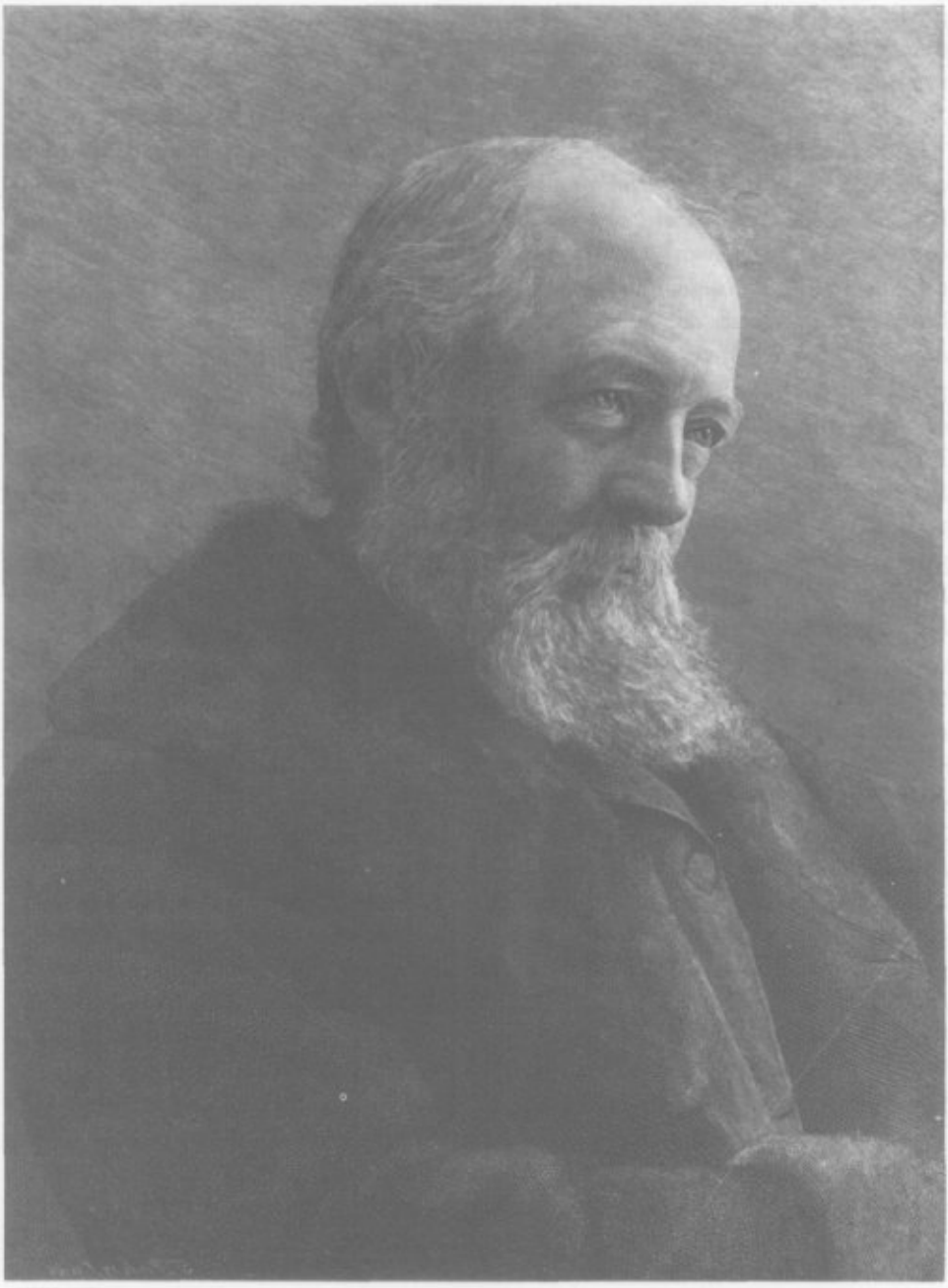

Frederick Law Olmsted presented the Greater Baltimore park system plan to the Municipal Art Society in 1903. The proposal created suburban parks and playgrounds within the natural terrain in a radical move away from the formal gardens of the past. (Stokes Autograph Collection, Yale University Library.)

Falls and Stream Valleys: Frederick Law Olmsted and the Parks of Baltimore

KEVIN ZUCKER

The town of Baltimore, like Richmond, Philadelphia, and New York, grew up on the fall line, where rapidly descending streams interrupted river transport. Water was the source of life; the many nearby streams nurtured early Baltimore, providing reliable industrial power to supplement the inconstant wind and the straining muscles of men and animals. Only Baltimore calls its rivers and streams by the name of "falls."[1] The streams called falls and the geological forces that created them gave Baltimore its distinct character and sense of place. Perhaps only the founding of the Baltimore & Ohio Railroad had more impact on the future progress of the city. No longer important economically, too steeply banked and narrow for development, the streams today show remarkably few traces of civilization and offer retreats from the stresses of life. They promote and foster city life, providing ample water, filtering waste, and recharging storm water before it reaches the Chesapeake Bay, while the surrounding woods cool and purify the air. These are serious matters that affect the physical and psychological well-being of all Baltimoreans and Marylanders generally.

These streams continuously need our help. As preparation for exploring the parks to which they give life (and which in turn give life to us), consider the compelling story told by the health statistics of Baltimore.

As of 1987, Baltimore City, when included with all 3,073 counties in the United States, ranked sixth from worst in annual excess deaths from all diseases, fifty-third in annual female excess deaths from breast cancer. The city ranked second and Baltimore County twenty-eighth from the worst in annual excess death from lung cancer. City and county ranked fourth and thirty-third, respectively, in annual excess deaths from all cancers.[2]

Statewide, Maryland has two cancer cases per 1,000 population, the worst rate of all the fifty states. These cancer rates sound serious alarms.[3]

Among contributing factors, several air and water quality ratings stand out. Baltimore's air contains the sixteenth highest concentration of acutely hazardous chemicals and ranks in the ninety-fifth percentile for suspected carcinogens released to the air by industry; its concentration of ozone is the forty-first highest.[4]

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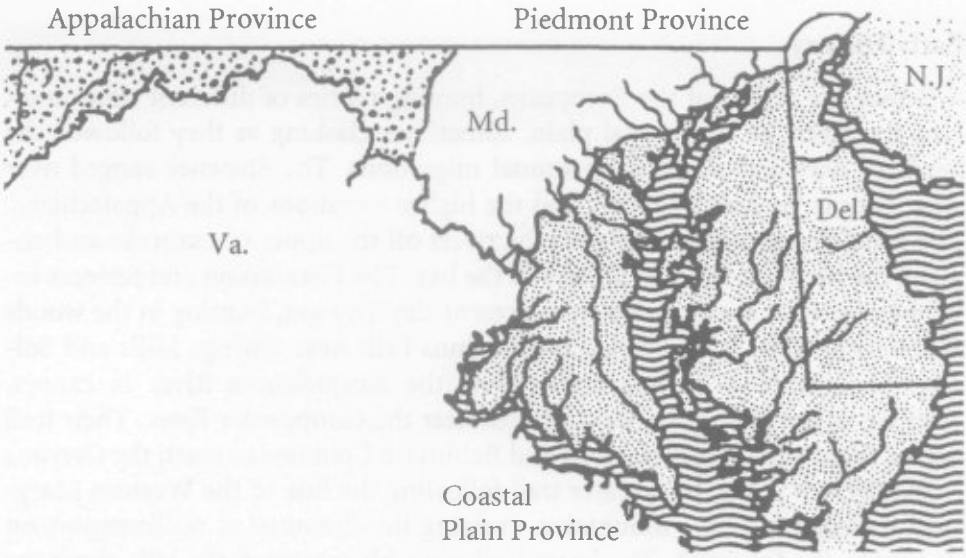
Maryland generates the most municipal solid waste in the nation, and only three states incinerate more municipal waste. Maryland placed eighth in total toxic chemical releases to the environment (at 7.2 pounds per capita or 3,187 pounds per square mile each year). Auto pollution menaces our air and ground water: Maryland uses more gasoline per capita than all but ten states. Transit takes much of that—only two states spend more on transit as a proportion of highway spending, and only four use more mass transit in urban areas. Gasoline-burning engines in Maryland discharge nearly the highest level of carbon monoxide per person of any state; only Connecticut has a higher proportion of population breathing unhealthy amounts of carbon monoxide and ozone.[5]

Maryland's overall "Green Index" avoids, so far, the company of the worst states (located mostly in the deep South). The state works hard at improving water quality and spends as well as the best for parks and recreation (sixty-nine dollars per capita).[6] *Of all fifty states we inject the least toxic chemicals underground, thus helping to reduce serious hazards to drinking water. Ninety-three hundred miles of Maryland rivers and streams suffer serious impairment (7.2 percent of all Maryland streams); only three states have a lower percentage of impaired streams. In a 1993 study, 10 percent of Baltimore County streams were found impaired; 20 percent, mostly in the rural north, were rated healthy.*[7] *Acid rain, caused in part by industry in surrounding states, threatens the waters of Maryland, the eighth most acidic of the fifty states (pH 4.3). At the same time, the Chesapeake Bay continues its decline. Maryland ranks fourth in proportion of toxics to surface water area, and eighteenth in toxic chemical releases to surface water (3,756,283 pounds per year; 0.8 pound per capita or 359 pounds per square mile). Similarly, Maryland placed twenty-second in toxic chemical releases to public sewers (with 3,959,217 pounds per year; 0.9 pound per capita or 378 pounds per square mile). According to the 1991–1992 Green Index, Maryland will need to invest $919 million on sewers by the year 2008, or $200 per capita.*

The Shaping Forces of Nature

Thanks to the shape of its terrain, Maryland has spectacular nature preserves. Several surprisingly peaceful stream valleys meander even within Baltimore city limits. The Jones Falls and Gwynns Falls drain into an arm of the Chesapeake Bay called the Patapsco River; Herring Run falls into the Back River, another arm of the Bay. Folks who grew up with streetcars remember these quiet places from their childhood. Now they are beginning to attract a new generation.

The State of Maryland forms a portion of the Atlantic slope, which stretches from the sea to the crest of the Alleghenies, rising gradually at first and then more rapidly into the highlands of the west. Three sharply-defined regions stand out on this slope: the Coastal Plain, the Piedmont Plateau, and the Appalachian Mountains. Where the Coastal plain and the Piedmont join, the



Map showing the physiographic provinces. Notice how the Chesapeake serves to drain the fall line. (Maryland Geological Survey.)

steep descent created waterfalls. The hills along the fall line arose first, forming natural dams; the present S-shaped course of the streams show where the temporary reservoirs found the low point on the rim. Eventually the water leveled the mountains in its path, scooping out trench-like valleys and exposing the underlying igneous rock called amphibolite, which later would provide the stone for houses and industry in the valleys. Earth washing down from the streams' upper courses continues to fill the lower. This process makes the upper valleys narrow and V-shaped, the lower broad and flat.

Springs surrounded by steep rock walls brought forth the first trickling stream sources. The underground water table feeds these springs, floating together with rock and earth on molten basalt and olivine (as we recalled during the Howard County earthquakes of 1993). Rather like icebergs, sections of the earth's crust crowd together under the forces of plate tectonics. The lifting and sliding of portions of these gigantic plates caused the eruptions of the mountains and plateaus. Streams rush between "terraces," subdividing the Piedmont Plateau. Hardwood trees such as chestnut, scarlet oak, and black and white oak once covered the upper slopes of these terraces; red oak, tulip, and hickory thrived on the lower slopes; maple, ash, elm, birch, and sycamore crowded the valley floors. These forests once teemed with quail, woodcock, wild turkey, wildcats, otters, and herds of deer and elk. "Bear Thicket" and "Hunting Ridge" (the terrace between the Patapsco River and Gwynns Falls) once lived up to their names.[8]

Early History

Before the arrival of the Europeans, hunting parties of different tribes traveled the rivers of the coastal plain, sometimes clashing as they followed the herds of deer and elk in their annual migrations. The Shawnee ranged over what is now Frederick County and the higher elevations of the Appalachians. The Susquehannocks lived beside the rivers off the upper Chesapeake and enjoyed the plentiful fish and oysters of the bay. The Piscataways and Senecas inhabited the hills north and west of present-day Towson, hunting in the woods at the headwaters of the Jones and Gwynns Falls near Owings Mills and Soldiers Delight. The Senecas came down the Susquehanna River in canoes, coasting down the bay to Seneca Creek near the Gunpowder River. Their trail begins there and crosses Harford and Baltimore Counties to reach the Gwynns Falls. There it splits, the greater trail following the line of the Western Maryland Railroad over the mountains, crossing the Potomac at Williamsport on its way to the far south. The lesser trail probably traversed the hills along the Gwynns Falls as far as Frederick Avenue, where it turned inland to cross the Patapsco at or below Elkridge. From there the trail heads past Annapolis and on to southern Maryland.[9] The Senecas followed this latter trail to their hunting grounds in the woods of Anne Arundel and Howard Counties, journeying south in June and returning in September.

Master Percy, an early explorer (circa 1640), described the trail as "a pathway like an Irish pace, having beside it for miles the pleasantest suckle, the ground all flowing over with fair flowers of sundry colors and kinds, as though it had been a garden in old England." The Indian practice of setting selective forest fires to improve the hunt kept down the underbrush and enhanced the appearance of the woods.

The European settlement of Baltimore County lagged behind that of the Eastern Shore of Maryland. The settlers in the county preferred the uplands of the Piedmont, where there was superior land for corn, wheat, and grass, and avoided the valleys which were restricted in width and not well drained, but in 1666 their population numbered just 720. Within three years, however, new settlements pressed up the stream valleys. Richard Gwin in 1669 received exclusive rights to conduct trade with the Indians near his post along the Gwynns Falls, where the Seneca trail, later Old Court Road, crossed that stream. Recognizing his success in enriching the colony, Lord Baltimore granted a two-hundred-acre tract to Gwin in 1672.

The town of Baltimore, meanwhile, progressed slowly. In its early days, Baltimore could not compete with Elkridge Landing, a more convenient port for tobacco growers. As the soil wore out under tobacco cultivation, flour became the new source of cash. The Jones Falls came to dominate the flour trade with ten mills, each capable of grinding around fifty thousand bushels of grain per

Ellicott's Mills on the Patapsco River, circa 1860. Dozens of mills grew up along the streams as water power pushed Baltimore into first place as the largest flour market in America. (Prints and Photographs, Maryland Historical Society.)

year. Elisha Tyson and the Ellicott brothers owned mills there. By 1825 the eight streams near the city had sixty mills totaling 2,360 horsepower. The tremendous water power available in the stream valleys allowed Baltimore to become the largest flour market in the nation. Massive Conestoga wagons crowded her streets on the way from mill to warehouse.

The rhythms of life in the stream valleys soon made a jarring transition with the advent of steam power. The steam engine put an end to the dominance of water power and sail; steamships began regular passenger schedules before 1813. Meanwhile surveyors discovered better routes for new turnpikes along the ridgebacks above the streams, channeling commerce away from the stream valleys. Surveyors selected the terrace between two tributaries of Gwynns Falls for the Baltimore National Pike; Reisterstown Road followed the next terrace, between the Gwynns Falls and Jones Falls watersheds; York Road ran between the latter and Herring Run basin. These upland routes provided for more gradual ascents, required fewer bridges, and permitted faster travel. The builders of the first railroads also needed to limit grades to about 1 percent. This they accomplished by following the stream valleys, though many proved to be too crooked. The building of the Baltimore & Ohio Railroad in the 1830s set

off a population boom. Between 1830 and 1858, Baltimore's population burgeoned from 80,000 to 212,000 after already doubling in the 1820s.

The flour trade surged after the B&O reached Frederick. With tremendous effort, the railroad at last negotiated the Appalachians and reached the Ohio Valley but too late, as the Erie Canal had already cemented the financial bonds between the hinterlands and New York. The canal affected patterns of immigration, diverting populations to the Great Lakes region. Once these patterns were established, the railroads of Baltimore and Philadelphia could not disrupt them. Even in 1858, the Erie Canal brought more freight eastward than all the railroads combined. Ultimately, it was not freight but coal from the rich anthracite fields of western Pennsylvania, coal to power the steam engine and smelting furnace, that secured the success of the B&O.

By 1860, Baltimore was a great coaling port. Later rate structuring by the railroads finally allowed Baltimore to attract grain shipments from St. Louis and Chicago, making the city the sixth largest port in the world.[10]

The First Parks, 1790–1860

In the course of rapid growth, certain public amenities were neglected. In the late eighteenth century Baltimore held the dubious distinction of being the largest American city without a public sewage system, and the practice of regular bathing had not caught on. The establishment of the first bathhouses for the working class, who had no bathing facilities in their houses, and the first bathing beaches at Canton, Winans Beach, and the "Spring Garden" (the mouth of the Gwynns Falls), lay many years in the future. In 1790, Baltimore physician Dr. George Buchanan wrote the first published appeal for organized park development. He believed that damp, unhealthy play environments exacerbated Baltimore's very high childhood mortality. He suggested creating playgrounds on elevated land. In 1792 the first public square provided such a playground for boys at Baltimore and Eutaw Streets. Live springs fed the three fountains where city residents could draw fresh water—one on the harbor, one up Calvert Street, and one near Fells Point. After 1812 the fountain areas joined the Eutaw Street square as public open space under city administration. The estate of Colonel John Eager Howard, located on the northern fringe of the town, served as Baltimore's only public park. Upon Howard's death in 1827 the park disappeared beneath Lexington Market, the Cathedral, and the Washington Monument.[11]

Baltimore's park system began to expand after 1815 with the acquisition of a few more "squares" that provided occasional breaks in the blocks of houses. Franklin Square was created in 1839, Union Square in 1847, and Lafayette Square in 1859 on the west side; Madison Square in 1853 on the east side. After its donation to the city in 1827 by William Patterson as a public walk, Patterson Park in east Baltimore was expanded in 1853.

Lafayette Square, circa 1870, one of Baltimore's first public squares. (Prints and Photographs, Maryland Historical Society.)

For quiet and cool shade, city residents frequently turned to the pastoral cemeteries on the outskirts of the city, popular for Sunday outings throughout the nineteenth century. The streetcar terminuses at Green Mount (founded in 1838) and Loudon Park (1853) made those cemeteries popular destinations. There were public "squares" in the boulevard medians of Fulton Avenue and Eutaw Place; Broadway became Broadway Square in 1851. That year, following up on a proposal of Mayor Elijah Stansbury, the city council established a Boundary Avenue Commission presided over by John H. B. Latrobe, a lawyer for the B&O. The commission recommended a parkway around the city circumference, following the example of European cities. They planned a 250-foot-wide boulevard with a 130-foot median containing trees, shrubs, walks, and benches. Though the project failed to win approval, the demand for open space continued to spread.

Newspapers took up a campaign in 1859 for the development of a great city park. An unexpected source fueled the movement: the thriving street car business. A dozen companies hauled passengers over city streets. By ordinance of that same year, Mayor Thomas Swann and the city council established a tax on the horse car lines. As a wholly new source of revenue it was appropriately earmarked for a new purpose: the purchase of park land. The park commission named by the mayor selected a Druid Hill site, on the Jones Falls. Protests

Mayor Thomas Swann and the Baltimore City Council levied a tax on the horse car lines in 1859. One penny from each nickel ticket went toward the purchase of park land. (Diehlman/Hayward Files, Maryland Historical Society Library.)

from east Baltimoreans, who desired a different site, were addressed by joining twenty-nine additional acres to six-acre Patterson Park. The Park Commission, renamed the Board of Park Commissioners, included newly-elected Mayor George William Brown, former Mayor Swann, and former commission members John H. B. Latrobe, Columbus O'Donnell, William Hooper, and Robert Leslie. O'Donnell, son of a successful merchant, served as a director of the Union Bank of Maryland, president of the First National Bank of Baltimore, president of the Baltimore Water Company, and president of the Baltimore Gas Light Company. Like Swann and the lawyer Latrobe, he served the B&O (as a director). The millionaire Hooper, son of an Irish emigrant, was a Republican abolitionist and total abstainer. He took over his father's sailmaking business in 1843 and acquired the cotton duck mill at Woodberry in Baltimore County in 1848. Funds from the streetcar tax paid off the bond issued to purchase the 475-acre Druid Hill Estate. Until then, the seller, Lloyd Nicholas Rogers, had jealously excluded all visitors in his anxiety to preserve the trees. "The name was apparently derived from the estate's opulence of oak trees, which were associated with the ancient religious order . . ." whose rites were conducted in oak groves. Rogers received $1,000 an acre for Druid Hill.[12]

The park, opened in 1860, finally stabilized at a total of 648 acres.[13] Druid Hill Park originally exemplified a large country park. When acquired, it bordered on the edge of the country. As the city built up around it, special features gradually humanized it, among them the zoological garden and the swimming pool. The change from horse-drawn to motor vehicles greatly reduced the sense of seclusion and restfulness as a veritable network of paved roads was cut through, transforming the park's character from country to urban park.[14]

The Olmsted Plan of 1903

In 1899 a city reform government came to power. In the optimistic mood of that year, a group of prominent citizens formed the Municipal Art Society

Druid Hill Park, circa 1880, a site selected by the city park commissioners, opened its 648 acres to the public in 1860. (Prints and Photographs, Maryland Historical Society.)

with Theodore Marburg—scion of wealthy tobacco growers—as its president. The society's mission was to help improve public spaces and to achieve two visionary goals. One was to work on the sewage problem by lobbying the city council and the General Assembly for the implementation of recent findings of the Baltimore Sewerage Commission. To fund the construction of the sewer system, the city sold its stock in the Western Maryland Railroad. The state legislature acted in turn to require the system to treat raw sewage—as distinct from storm water—before discharging it into the Chesapeake Bay or its tributaries.[15]

As its second goal, the Municipal Art Society planned for the development of territory annexed in 1888 north of North Avenue. The society hired the firm of Frederick Law Olmsted, the designer, with Calvert Vaux, of New York's Central Park. The Olmsted firm, known as Olmsted Brothers, already had forty years' experience in park planning. Prospect Park in Brooklyn, New York, succeeded Frederick Law Olmsted's first and most ambitious project, Central Park, and other parks quickly followed in New York State, Boston, and Chicago. Further designs included the grounds of Stanford University in Palo Alto and Golden Gate Park in San Francisco, and the environs of the Capitol in Washington. Olmsted Brothers produced a comprehensive plan for

a series of stream valley parks stretching from the Patapsco to Gunpowder Falls.

"Frederick Law Olmsted's ideal life was a humane, free, and steady existence with time apportioned for quiet leisure as well as hard, engrossing work. This was the way he wished to live," writes Elizabeth Stevenson, Olmsted's biographer. "By designing decent settings for everyday work and play he hoped to enable other people to live in this manner. Then a majority of the population might lead sane lives with an allowance for emotion and imagination as well as for rational and normally selfish activity."[16] Olmsted himself said of this vision that

> Probably the advantages of civilization can be found illustrated and demonstrated under no other circumstances so completely as in some suburban neighborhoods where each family abode stands . . . apart from all others, and at some distance from the public road. . . . I have seen a settlement, the resident population of which was under three hundred, in which there was a public laundry, bath-house, barber's shop, billiard-room, beer-garden and bakery. Fresh rolls and fresh milk were supplied to families before breakfast time every morning."[17]

Olmsted's encounter with the Maryland landscape began in the 1870s. His firm continued to work on Baltimore park planning through 1940, when they endorsed the Crimea estate as the site for land purchased with the Leakin bequest. In 1932, Leakin left property to the city, intending it to be sold and the funds used to purchase park land. Over a period of seventy years the Olmsteds, father and sons, designed sites in Annapolis, Chevy Chase, Baltimore, and over a hundred other locations throughout Maryland. They planned residential developments at Sudbrook Park, Roland Park, Guilford, Dundalk, and Gibson Island. They designed country estates, city squares, church grounds, boulevards, parks and public grounds at Fort McHenry, Green Mount Cemetery, the Johns Hopkins University, Western Maryland College, and St. Mary's Seminary.[18]

In 1903, the year of Frederick Law Olmsted's death, Olmsted Brothers submitted a 120-page plan, second only to Boston's in scope, for a park system for greater Baltimore. The report, illustrated with maps, gave substance to the Municipal Art Society's ambitious vision: to create numerous small parks and playgrounds, expand the larger city parks, develop parkways and stream valley parks in the suburbs, and select and set aside large reservations beyond the metropolitan area for future park use.[19] From experience gained with New York's Central Park, Olmsted had learned to let the terrain suggest the plan, instead of imposing a new structure requiring expensive earth-moving. He believed that such simple plans could only succeed if human imprints on the ter-

rain remained slight, if the trees continued to stand and grading was not much changed. Baltimore's stream valleys met these conditions admirably.

The Olmsted plan retains a compelling beauty, adopting for its outlines the valleys' own contours. By careful inspection of the ground, using the best available contour maps, the Olmsted firm sited the suggested boundaries of the parks just beyond the crest of the valley wall. Any buildings on the park perimeter would be out of view, below the horizon line presented to the park user. The Olmsted Report of 1903 concluded that

> seclusion from the adjacent land is . . . essential because without it the buildings on that land become a part of the landscape and introduce some of that from which escape is sought. The more complete the barrier both as to sight and sound, the more perfectly can the kind of park we are considering fulfill its function, and much money may well be spent in protecting its borders. . . . The possibility of securing a well-protected border for a rural park should be an important factor in selecting its site and determining its boundary, a consideration of design often neglected until improvement begins.[20]

In this scheme, persons within the park, walking near the floor of the stream valley, cannot see the developed land of the plateau beyond the rim of the valley. All the stream valleys inherited from the shaping forces of nature perfectly ideal visual border screens. Even the slightest rise in the ground can act as a screen, if the encroaching city on the opposite side can be kept at a sufficient distance. According to Olmsted's conception, high or flat-roofed structures should not approach the park boundary anywhere around the edge of the valley, though houses might come closer. The park does not begin at a certain line—it appears gradually, with the houses thinning out as one approaches it. In this theory, the park extends out into the surrounding populated area and therefore must be coordinated with city planning. Olmsted believed in comprehensive planning that included schools and other facilities.

Olmsted pioneered the movement away from willfully recreating the environment. He did not favor the formal garden approach to park design that had so dominated French and English planning in the eighteenth century. He saw the possibilities in a landscape as a sculptor might see a sculpture in a slab of unchiseled stone: "It is a common error to regard a park as something to be produced complete in itself, as a picture to be painted on canvas. It should rather be planned as one to be done in fresco, with constant consideration of exterior objects, some of them quite at a distance and even existing yet only in the imagination of the painter."[21] In Olmsted's view, suburbia might seamlessly continue a park, dotting park land with houses. The layout of the streets enforces this design by the parceling out, or subdivision, of the resulting street frontages into lots. Plans such as Olmsted's design for Sudbrook Park, near

Pikesville, control housing density, preserve trees, and flank the subdivision with park land on one side and parkway on the other.

The major features of the Olmsted Plan of 1903 were its reliance on the stream valleys as mainstays of the system and its use of parkways to connect these parks.[22] Of the three cross-town boulevards proposed in 1903, the city acquired two, though not in exactly the locations originally proposed. Gwynns Falls Parkway, connecting Druid Hill Park with Gwynns Falls Park, opened for traffic in 1924. A bridge across the Jones Falls links Druid Hill Park with Wyman Park. Thirty-third Street connects Stony Run with Lake Montebello, Herring Run, and Clifton Park. (Patterson Park received no interconnections.)[23]

By proposing a series of parkways, Olmsted hoped to propagate trees, which he loved and felt worthy of encouraging, not only for their benefits to humanity but also for their own sake. He hated to see trees "deformed by butcherly amputations. If by rare good fortune they are suffered to become beautiful, they still stand subject to be condemned to death at any time, as obstructions to the highway." He went on to ask

> whether we might not with economy make special provision in some of our streets—in a twentieth or a fiftieth part, if you please, of all—for trees to remain as a permanent furniture of the city? I mean, to make a place for them in which they would have room to grow naturally and gracefully. Even if the distance between the houses should have to be made half as much again as it is required to be in our commercial streets, could not the space be afforded? Out of town space is not costly when measures to secure it are taken early. The assessments for benefit where such streets were provided for, would, in nearly all cases, defray the cost of the land required. . . . The change both of scene and of air which would be obtained . . . on passing into a street of this character after the trees had become stately and graceful, would be worth a good deal. [The advantage would be increased] if such streets were made still broader in some parts, with spacious malls . . . and laid out with laterals and connections in suitable directions to serve as a convenient trunk line of communication between two large districts of the town.[24]

Different Parks for Different Needs

A park system plan must not only indicate the boundaries of parks but contain a conception of the major purpose that each will serve. Olmsted identified several categories of park function, and believed these were best met by parks exclusively dedicated to particular purposes. To assure that different park functions do not conflict, any improvement that tends to violate a park's major purpose would be avoided. Improvements on separate sites dedicated to

special purposes would cut costs in the long run. Opportunities for different kinds of recreation would be provided in parks specifically designed and maintained for particular uses. Thus, Olmsted's plan called for differentiated recreation areas called, respectively, reservations, parks, and district playgrounds. The types of park suited to the Baltimore environment were classified in the following way.

1. *The reservation, a holding of country land, perhaps in connection with city forests or water supply, accessible by roads but not developed for intensive recreation.* Such nature preserves were sited in the Patapsco and Gunpowder stream valleys. Olmsted wanted these grounds to be reserved for the park needs of future generations, far beyond the current limits of development, "before the difficulty of . . . building shall be greatly more formidable than now. . . . I by no means wish to suggest that nothing should be done for the present generation; but only that, whatever happens to the present generation, it should not be allowed to go on heaping up difficulties and expenses for its successors, for want of a little comprehensive and business-like foresight and study."[25]

2. *The country park, a landscape devoid of all reminders of civilization, providing needed escape from the sights and sounds of the city and easily reached by bus.* Most city dwellers cannot afford the time to enjoy anything more remote than the country park. In fact, urban growth has quite overburdened Druid Hill, the one really large park. Gwynns Falls Park best exemplifies the country park.

3. *The urban park—or small local park—that presents a tamed appearance and features formal elements such as fences, foliage and flowers.* Such a park typically covers several city blocks. The city already owned a number of these parks in Olmsted's time. His plan recommended thirty-six additional parks, averaging between four and five acres. Clifton Park, Patterson Park, and Carroll Park belong in this category, larger than strictly neighborhood parks, yet not big enough to give a sense of temporary escape. The plan of 1903 recommended doubling the area of Patterson Park by adding thirty city blocks. However, only six blocks were added before development overtook the deliberate pace of land acquisition.

4. *The playfield, or district playground, for adults and young people over twelve.* Olmsted thought regular openings between buildings more important than large parks. Numerous small grounds, so distributed through a large town that one of them could be easily reached by a short walk from every house, would be more desirable than a single area of great extent, however rich in landscape attraction it might be. City planners took Olmsted's recommendation to heart, building dozens of playfields outside of the old downtown area.

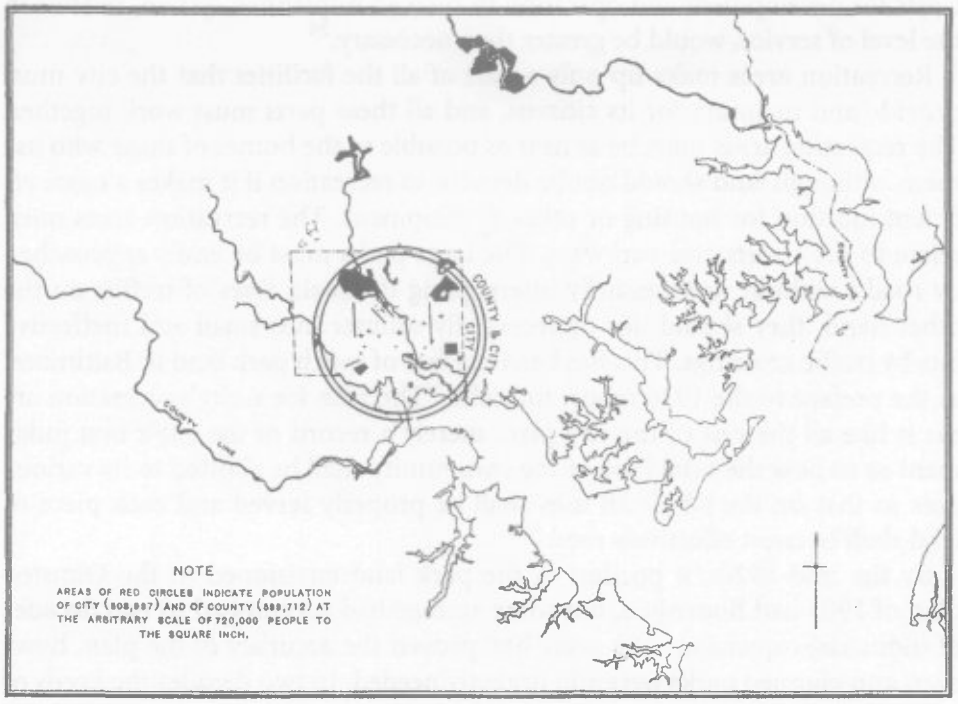
5. *The neighborhood playground for children up to fourteen years of age, designed for densely-populated areas.* Here, as in the larger parks, the Olmsted firm worked with plans suggested by the environment, adjusting their designs to suit each neighborhood's needs. The planners first developed a population-

density map of Baltimore. Then they drew a series of circles, each representing five hundred individuals. No major thoroughfares would divide these parks. At a point in each of the circles they selected a site for one playground or small square. The report of 1903 called for "numerous small tracts [to] be purchased and reserved for squares, playgrounds and neighborhood parks, and for schools and other public buildings in many parts of the city where vacant land is rapidly disappearing." The goal was that playgrounds should be at least as numerous as schools.[26]

6. *Parkways that connect the larger parks and reservations in the stream valleys, especially in the suburban zone, serving their locality as small parks, and often providing the best view over a stream.* In planning the street system for an extensive area annexed in 1918, the City Plan Committee proposed several more stream valley parkways for the outskirts of the city, thus preserving what might otherwise have developed haphazardly.[27]

7. *Special facilities with unusual features such as commanding hilltop views, hills for sledding and skiing, facilities for bathing, swimming, skating, boating, golf courses, athletic fields, and zoological gardens.* Some of these amenities might be found in the larger parks, but greater efficiency could be obtained from suitable areas devoted to these purposes. Most of the small harbor front park known as Middle Branch Park was acquired as proposed by the Olmsted plan. But harbor development plans, which proposed complete commercial and industrial development of the entire frontage of Baltimore harbor, continually threatened its existence. Until 1980 Baltimore devoted more of its waterfront to commerce than any other comparable city. With respect to the four miles of waterfront on the west side of the city, the report of 1903 and a follow-up report in 1924 envisioned setting aside a small percentage for recreation, placed to interfere as little as possible with the efficient economic use of the rest of the waterfront while maximizing the benefits to public recreation. Middle Branch Park seems to fulfill these conditions even today.

Olmsted and his associates believed that Baltimore's park plan should not only be thoroughly coordinated with the city plan, but also with the developing regional plan. Mislocated parks might appear to serve their immediate purpose, but would eventually cause great waste in time, effort, and money. While no part of a city plan should be allowed to become absolutely fixed to the detriment of the other elements, all parts of the plan, such as streets, railroads, and the school system, should be consistently developed one with another. A complete park and recreation plan capable of anticipating future needs must be integrated within a comprehensive city plan, which takes into account transportation, housing, and harbor development, present and future. (The long history of harbor development in Baltimore illustrates the need for comprehensive city planning by a coordinating agency with the power to bring



Olmsted's map of public lands suited for parks included immediate plans for urban areas and a comprehensive preservation program. (From Olmsted Brothers, Report upon the Development of Public Grounds for Greater Baltimore *[Baltimore: The Lord Baltimore Press, 1904].)*

conflicting interests into line for the general welfare.) Once adopted, a plan should never be compromised for any local reason.[28]

Another report by the Olmsted Brothers firm in 1926 recommended additional park extensions and confirmed the 1903 plan to link the Gwynns Falls, Jones Falls, and Herring Run stream valleys. This follow-up report developed further the themes of the 1903 report. It observed that cities tend to take away access to unspoiled outdoor areas and the opportunity they provide for exercise and recreation, necessities of a healthy, happy, and productive life.

The amount of land a park system provides is important, but the value of the land increases if it can be properly distributed in relation to needs and resources. Playfields should be located near young populations most in need of them. Other kinds of parks must spring from local conditions and traditions, in locations selected to take advantage of the natural and manmade resources of the city—its harbor, stream valleys, hills, and parkways.

Without the Olmsted plan, Baltimore would have been reduced to acquiring land where and as it became available, developing the kind of parks that would have been devalued by incompatible uses of the surrounding land.

Costs for development and operation in such an unplanned system, relative to the level of service, would be greater than necessary.[29]

Recreation areas make up only a part of all the facilities that the city must provide and maintain for its citizens, and all these parts must work together. The recreation areas must be as near as possible to the homes of those who use them, although land should not be devoted to recreation if it makes a more efficient location for housing or other development. The recreation areas must relate to the streets and parkways. The large parks must be easily approached by roads, without unnecessarily interrupting the main lines of traffic; on the other hand, they should not unnecessarily splinter into small and ineffective bits by traffic crossings. This has been the fate of much park land in Baltimore, as the preface to the 1926 report foretold: "The plan for a city's recreation areas is like all the rest of the city plan, merely a record of the city's best judgment as to how the total land of the community shall be allotted to its various uses so that on the whole all uses shall be properly served and each piece of land shall be most effectively used."[30]

By the mid-1920s, a portion of the park land envisioned in the Olmsted plan of 1903 had flourished, but some acreage had succumbed to two decades of industrial expansion. The years had proven the accuracy of the plan, however, and planned parks were still urgently needed. In two decades the needs of the populace and the rapid pace of population growth had far outpaced the park land program.[31] With the coming of the Depression, the sources of revenue for new land acquisition were wiped out, and the city was unable to pursue the completion of the Olmsted plan of 1926. Writing in 1929, the new president of the Board of Park Commissioners, George W. Cameron, figured that Baltimore, with its population of 819,000 and 58,835 acres, ought to have 5,565 acres of park land instead of the 3,400 actually owned. The state legislature denied the board the right to finance the carefully prepared park extension plans for making up this deficiency. Cameron observed that "common sense points to the necessity of looking a generation ahead and acquiring open spaces not now actually needed, just as none of the older parks were urgently needed when acquired," since they were then "wholly within, or bordering upon open country." He observed that, "due to neglect of a past generation, children are playing in the street," but concluded that nothing can be done for areas of the city already built up. More than three-quarters of the 3,400 acres in the system were contained in just the nine largest parks.

The 1932 budget for the parks was slashed to 40 percent of its pre-Depression level. In 1938 the Works Projects Administration began helping the city parks department with maintenance, road repairs, and athletic field operations. Despite the lack of resources and manpower during World War II, and losses of acreage by Wyman and Gwynns Falls Parks, in 1943 city parks totalled 4,270 acres, of which five hundred were in playgrounds and playfields,

A shepherd and his flock on the slopes of Druid Hill Park, circa 1905. (Prints and Photographs, Maryland Historical Society.)

and 3,770 in city-wide and stream-valley parks, squares, and medians. That year's plan called for 185 new playgrounds and thirty-three playfields adding a total of over 1,100 acres.[32] By 1950 the system had expanded to 5,772 acres, cared for by 650 permanent employees augmented by summer helpers. This equaled the target figure for acreage cited by Cameron a generation earlier.[33] In 1965 there were 5,865 acres in parks and recreation land, still a deficiency of roughly 2,270 acres.[34]

Parkway or Expressway?

The Olmsted plans of 1903 and 1926 proposed several parkways radiating out from the city that were never built. This left the city without adequate automobile traffic routes into downtown prior to the interstate era. After World War II, a new generation had new priorities for the land once marked out as park. To the highway builders of that era the stream valleys represented the only remaining stretches of undeveloped land available for the interstate highway system to approach the city.[35] In part, the highway planners played upon Olmsted's parkway concept, envisioning expressways as extensive, park-like greenbelts which would provide a relaxing, scenic atmosphere. The degree

to which this ideal can be thwarted can be seen today in the way Interstate 895 and sprawling industry dominate the lower Patapsco valley.

The Olmsted proposal of 1926 called for a parkway leading up the Jones Falls toward its source in Green Spring Valley. As originally designed, Jones Falls Park would advance north of Druid Hill to Lake Roland. The city council seriously considered a proposal for development of Jones Falls Park. The park plan arose out of a seventy-million dollar park master plan commissioned by the city in 1960, which called for the addition of seventeen hundred acres and 193 new facilities by the mid-1980s. Concurrent expressway planning for I-83, called the Jones Falls Expressway, appeared to eliminate any possibility for realizing the stream valley park idea. The business community lined up in favor of the expressway, leaving no alternative for park advocates but to attempt to integrate the expressway and stream valley concepts. A report commissioned by the Board of Recreation and Parks and the Municipal Art Society in 1961 called for an urbanized park of 353 acres, in places amounting to nothing more than an elaborate landscaping plan for the expressway, containing restaurants and many other structures as well as high-rises on the perimeter.[36]

Despite this effort at compromise, in 1964 the city council withdrew its park plans for the Hampden-Woodberry segment of the valley, discarding fifty-three acres. Additional acreage fell from the plan until only a fraction of the proposed area remained, a narrow strip almost too small for any practical park purpose.[37] Only Cylburn Park and Robert E. Lee Park came to fruition in the proposed Jones Falls Park plan. A relative of Robert Garrett, then Park Board president, had willed Robert E. Lee Park to the park system in the 1940s. This park of 449 acres surrounds Lake Roland, the only remaining boat lake.[38] Most of the industrial development stands on the east side of the Jones Falls, but ample green space survives today between the television tower and Cylburn Park (with additional construction now pending) and north of the Baltimore County line.

A tributary of the Jones Falls, Stony Run joins the falls just below Druid Hill Park. On Stony Run, Wyman Park protects the valley as far as University Parkway, where Stony Run Park continues, a narrow city block in width, to the green space behind Friends, Gilman, and Bryn Mawr Schools. The Olmsted report of 1926 proposed this stream valley park, and much of it still remains parkland despite encroachments.

The Reservations

The ridge and valley hinterland to the north and west and estuary and bayshore landscapes to the south and east make diverse types of scenery easily accessible to the people of Baltimore.[39] The 1903 Olmsted plan called for two reservations in the stream valley parks and two others along the banks of tidewater rivers that flow without much fall directly to the bay. South of the

Cylburn Park is only a fragment of the seventeen-hundred-acre Jones Falls Park proposed in the Olmsted Plan. Most of the land fell to development and industry after World War II. (Vertical File, Maryland Historical Society Library.)

Patapsco, Curtis Creek Park was one of the proposed tidewater parks. Instead, the mouth of this creek, Curtis Bay, became a notorious dumping ground for toxic wastes, and a General Services Administration depot was established on its west bank. (The Marley Neck bank still presents a relatively unspoiled shoreline above the United States Coast Guard station at Arundel Cove.) In partial compensation for the loss of Curtis Creek Park, the State of Maryland created Sandy Point State Park on the shores of the Chesapeake Bay, near the bay bridge. At 760 acres it provides beaches within an hour's drive from Baltimore.[40]

North of the Patapsco, the Back River was to be parkland from about Witchcoat Point to its headwaters. This project did not develop, though extensive wetlands and tidal flats on the Back River shores were set aside and protected from future development in 1993. Unfortunately, Conrail and Interstate 695 run only a half-mile from the banks of the river.

Two main tributaries of the Back River, Herring Run and Chinquapin Run, have parkland as envisioned by the Olmsted report of 1926. Johns Hopkins acquired Clifton Park, an estate dating back to 1802, in 1836.[41] Hopkins wanted this site, located between Harford and Bel Air Roads, for the university he founded. Instead it came into the city park system in the 1890s. The mostly treeless park has given space to two cemeteries and a junior and a senior high

school. The grounds of Montebello School connect the park with Lake Montebello and to Herring Run beyond. Before the Depression a beginning had been made in acquiring Herring Run Park, with waterworks properties facilitating its extension. As late as 1950, at 513 acres, it had the only natural spring in the system. A fifty-acre tract was sold off to the Baltimore produce terminal, continuing a series of losses.[42] Herring Run Park stretches three miles from Montebello Hospital to the highway interchanges at Interstates 95 and 895. Private owners now hold half the length originally proposed, causing the park to be very narrow between Sinclair Lane and Bel Air Road.

The large outlying forest reservations in the stream valleys matured as state parks. The Olmsted report of 1903 proposed parkland for the entirety of the Patapsco River. Indeed, in the mid-1920s the State Board of Forestry established a forest reserve along sections of the river. The initial area widened until it included a large fraction of the tract recommended in 1903, from Relay to Alberton and beyond. By 1957, Patapsco Valley State Park extended over forty-two hundred acres, offering hiking, camping, and similar forms of recreation in the wilds, while still preserving the forest landscape for future generations. Today it covers approximately two-fifths of the proposed area, in two major enclaves: one just upstream from Elkridge and the other, further up, above Ellicott City. Above Relay the river valley avoided the developer's axe. From Elkridge downstream the Harbor Tunnel Thruway dominates the parts of the stream valley that were acquired for park land—including Reedbird Park, Southwest Area Park, and part of Patapsco Valley State Park.

The other reservation proposed in 1903 thrives as Gunpowder Falls State Park. At the time, the Loch Raven Reservoir on the Big Gunpowder Falls was protected watershed owned by the Baltimore City Water Board. The Big and Little Gunpowder Falls feed into the Gunpowder River along the eastern boundary of Baltimore County. Despite development near I-95, the park branched out over much of the lower valleys of both falls. A study published in 1958 called for a park covering twenty-three thousand acres.[43] Acquisition of small parcels around Sweet Air and Days Cove in the 1980s raised the total acreage of this park to fifteen thousand.

Nature Preserve in the City: The Gwynns Falls Valley

A mixed-mesophytic forest thrives along the hills guarding the Gwynns Falls and Dead Run. Three different forest types live together: the oak-hickory type, the beech-birch type, and river-bottom hardwoods—maple, ash, and box elder. The forest has achieved a steady state of ecological climax, its final vegetative form: a natural community in a stage of ongoing maturity. It delights naturalists because of its great variety of species and their vigor, limblessness, height, and large diameters. Some of the trees first sprouted in the 1730s; others are over a century old. Some places in the park far surpass groves preserved

elsewhere as big tree forests. The red and black oaks are unusually abundant, even growing on the ridges alongside tulip poplars, a strange place for plants needing moist soils. The white oaks one might expect may have been cut down for ship building and cooperage in the late nineteenth century. Wildflowers spring up in abundance: thriving trillium, jack-in-the-pulpit, geranium, cohosh, and a host of others.[44]

Gwynns Falls Park originally stretched from Gwynn Oak Avenue to Washington Boulevard, with breaks at Edmondson Avenue, Baltimore Street, and Frederick Road, encompassing 763 acres. By 1956, the boundaries had been reduced to Purnell Drive in the north and Wilkens Avenue in the south; at 747 acres it remained the largest park in the bureau. The city purchased an area totalling 312 acres adjoining Gwynns Falls Park from descendants of Thomas Winans in two parcels, in 1941 and 1948. This became Leakin Park. A further 850 acres augmented these in the late 1960s. The mouth of Gwynns Falls—the area bounded by Carroll Park, Ostend Street, and the Harbor—hosts a prominent waste treatment plant, gas storage tanks, and other heavy industries. Industry and railroads broke the progress of Gwynns Falls Park upstream; the park suffers many breaks, notably above Baltimore Street.

Along Gwynns Falls between Washington Boulevard and Wilkens Avenue, Carroll Park was extended to the stream (the present golf course), but the low, wooded shore that frames the stream landscape on the west adjacent to the railroad remained in private hands. Allowing this narrow strip to devolve into factories and slums reduced the value of the large piece of park land on the east side of the stream. It has shown some industrial value, but it would have made an excellent extension to the playground on the opposite side of Wilkens Avenue.[45] A current project known as the "Greenway" will acquire four parcels along the stream to complete the park connection and create a hiking trail from Gwynns Falls Park to Middle Branch Park.[46] Storm clouds remain. The city department of public works has just endorsed a plan for a landfill along the stream.

For many years highway planners intended to cut through the center of Gwynns Falls Park and obliterate the meadow at the confluence of Gwynns Falls and Dead Run. The efforts of neighborhood groups in open hearings as early as 1963 ultimately turned back plans for Interstate 70. At hearings on the design of the Leakin Park segment of I-70 held in 1969, residents won a delay pending an ecological study. That study, written by Robert H. Giles of Virginia Polytechnic Institute, made a strong argument for preservation: "Open space is not the leftover land, or the vacant land, the unused land or the waste land. It is of an equal order of consideration with any kind of development."[47]

To facilitate high-speed travel, a highway must take a right of way of at least three hundred feet, or about fifty acres per mile. The land taken usually lies at the lowest and most level contour beside or even astride the river, the central

feature of the park landscape. Highway designers tend to re-sculpt the entire right-of-way, erasing whatever might stand in the way. Giles stressed that, once destroyed, a park can never be replaced.

> It represents values and resources that cannot be found elsewhere. It must be preserved *in situ* or not at all. . . . The forests and parks of Baltimore . . . have no measurable real value for agriculture, livestock, firewood, or forage. Nevertheless they contribute in significant physical ways to the well-being of the citizens of Baltimore. They regulate water supply, reduce floods, recharge ground-water supplies, reduce winds, ameliorate carbon dioxide levels, cool the temperatures . . . reduce erosion and prevent siltation of aquatic organisms. In addition they provide space for recreation and exercise . . . whether a view, a height, a play area, or an escape, these are real physical needs—as real as those of bed, food, and clothing. . . . The land and water resources determine whether people want to live in a city, but more importantly if they can live in health, safety, and decency.[48]

The stream valley parks control the water within the watershed and within the community. Where a forest is cut down, evapotranspiration decreases. Due to the hardening of the ground surface, storm waters run off as much as 50 percent faster. Rainfall under natural conditions percolates into the soil lens and thus contributes to a stable stream flow. Remove the trees, manipulate the habitat, interrupt the ground water tables, and you will surely influence the amount of flow and its quality. The increased floods, siltation of the bay, and pollution caused by this run-off carries a high economic cost to the community.[49]

A statement from the Olmsted report of 1903 provides an apposite conclusion to this article. "When a city grows, . . . streets and blocks multiply automatically, as it were, whether planned in a far-sighted way for the best common interests or left wholly to private initiative; but other open spaces, such as parks, can be secured only by joint action; they are not inevitable products of city growth, and if they are to exist, *every generation during which the city grows must exert itself to add more of them* [emphasis supplied]."[50]

NOTES

1. William B. Marye, "A Commentary on Certain Words and Expressions Used in Maryland," *Maryland Historical Magazine,* 46 (1951): 126.

2. B. A. Goldman, *The Truth About Where You Live: An Atlas for Action on Toxins and Mortality* (New York: Random House, Inc., 1991), 41, 91, 107, 121.

3. Bob Hall & Mary Lee Kerr, *The 1991–1992 Green Index: A State by State Guide to the Nation's Environmental Health* (Washington, D.C.: Island Press, 1991), 89.
4. Goldman, *The Truth About Where You Live*, 178, 181, 275.
5. Eighty-eight percent of the population breathes air with too much carbon monoxide, air that also violates ozone standards. Hall & Kerr, *Green Index*, 22.
6. Ibid., 110.
7. *Baltimore Sun*, November 7, 1993. The impaired streams included Dead Run, Herbert Run, and Bird River. The lower portions of all the streams were "moderately" degraded, as were some creeks draining into Loch Raven Reservoir. Dead Run suffered from low levels of dissolved oxygen, high concentrations of organic pollutants, variable water temperatures, and excessive metals and nutrient levels. See also Friends of Gwynns Falls/Leakin Park, *Water Quality Study* (Baltimore: Friends of Gwynns Falls/Leakin Park, 1990).
8. Woodlawn History Committee, *Woodlawn, Franklintown & Hebbville* (Baltimore: Woodlawn Recreation and Parks Council, 1977), 1.
9. "William B. Marye, "The Old Indian Road, Part II," *Maryland Historical Magazine*, 15 (1920): 210.
10. T. C. J. Whedbee, *The Port of Baltimore in the Making, 1828–1878* (Baltimore: F. Bowie Smith & Son [privately printed], 1953), 39–44.
11. Lewis Delano, "A Great Moral and Sanitary Agency: Baltimore's Druid Hill Park in 1860," American Studies Dept., University of Maryland, Baltimore County.
12. Ibid.
13. The park had at one time 664 acres. Simonds and Simonds, *Landscape Architects & Planners, Parks and Recreation Study, Objectives Standards Deficiencies* (Pittsburgh: Simonds and Simonds, 1965), A-13.
14. Arthur C. Comey, "The Present Status of Baltimore's Park System, June 2, 1924." Report commissioned by Baltimore City, Baltimore Environmental Center.
15. Theodore C. Schaetzle, *Nine Years' Operation of the Baltimore Sewage Works* (Baltimore: Baltimore Highways Dept., 1921).
16. Elizabeth Stevenson, *Park Maker: A Life of Frederick Law Olmsted* (New York: Macmillan, 1977), 309.
17. Frederick Law Olmsted, *Public Parks and the Enlargement of Towns* (1870; repr. New York: Arno Press, 1970), 9.
18. Friends of Maryland's Olmsted Parks & Landscapes, *The Olmstedian* (1988), no. 1.
19. Comey, "The Present Status of Baltimore's Park System."
20. Olmsted Brothers, *Report upon the Development of Public Grounds for Greater Baltimore (1903; repr. Baltimore: Friends of Maryland's Olmsted Parks and Landscapes, 1987), 36–37.*
21. Olmsted, *Public Parks and the Enlargement of Towns* , 25.
22. Ira L. Whitman, "Uses of Small Urban River Valleys" (Ph.D. dissertation, Johns Hopkins University, 1968).
23. Comey, "The Present Status of Baltimore's Park System."
24. Olmsted, *Public Parks and the Enlargement of Towns*, 16.
25. Ibid., 25.
26. As of 1965 there were forty-eight playlots (each averaging 0.31 acres in size), 136 play-

grounds (1 acre each), 84 playground/playfields (6.42 each) and 53 playfields (9.5 each). Simonds & Simonds, *Landscape Architects & Planners,* Appendix A.

27. Comey, "The Present Status of Baltimore's Park System."
28. Ibid.
29. Simonds and Simonds, *Landscape Architects & Planners,* 14.
30. Olmsted Brothers Report (1926), preface.
31. Comey, "The Present Status of Baltimore's Park System."
32. Simonds and Simonds, *Landscape Architects & Planners,* 33.
33. The earlier target was 5,565. The park system had grown by 2,372 acres including Leakin Park (312 acres), Graham Park (120 acres) and Robert E. Lee Park (450 acres).
34. Simonds and Simonds, *Landscape Architects & Planners,* 4, 33.
35. See Jim Duffy, "Best Laid Plans: Three Visions for Baltimore City that Never Came to Pass," *Baltimore City Paper,* November 26, 1993.
36. *Plan for the Conservation and Development of Jones Falls Valley* (Baltimore: Greater Baltimore Committee, Planning Council, 1961), 25.
37. Whitman, "Uses of Small Urban River Valleys."
38. Like Pine Ridge Golf Course and Graham Park, it is actually in Baltimore County. One city park, Fort Smallwood (acquired from the federal government), is in Anne Arundel County.
39. Comey, "The Present Status of Baltimore's Park System."
40. Allen Organization, *Study for a Proposed Gunpowder River Valley Park System* (Baltimore: Maryland State Planning Commission, 1958), 1.
41. Hopkins was another figure involved with the early beginnings of the B&O Railroad.
42. By 1965 it was reduced to 335 acres. Simonds & Simonds, *Landscape Architects & Planers,* A-3.
43. Land to be acquired, 11,610 acres; Existing Reservoir Land (Loch Raven and Prettyboy) 11,400 acres. Allan Organization, *Study for a Proposed Gunpowder River Valley Park System,* 23.
44. Robert H. Giles, "Environmental Impact Statement," Baltimore Environmental Center, 1969.
45. Comey, "The Present Status of Baltimore's Park System."
46. Project Open Space contributed $440,000 to purchase the land. Interview with Lisa Hite, planner, Baltimore City Department of Recreation & Parks, July 1993.
47. Giles, "Environmental Impact Statement."
48. Ibid.
49. Ibid.
50. Olmsted Brothers, *Development of Public Grounds,* 11.