


Ten Successes That Shaped the 20th Century American City

by Laurence C. Gerckens, AICP

1 PROVISION OF PURE WATER AND EFFECTIVE SEWAGE TREATMENT

When the germ theory of disease won acceptance in the early years of the twentieth century, city leaders moved to construct extensive sewage collection and disposal systems and to provide for unpolluted water supply. Construction of the massive dams, reservoirs, and aqueducts required to collect and carry great amounts of water over long distances for urban consumption, and extensive sewer systems to carry away waste, were among the greatest engineering feats of the late nineteenth and early twentieth centuries. 

Water for Los Angeles

Although cities such as New York and Cleveland could boast of hundreds of miles of sewer pipe as early as the 1890s, most cities simply dumped their collected sewage into downstream waterways. In the first decade of the twentieth century many cities still provided unfiltered water that was unfit to drink. As a result, outbreaks of diseases such as typhoid, which killed 1,063 persons in Philadelphia in 1906, were common. Between 1900 and 1910 many cities added sand filters and chlorination devices to their water systems resulting in a marked reduction in disease. By 1910, ten million Americans drank water that

Editor's Note: Unless otherwise indicated, sidebars were prepared by the Planning Commissioners Journal's editorial staff.

was at least sand filtered, an innovation that cut death rates dramatically.

The extensive water systems of American cities permitted widespread installation of flush toilets and bathtubs in American homes at the beginning of the twentieth century to a degree associated in Europe only with the elite. Provision of such admirable municipal systems led outlying areas to seek



The first Los Angeles aqueduct under construction.



annexation by central cities to obtain these services. This helped lead to large scale city growth in the first half of the twentieth century. Later improvements in sewer and water systems during the Great Depression and after the Second World War, combined with the application of effective filtration and chemical treatment systems, led to America's reputation for having the safest public water supply systems in the world.

Water for Los Angeles

by Eileen Flick

The Owens Valley, in Inyo County, stretches about 100 miles, bounded by the Sierra Nevadas and the Inyo Range; it is approximately 250 miles from Los Angeles. ... In 1902, with the passage of the National Reclamation Act, hopes ran high in the valley that the government would help the valley develop its water resources.

Meanwhile down in Los Angeles, by the early 1900's it was clear that new water sources were needed to support continued growth.... In 1902 William Mulholland became the first superintendent of the new [City Water] department.

As Mulholland began looking for new water sources, Fred Eaton, a former mayor of Los Angeles, and an engineer, brought the Owens Valley to his attention. Eaton had first discovered the valley in the 1890s, and had immediately recognized its potential as a water source. ... Eaton quietly set about buying up options on strategic land in the valley – the land that would be needed for construction of an aqueduct. To curious valley residents Eaton implied that he was affiliated with the Reclamation Service, not the city of Los Angeles, as was actually the case.

Following a series of bond issues the city acquired enough money to buy these options from Eaton and to start construction on an aqueduct. Thus the residents of Owens Valley, who had expected to be the beneficiaries of a federal irrigation project, found themselves out of luck, and water, as construction began on the great Los Angeles aqueduct.

The above was excerpted with the author's permission from a longer article "The Owens Valley Land Grab." Eileen Flick works at the University of Southern California's Center for Scholarly Technology.

Districting by Municipal Regulation

The following are excerpts from remarks made by Lawrence Veiller, a leader in the movement to establish municipal zoning. From the Proceedings of the Eighth National Conference on City Planning, Cleveland, Ohio, June 5-7, 1916.

"City planners must frankly admit that there has been much basis for the criticism so often heard with reference to the city planning movement in this country, to the effect that this movement has been largely discussion and that little real city planning has been done; that in actual achievement the results have been slight.

The reason that so little has been done, I am convinced, is because of the fact that we have not heretofore been able to carry out a city plan, owing to our inability to adopt any plan for the proper districting of our cities. ...

City planning if it means anything, means essentially differentiation – differentiation, for instance, in the use of streets; differentiation of through thoroughfares and residential streets; differentiation in the width of streets.

But how in the world can we differentiate these vitally important things if we have no means of knowing what our neighborhood is to be?

How many city planners are today able to say when they plan a city: "This portion is to be a residential district and remain so. And this section of the city will be a factory district and remain so. And this other portion of the city is to be a district in which the workingmen will have their homes." How delightful it would be if we could say anything of the kind. ...


There can be no doubt that the time has come in America when we should call upon the state to use its great power and prohibit those things that we know are clearly injurious to the community. ... The generation that comes after us, reading the accounts of how we hesitated and deliberated and wondered what we could do, will say: "Is not that an interesting illustration of the timidity and lack of courage of the men who went before us? Why they actually deliberated for years whether they could district a city!"

2 THE ISOLATION OF DANGEROUS AND DISHARMONIOUS LAND USES

American cities in the year 1900 were a hodgepodge of industrial, warehouse, commercial, and residential uses, frequently closely intermingled without rhyme or reason other than the characteristics generated by chance and individual advantage. It was not uncommon for a party to purchase a residential structure only to find it ringed by odoriferous uses that made occupancy of the structure untenable. Characteristics of entire neighborhoods often changed as uses moved in rapid succession.

With the poor needing to live in close proximity to places of employment (to obviate the need for trolley fare), dense tenement districts developed close to factories, warehouses, and other industrial establishments, often of an obnoxious and dangerous nature.

These two key turn-of-the-century problems – instability of neighborhood land uses and lack of compatibility of neighboring uses – were the focus of the first "comprehensive" zoning code in America, the New York City Zoning

Code of 1916. Addressed to protecting residential areas from invasion by commercial and industrial uses, and commercial areas from invasion by industrial uses, zoning restricted uses deemed non-compatible to specific and separate physical locations. This yielded more stable land use patterns, and promoted long-term development by ensuring that investment in areas would not be threatened by incompatible uses.  Districting by Municipal Regulation

The concept of the physical isolation of non-compatible or disharmonious uses in separate districts or zones, as practiced in the United States in the twentieth century, led to planned commercial and industrial districts, perimeter industrial parks, and creation of special remote zones for uses deemed extremely dangerous due to the high possibility of fire or explosion.


Today, the isolation of dangerous and disharmonious land uses in America is virtually complete except in the older central cities and in rural and semi-rural unzoned areas. In fact, the question has now reversed itself so that planners are increasingly asking whether the segregation of uses has gone too far. *Editor's Note: for a more detailed look at this, see Gerckens' article, "American Zoning & the Physical Isolation of Uses," in PCJ #15 (Summer 1994)*



A typical scene today: large commercial use isolated from residential district.

3 THE ABOLITION OF CORRUPT "BOSS" GOVERNMENTS

Many American cities were riddled with corruption at the beginning of the twentieth century. Political "bosses" operated "machines" to enrich themselves at public expense. Prior to the 1850s, political leaders had little access to vast sums of money. But opportunities for immense wealth emerged with the arrival of the street railway since private street railway corporations needed the municipality's permission to place their rails in public streets.

Political bosses took hold of the authority to grant or withhold franchises worth millions of dollars and used this power to accumulate immense personal wealth and buy an army of political lackeys willing to do their bidding. In addition to the granting of transit franchises, urban bosses often controlled the vast public works projects being built to meet the needs of the post Civil War era population boom. There were few carefully prepared plans for these projects and little concern for economy or efficiency. Instead, they were often viewed as an avenue for personal enrichment, and a ready-made source of jobs for constituents (often newly arrived immigrants) who could then be counted on for support at the polls.  Tammany Hall.

Reaction to the abuses of boss rule was one of the driving forces behind the widespread adoption of community planning in the early twentieth century. Planning advocates stressed the need for efficiency and accountability in the expenditure of public funds on capital projects. For this reason, Alfred Bettman of Cincinnati initiated the citizen-dominated planning commission in 1915, authorizing this body to create a long-range plan for the community that the boss-controlled city council could not

violate in ordinance or appropriation. He then introduced the capital budget to provide a public accounting, with public hearings for each proposed capital expenditure.

Adoption of a comprehensive plan and a capital budget, both now common municipal practices, helped to remove the corrupt boss politician and his cronies from the capital expenditure process, taking away one important source of their power. Planners can thus take credit for making a major



Caption of this Thomas Nast cartoon of Boss Tweed reads: A group of vultures waiting for the storm to blow over: – "Let Us Prey".

contribution to the municipal reform movement that significantly "cleaned up" American politics in the first half of the twentieth century.

Editor's Note: See also Gerckens' article, "Community Leadership & the Cincinnati Planning Commission" in PCJ #18 (Spring 1995). For a look at the planning commission's continuing role in capital budgeting, see Michael Chandler's series, "Capital Improvement Programs" in PCJ #25-27 (Winter-Summer 1997).



Tammany Hall

"Everybody is talkin' these days about Tammany men growin' rich on graft, but nobody thinks of drawin' the distinction between honest graft and dishonest graft. There's all the difference in the world between the two. Yes, many of our men have grown rich in politics, I have myself ... and I'm gettin' richer every day, but I've not gone for dishonest graft – blackmailin' gamblers, saloon-keepers, disorderly people, etc.

There's an honest graft, and I'm an example of how it works. I might sum up the whole thing by sayin' 'I seen my opportunities and I took 'em.'

Just let me explain by examples. My party's in power in the city, and it's goin' to undertake a lot of public improvements. Well, I'm tipped off, say, that they're going to lay out a new park at a certain place.

I see my opportunity and I take it. I go to that place and I buy up all the land I can in the neighborhood. Then the board of this or that makes its plan public, and there's a rush to get my land, which nobody cared particular for before.

Ain't it perfectly honest to charge a good price and make a profit on my investment and foresight? Of course, it is. Well, that's honest graft."

From: Plunkitt of Tammany Hall: A Series of Very Plain Talks on Very Practical Politics, Delivered by Ex-Senator George Washington Plunkitt ... recorded by William L. Riordon (Knopf 1948, New York). Plunkitt was a contemporary of Boss Tweed, perhaps the most notorious of the corrupt city officials targeted by late 19th century reformers.

The Tweed Ring's power was shattered in 1871, largely because of the work of a cartoonist. As one commentator has noted, "In those quiet days before the great uprising, only two led the crusade against the Tweed Ring: Thomas Nast of Harper's Weekly, and the New York Times. ... Tweed himself thoroughly recognized Nast's artistry in making a cartoon a deadly political weapon. 'I don't care a straw for your newspaper articles, my constituents don't know how to read, but they can't help seeing them damned pictures.'" From: Alexander B. Callow, Jr., The Tweed Ring (New York: Oxford, 1966)



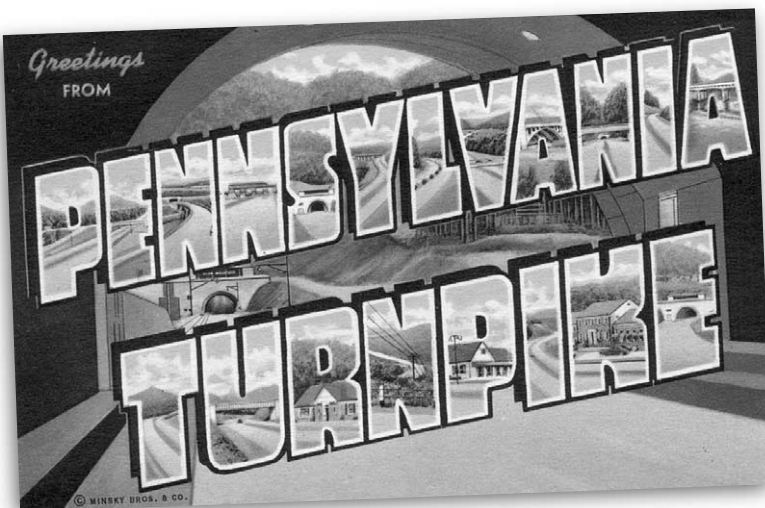
OHIO HISTORICAL SOCIETY

The National Road, shown here near Amsterdam, Ohio, circa 1913, was one of the few inter-city roadways in the early twentieth century.

4 DEVELOPMENT OF INTEGRATED ROADWAY SYSTEMS

The railroad was America's only truly national surface transportation system as the twentieth century began. Although the National Road had been completed from Baltimore and Washington to Vandalia, Illinois in 1840, in 1900 it was the only such federal highway. Moreover, for much of its length it existed as a rutted, muddy, and often log-corduroyed path. For most city dwellers, travel to another city meant travel by train, as the roads connecting cities were commonly farm-to-market dirt lanes. And for many Americans a trip to another city beyond

The Pennsylvania Turnpike, America's first superhighway, opened to the public on October 1, 1940. Financed largely by the federal Public Works Administration and Reconstruction Finance Corporation, the 160-mile long Turnpike between Pittsburgh and Harrisburg was constructed in just 23 months.



It served as a model for the first generation of limited access highways, and eventually was designated as I-76, the initial segment of the Interstate System. For more on America's early highways, see *Open Road* by Phil Patton (Simon & Schuster 1986).

the immediate vicinity of their home was a once in a lifetime experience.

The advent of the Model T Ford in 1908 is commonly recognized as heralding the beginning of the modern era of automotive transportation. But without a national commitment to a graded and paved road system this signal innovation might well have remained just an interesting curiosity.

The Federal-Aid Road Act of 1916, the first commitment to a nationwide road system, provided funding for two-lane concrete roads. Interestingly, the basis for the system was found in the Constitution's provision for federal post



roads, connecting post offices. These first federal highways, quickly lined with billboards and strip commercial uses, constituted the major American highway system until 1956, when the Interstate System of limited access highways was begun (also with a stated basis, in this

case national defense, that bore scant relation to its ultimate role).

The Interstate Highway System, with its more than 40,000 miles of roadway – one of the largest construction projects ever undertaken – knitted together the United States with rapid, safe, and comfortable access. It made a trip to either coast, or to any state in between, a possibility for most Americans. Perhaps of even greater import, it created a superb matrix for national and regional development based on over-the-road trucking fleets – and was accomplished without adding a penny to the national debt.

The Interstate System has also had its costs, many the result of its extension through central city areas. Countless neighborhoods were split, and many residents uprooted, to make way for urban interstates. One of the challenges facing planners in recent decades has been to address the negative impacts of these arterials, while respecting the vital role they play in commerce and economic development.

5 THE ELECTRIFICATION OF CITIES AND REGIONS

The electric light, demonstrated by Edison in 1879, provided a safe non-flame source for in-house lighting, replacing kerosene and gas lamps. The electric light made it possible for the business day to be lengthened, for factories to operate round-the-clock, and for the common dawn-to-dusk life cycle to be expanded with night-time activities.

Another vitally important product was the small electric motor. It freed industrial production from locations immediately adjacent to major power sources. No longer did machinery have to be within a belt length of a steam engine or water wheel. As a result, many electric powered industries moved into structures originally built as warehouses.

Unfortunately, safety standards for

6 THE ADVENT OF UNIVERSAL COMMUNICATIONS

From the country's earliest days till well after the end of the Civil War, the primary means of communication were personal interaction and the written word delivered by post.

Personal interaction required close proximity, as was possible in dense urban districts. Postal service typically provided a poor and often unreliable substitute for face-to-face contact. In 1860, for example, a letter mailed in New York City to be delivered to an address within the city could take from 24 hours to 24



LEWIS W. HISE/NARA

Even in the 1930s many rural homes lacked electricity.

warehouses were often woefully inadequate for their new industrial uses. Fire escapes, for example, adequate for employees expected in a warehouse were inadequate when the space was converted to industrial production, employing many more people. This was brought to the fore with the Triangle Shirtwaist Company Fire in New York City on March 25, 1911. One hundred and forty six people, mostly young women, died in a “fire-proof” building built to code for a warehouse that had then been converted to a clothing factory. The horrors of “Triangle” were a supporting motivation for closer government regulation through zoning ordinances and building use and occupancy controls.

Farm life in America in the early years of the twentieth century was constrained by nightfall, extended only slightly by kerosene lamps. Many saw that extension of electric power to the farm could result in a substantial upgrading of farm life and increased productivity.

Yet, the extension of electric lines to widely dispersed farm locations was expensive and incapable of being carried out by the individual farmer. One of the major priorities of the New Deal was the widespread electrification of America's farms and rural areas. The realization of regional and national power grids made electric power available throughout the country.



These two huge generators transform the power of falling water into electricity at the Tennessee Valley Authority's Norris Dam.



STATE HISTORICAL SOCIETY OF WISCONSIN 02.26

Telephone poles going up in Black River Falls, Wisconsin, circa 1890.

days to reach its destination – assuming it arrived at all.

The telegraph, introduced by Samuel Morse in 1835, provided a rudimentary information system that tied cities together in a national network by means of wires that paralleled railroad tracks. The telegraph's greatest virtue was that it was instantaneous. By the late 1880s the streets of most American cities' commercial districts were a forest of telegraph poles supporting hundreds of telegraph wires connecting major business houses.

In the long run, however, the telephone proved to be of much greater significance. First demonstrated in practical form by Alexander Graham Bell at the Philadelphia World's Fair of 1876, the telephone, like the telegraph, provided instantaneous communication. But unlike the telegraph, it could be easily

continued on page 8



Information & Location

Information technology has presented an unprecedented range of organizational options for companies and institutions by enhancing communications linkages through computer networks, phone, fax, modem, video conferencing, or e-mail. This allows different types of functions within a company to be optimally located in different settings: towns, cities, regions, or countries, depending upon the specific requirements of that activity.

The classic example of this is the relocation of back office functions out of high-cost urban centers to suburban locations – or, more recently, to smaller towns or off-shore locations. In larger companies, routine administrative functions may be centralized in one location, manufacturing moved off-shore, R&D performed in campus-like suburbs, and sales offices provided in each market area.

A similar distribution of activities can also occur between autonomous companies linked together by outsourcing (i.e., the practice of acquiring goods and services from outside, specialist firms, rather than providing them internally) and strategic alliances – trends enabled by reliable telecommunications linkages between companies and their supplier networks.

... Jobs are not translating directly into demand for commercial space the way they once did. In the information society, a smaller proportion of jobs will be accommodated in traditional workspaces such as downtown offices or suburban business parks. ...

A growing number of companies and agencies are setting up remote satellite offices or neighborhood telecenters, providing computing and telecommunications connections from a location close to where workers live. ... Teleworking also includes the rising tide of self-employed workers and those operating other home-based businesses. ...

All of these trends shift the demand for work space away from the traditional employment environments, reducing the demand for conventional, centralized workspaces.

The above is excerpted from "How the Information Revolution Is Shaping Our Communities, by Pamela Blais," published in PCJ #24 (Fall 1996).

Ten Successes... continued from page 7

used by any individual and was not limited in the amount and type of information that could readily be transmitted. By 1900, 800,000 telephones were in use in America, one for every 95 people – and usage continued to grow at phenomenal rates. Development of a national integrated telephone system



One of the 250,000 who provide Bell Service.

At Your Service

Imagine a bird's-eye view of the United States. Imagine it crisscrossed with telephone wires or underground cables connecting every city, town and hamlet. Imagine these wires reaching nearly 14,000,000 destinations—in city homes and offices and in 2,500,000 farmhouses.

Imagine all this and your vision is still short of the truth regarding the Bell System. A telephone at your elbow, a wire circuit to your farthest neighbor. Apparatus which embodies the latest developments of an army of trained scientists. The picture is still incomplete.

In every center of population is a telephone exchange and an organization of skilled workers to give life to the nation-wide facilities of communication. Every circuit must be tested; every inch of wire watched and kept in repair; every switchboard operated day and night.

But that is not all. There is the new construction to meet the increasing needs of the telephone-using public. Every day, from one end of the country to the other, thousands of crews of linemen and cablemen, and installers of every kind of telephone equipment, carry on this work with the continued growth of the nation.



"BELL SYSTEM"
AMERICAN TELEPHONE AND TELEGRAPH COMPANY
AND ASSOCIATED COMPANIES
One Policy, One System, Universal Service, and all directed toward Better Service

This 1922 Bell System advertisement highlighted the fact that 2,500,000 farmhouses were already wired for phone service.

was one of the great accomplishments of the twentieth century.

Future historians may well give similar weight to the end-of-the-century explosion in electronic communications ushered in by the Internet. Americans are experiencing a condition of near-universal communication, having access, privately or through a public library, to devices capable of transmitting, receiving, and accessing a vast array of data. For the price of a basic computer and Internet service, one can now access virtually the entire world, instantaneously. Marshall McLuhan's "global village" has become a reality.

Information & Location

7 THE WIDESPREAD EXTENSION OF HOME OWNERSHIP

In the later half of the 19th century, when the trolley car and horse-drawn wagon provided the principal forms of urban transportation, the typical urban residence was the tenement house. Privately owned individual detached housing units were limited to the well to-do and located on exclusive residential streets or in isolated suburban enclaves accessed by rail. The boarding house, for those unable to afford an apartment of their own, was a common feature of virtually every American city.

With the temporary affluence of the First World War economy and the prosperity of the 1920s, the detached privately owned single-family home briefly flourished, though for most families such "ownership" proved illusory. The common home finance device was a loan for the principal sum, usually for ten years, with the interest due each year and the full principal amount due at the end of that period. This permitted a family to live in the house they "owned" for the cost of the mortgage interest. Some might save the principal amount and pay it at the end of the mortgage period. But most were unable to do so. When the term of the loan expired they would find a financial institution willing to re-loan them the principal amount for another ten years. But with the "Crash of 1929" there were no institutions able to re-loan the principal, forcing millions into bankruptcy, with the loss of their homes.

The Federal Housing Administration (FHA), established by the Housing Act of 1934, was designed primarily to provide work for unskilled laborers by promoting construction of single-family homes. But it also made widespread home ownership possible by federally insuring private loans for single-family homes with amortization of the principal amount over the life of the loan – freeing the home owner from what had previously been a major obstacle to

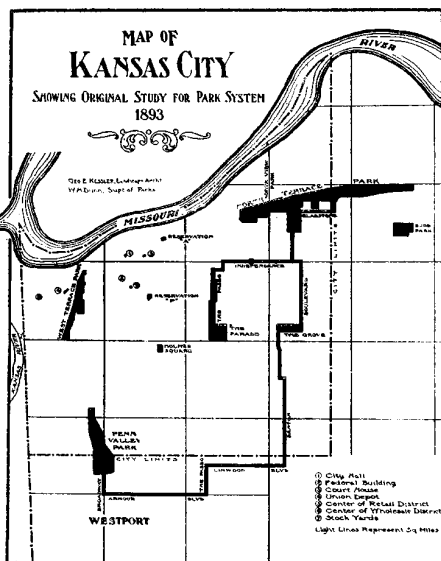
permanent ownership: the final balloon payment.

During World War II, the FHA provided even more liberal terms for loans in order to attract private investment to defense worker housing. These 10 percent-down 25-year loans were continued into the post-war period, enabling returning GI's to become homeowners. This helped lead to the widespread home ownership many Americans enjoyed in the second half of the century.

8 THE REALIZATION OF METROPOLITAN AND REGIONAL PARK SYSTEMS

The last decade of the 19th century saw the introduction of what proved to be a powerful idea: the development of park and parkway systems extending beyond the limits of the city. In Kansas City, landscape architect George Kessler proposed a system of regional parks including ridgeline overlooks of the Missouri River, preservation of unique woodlands and glens, and a system of wide linear greenways bounded by major roads

The parklands would provide structure to the emerging metropolis, while adding value to parkside residences and neighborhoods, and linking them with




George Kessler's original map of a park system for Kansas City shows parks and parkways extending beyond the city limits. Report of the Board of Park Commissioners of Kansas City, Missouri, 1914.



View of Tilden Regional Park in 1934, one of the initial parks included in the East Bay Regional Park District.

The East Bay Regional Park District

East Bay area community leaders early on recognized the benefits of addressing services on a regional basis. Their vision was most evident in the establishment, in 1934, of the East Bay Regional Park District. Now, more than 65 years later, the Park District is comprised of more than 91,000 acres of wildlife preserves, open space, and park and recreation areas.

District was the first American regional park district with consolidated authority and independent taxing powers. It established a national model for administrative and regional park quality.  The East Bay Regional Park District

Building on these successes, communities all across America developed metropolitan and regional park systems that preserved unique natural areas and provided needed recreational facilities. *Editor's Note: For more on the benefits of regional open space networks, see Ed McMahon's "Green Infrastructure" in PCJ #37 (Winter 2000).*

attractively designed roadways. As a bonus, by acquiring the land well in advance of development, it could be obtained at lower cost. *Editor's Note: For more on Kessler's plan see Gerckens' article, "Humanizing the Urban-Industrial Environment" in PCJ #10 (May/June 1993).*

The park system idea quickly took hold. By 1900 Boston led the way in realizing a vast regional park system. Daniel Burnham's 1909 *Plan of Chicago* gave a further boost to the metropolitan and regional park concept by proposing a park system extending some thirty miles from the center of the city and a lakeside park system of over twenty miles that would establish the unique character of the Chicago lakefront. And in the 1920s, in New York, the *Regional Plan of New York and Environs* and the New York State Parks Council and the Long Island State Parks Commission, led by Robert Moses, developed a model system of metropolitan parks and parkways that would shape the lives and recreational habits of millions of people for decades to come.

Regional park systems were also flourishing in the West. Perhaps foremost was the establishment of California's East Bay Regional Park District in 1934, based on Frederick Law Olmsted, Jr.'s "California State Park Survey." The East Bay Park

Controlling the Flow

Regional planner Benton MacKaye, in offering his thoughts on how regional planning could help structure sprawling metropolitan growth, drew on the analogy of coping with flood waters. As MacKaye described:

“The flow of metropolitanism we have compared loosely with the flow of waters – but we must now be more precise: we must compare it with the flow of flood waters. ...

[Assume] a circular area of twenty-mile radius, containing a central metropolis of 40,000 population and a number of small villages in even distribution. Four main highways extend outward from the central town – north, south, east, and west. Side roads cross the main roads at regular intervals. The periphery of the locality consists of a range of hills and low mountains, from which four ridges extend in toward the central town ...

If left alone, the metropolitan deluge will flow out along the main highways (and the side highways) ... distributing the population in a series of continuous strings, which together would make a metropolitan cobweb of the locality. In this way the area with its several villages would become engulfed by the metropolitan flood. What are the barriers and footholds supplied by nature in this locality for narrowing and checking the full workings of this cataclysm? What topographic features are there, and what common public ground, which could be developed as a series of ‘embankments’?

The outstanding topographic feature consists of the range of hills and mountains encircling the locality, together with the four ridges reaching toward the central city. This could be reserved as a common public ground, serving the double purpose of a public forest and a public playground. It might be called a ‘wilderness area.’ It would form a linear area, or belt, around and through the locality. ... This series of open areas and ways would form a distinct realm: it would be a primeval realm (or near-primeval) – the opposite realm from the metropolitan. ... A system of open ways of this design would form a series of breaks in the metropolitan deluge: it would divide – or tend to divide – the flood waters of metropolitanism into separate ‘basins’ and thereby tend to avert their complete and total confluence.”

From *The New Exploration: A Philosophy of Regional Planning* (Harpers Ferry, WV, The Appalachian Trail Conference). Originally published in 1928.

9 THE CONTROL OF LAND SUBDIVISION

From William Penn’s 1683 plan for Philadelphia to the latest neo-traditional addition, the primary American town building motivation has been land speculation. In the nineteenth century this led to over-subdivision, resulting in vacant lots, undeveloped streets, and large-scale default of property to the public through failure to meet tax payments. Lots were often sold with inaccurate or nonexistent surveys, with no access to public streets, or with areas too small to be built upon. Streets were laid out with either inadequate or overly generous rights-of-way, and often on slopes too steep to be negotiated.

New Jersey instituted the first land subdivision control in 1913, when it required local review of proposed subdivisions. But the primary impetus to land subdivision reform came from the Standard City Planning Enabling Act, prepared in 1928 by the U.S. Department of Commerce as a model for adoption by the states.

The Planning Enabling Act provided, among other things, for municipal planning commission approval of plats. The subdivision plat review process helped assure that residential streets would have adequate capacity to handle future traffic, and that lots would be of adequate size and shape and have frontage on a public way. By 1968 over 95 percent of municipalities of 5,000

population or more had adopted subdivision control ordinances based on state statutes largely modeled after the original Standard City Planning Enabling Act.

Subdivision regulation in many communities has expanded beyond the early objectives. By the mid-1950s, local subdivision controls were often specifying road construction quality and utility services, and many were requiring donation of land for neighborhood park and recreation facilities.

In more recent years, some jurisdictions have used subdivision regulations as a growth management tool, seeking to preclude development until adequate public facilities are in place. Others have used subdivision controls to preserve natural features such as wetlands, or as a way of achieving environmental goals such as the control of stormwater runoff. *Editor’s Note: For more on some of the resource protection uses of subdivision regulation, see Randall Arendt’s “Growing Greener: Conservation Subdivision Design,” in PCJ #33 (Winter 1999).*

10 THE ENVIRONMENTAL MOVEMENT

The century-long expansion of development, as reflected in many of the topics already noted in this article, has often overshadowed a countervailing movement aimed at protecting the environment and preserving natural areas. One of the leading planners within this movement, and perhaps


the father of “regional planning” was Benton MacKaye.

MacKaye is today best remembered for conceiving the Appalachian Trail in the late 1920s. For MacKaye the Appalachian Trail was to be much more than a walking path. He also envisioned it as a way of protecting the



View of part of The Woodlands, a 27,000 acre forested community located 27 miles north of downtown Houston.

THE WOODLANDS OPERATING COMPANY

indigenous worlds of woodland, village, and farm, while providing a series of greenways reaching downward to the sea separating the urban centers of the Atlantic Coast, “controlling the metropolitan invasion” into the natural world. MacKaye’s writings have remained a source of inspiration for regional planners to this day.  *Controlling the Flow*

Following in the direction set by MacKaye was Ian McHarg, a landscape architect at the University of Pennsylvania. McHarg explored a development ethic in which the natural world is viewed as an element of the commons to be conserved and treasured. In 1969 his book, *Design with Nature*, was published, emphasizing the importance of accounting for natural features in planning studies, and setting out a widely followed approach to determining areas appropriate (and inappropriate) to development through use of environmental overlay maps.



Benton MacKaye

The environmental movement, in which many planners took active roles, capped its influence in 1969 and 1970 with the passage of the National Environmental Policy Act, requiring environmental impact statements before major public projects such as highways could be built; the establishment of the Environmental Protection Agency; and the first Earth Day celebration (on April 22, 1970), which saw millions of Americans demonstrating in support of environmental protection.

The environmental movement has continued to exert its influence through subsequent years. Vermont enacted a landmark state land use permitting law, requiring major developments to be reviewed by district environmental commissions for compliance with a series of environmental criteria. In the early 1970s, McHarg helped design The Woodlands in Texas, the first ecologically-based American new town. In 1973, Oregon established a land-use system to promote compact cities and to protect



The early Apollo space missions coincided with the growing environmental movement of the late '60s, and helped highlight our planet's beauty and singularity. This view shows Earth rising above the lunar horizon.

woodlands, farmlands, and coastal beaches. In the 1980s and 1990s, Oregon's initiative spawned action in other states, and the use of ecological data and analysis in geographic information systems (GIS) became standard practice.

As we enter the new century, a nationwide “anti-sprawl” movement is under way with the potential to curtail the spread of metropolitan areas. And in these first years of a new millennium many jurisdictions are planning for sustainable development and the preservation of natural corridors, potentially realizing the respectful harmony between man and the natural world envisioned by Benton MacKaye three generations ago. ♦

Laurence Gerckens, national historian for the American Institute of Certified Planners, founder of The Society for American City and Regional Planning History, and emeritus professor at The Ohio State University, teaches American urban planning history as an adjunct professor at Michigan State University, Kansas State University, and Goucher College, Baltimore. Gerckens has contributed a number of articles to the Planning Commissioners Journal.



Fannie Mae's Top 10 Influences

The Fannie Mae Foundation has released a list of the top 10 influences on American cities over the past half century. The Fannie Mae list was based on a survey of historians, planners, and architects conducted by Robert Fishman, professor of history at Rutgers University. Some of you might find it interesting to compare with Larry Gercken's observations.

1. The 1956 Interstate Highway Act and the dominance of the automobile
2. Federal Housing Administration mortgage financing and subdivision regulation
3. De-industrialization of central cities
4. Urban renewal: downtown redevelopment and public housing projects (e.g., 1949 Housing Act)
5. Levittown (the mass-produced suburban tract house)
6. Racial segregation and job discrimination in cities and suburbs
7. Enclosed shopping malls
8. Sunbelt-style sprawl
9. Air conditioning
10. Urban riots of the 1960s

The Fannie Mae report is also available on their Web site: < www.fanniemae-foundation.org/research/ >

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