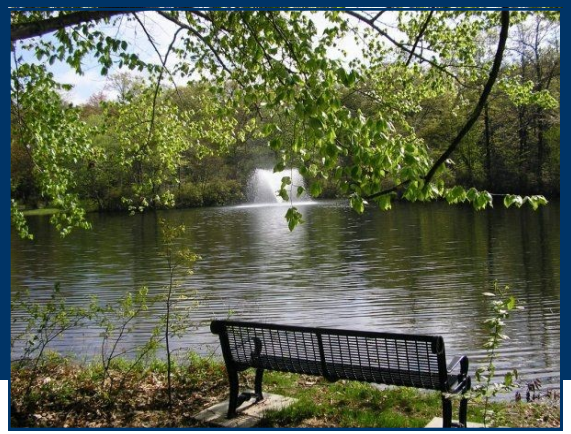
One City, One Plan

Chapter 10

Parks, Open Space & Natural Resources

KEY TOPICS

- Existing Parks & Open Space Inventory
- Friends of the Parks and Foundations/Trusts
- Recent Parks & Open Space Planning Efforts
- Hartford's Trail System
- Natural Resource Inventory
- Future Park & Open Space System
- Goals & Objectives



Adopted June 3, 2010

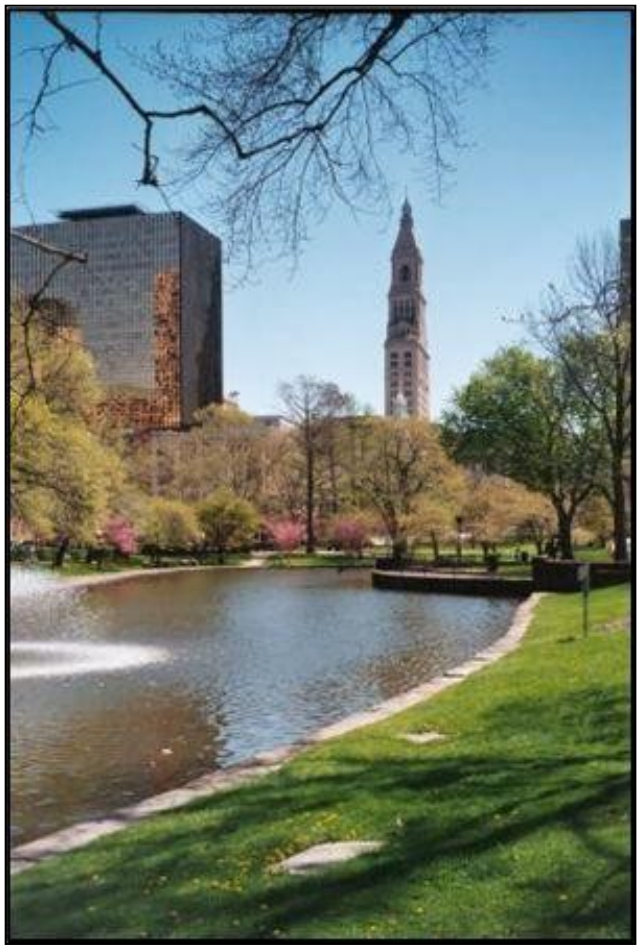
Introduction

The purpose of this chapter is to provide a summary of Hartford's parks, open spaces and natural resources and to recommend ways in which the City's Plan of Conservation and Development can address maintenance of and improvements to these resources. Hartford's Park system is of great historic significance to the evolution of American public parks. Hartford parks and open spaces serve as valuable amenities to the city's residents, regional visitors, and tourists from abroad. Hartford can further refine park landscapes and open space to increase property values, neighborhood quality of life, and regional ecological connectivity. Strengthened recreational and cultural programming can enrich the lives of residents and bring more visitors to the city.

Frederick Law Olmstead, the father of American landscape architecture who designed New York City's Central Park as well as great public parks, college campuses and landscapes across America – was the Hartford Park system's inspired advisor as well as a Hartford native. For over a century, Hartford Parks were regarded as among the best in nation and deeply admired by Hartford residents. Hartford's parks system began in 1853 with the purchase and creation of Bushnell Park, which was the nation's first publicly financed park. From the late 1800s to the early 1900s, Hartford added approximately 1,000 acres of parks and open space, including Elizabeth, Keney, Goodwin, Riverside, and Colt Parks. This acquisition provided the foundation for the present day open space system of parks and flood plains.

The quality, quantity and diversity of parks and open spaces are important attributes that enhance the character of Hartford's neighborhoods. The parks' multifaceted benefits include a range of recreational fields for organized sports, scenic pathways for bicyclists and pedestrians, swimming pools, boat launches, equestrian bridal trains, golf courses, playscapes for children, gardening, and other healthy opportunities for social interaction. In addition, the landscapes provide the ecological services of green infrastructure by improving air and water quality, mitigating stormwater run-off, and lowering noise pollution. These benefits enhance community character and positively affect property values and the marketability of neighborhoods.

The existing inventory of parks and open space is an asset to the City as it provides green space that helps break up the urban landscape patterns while enriching the surrounding neighborhoods with recreational opportunities. However, the degree to which park facilities meet contemporary needs is always an issue because community recreation needs and neighborhood demographics continually evolve over time. While the existing parks and open



View of the pond at Bushnell Park

Keney Park Golf Course

Signage at Entrance to Riverside Park

space inventory provides a wide array of recreational opportunities and extraordinary scenic landscapes, there is potential for recreational improvements that will meet the changing needs of the Capitol City.

Existing Parks and Open Space Inventory

Hartford has 35 parks and approximately 2,000 acres of open space within the city limits and an additional 917 acres outside Hartford. Hartford's facilities range from large parks like Keney, Colt and Goodwin to small neighborhood parks and greens like Campfield Green and Franklin Square Park. The locations of Hartford's parks are shown on the map titled *Parks, Recreation & Open Space Inventory*.

The City of Hartford Department of Public Works manages and maintains the facilities of the park system while the Department of Health and Human Services' Recreation Division manages athletic programming and social services within the system.

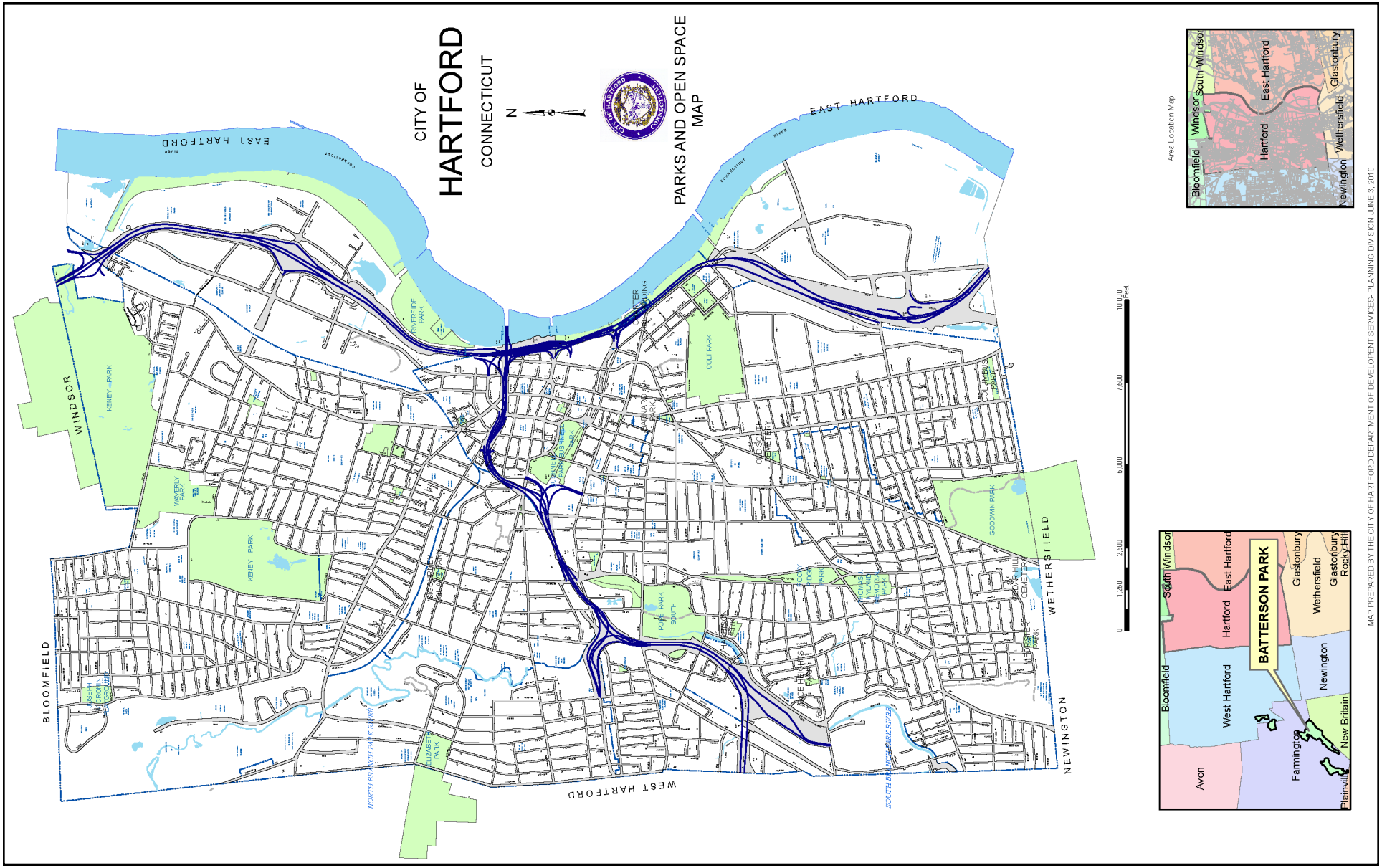
Although the City has over 2,000 acres, nearly half of the land is located in just six parks: Keney (537 acres), Goodwin (126 acres), Colt (108 acres), Pope (77 acres), Riverside Park (52 acres) and Bushnell (33 acres). Hartford also has significant open space acreage outside of its borders. Batterson Park (585 acres) is located largely in Farmington with the southeastern edge in New Britain. Parts of Goodwin, Keney, and Elizabeth Park extend into adjacent communities.

The Connecticut River is Hartford's greatest regional natural resource. Hartford is the northernmost extent of the navigable section of the River. Riverfront Recapture, a non-profit organization, manages a premier regional waterfront park along the Connecticut River. Riverfront Recapture entertainment as well as access to the Connecticut River at Charter Oak Landing, Mortensen's Riverfront Plaza and Riverside Park is all within walking distance from Hartford's central business district.

Charter Oak Landing, located just to the south of the Downtown, includes dockage for excursion boat service, a boat launch, riverside trails and picnic areas. A paved and lighted pedestrian walkway connects the park to the Great River Parks Amphitheater in East Hartford via a pedestrian walkway on the Charter Oak Bridge.

Mortensen's Riverfront Plaza, the centerpiece of the riverfront park system, connects the downtown with the waterfront. The plaza features an amphitheater, boat cruises, seasonal food and entertainment, paved walkways and access to the river. A pedestrian promenade on the Founders Bridge connects the Downtown to both the Great River Park in East Hartford and the Riverside Park to the north.

Riverside Park is a century-old restored park



Parks & Open Space Inventory Map

Pope Park

Gardens at Elizabeth Park

located just north of the Downtown. The park features a boat launch, a gazebo, a playscape, climbing wall, multi-purpose trails, a football field, and a boathouse for rowing clubs, which includes a meeting hall for cultural gatherings.

Six of Hartford's parks are on the National Register of Historic Places, including Bushnell Park, Keney Park, Colt Park, Elizabeth Park, Sigourney Park, and Charter Oak Landing. These older historic parks are some of the city's greatest assets and the backbone of the parks system.

Bushnell Park, one of Hartford's most popular parks located in the center of Downtown Hartford, hosts enriching features of historic, architectural and natural significance. These include the Soldiers and Sailors Memorial Arch, a 19th century carousel, a reflecting pool, the Corning Fountain, Horace Wells and Israel Putnam Statues, and an outstanding urban Arboretum, which includes "Champion Trees" of Connecticut. A recently restored Pavilion hosts numerous seasonal theater and musical performances.

Pope Park is located in the City's Frog Hollow neighborhood. The park was donated to the City in 1895 by Colonel Albert Augustus Pope for use by his employees at the Pope Manufacturing Company and city residents. The park was originally landscaped by the renowned Olmsted Brothers design firm. Today, the park (and the additional area of Pope Park North) features areas for baseball, football, soccer, tennis, playgrounds, and spray and swimming pools. In November 2008, the City began the third phase of a $13.6 million initiative to revitalize the Bankside Grove section of the park. New bituminous walkways provide ADA access and improve pedestrian movement, including a new pedestrian entrance located near Park Terrace and Hillside Avenue. This component also includes new landscaping, benches and trash receptacles. These physical improvements will link pedestrians walking between other areas of the park where work has been completed over the last four years.

Elizabeth Park is located approximately 2.5 miles from the Downtown, and crosses into West Hartford along Asylum Avenue. The Park activities tend to divide at Prospect Avenue, which separates Hartford from West Hartford. The East Lawn section, which overlooks the city skyline, comprises 19 acres of open space within Hartford's historic West End residential neighborhood. Highlights include the first municipally-owned rose garden in the United States, with more than 900 varieties and 14,000 rose bushes displayed during the summer months; Seasonal horticultural attractions, which draw neighbors and visitors from around the world; and theater and music performances. The Elizabeth Park Pond House serves as a meeting hall for numerous community educational and cultural events.

Colt Park is located in the City's Sheldon-Charter

Oak neighborhood. The park features areas for baseball, basketball, football, soccer, tennis, playgrounds, and spray and swimming pools. In 2007, Phase II of the Master Plan began for Hartford's Botanical Garden and Conservatory. The Garden is planned for the westernmost 18.5 acres of the park and is proposed to consist of a series of indoor and outdoor garden spaces and restored historic buildings.

This Plan recognizes the aspiration of Vintage baseball to establish a more substantial and permanent location in the Colt Park area. Vintage Baseball is a unique recreational activity and part of an exciting trend. In the Hartford area, Vintage Baseball would give synergy to the drive to create a national historic park in and around the former Colt Factory. Moreover, The Plan cites Vintage baseball's potential to be a driver of economic development spawning industries involved in uniform production, period architecture and entertainment.

Keney Park is located in Hartford's Northeast Neighborhood and is the largest park and an unusually rich natural resource within the Hartford Park System. Keney Park is subdivided into three sections: Woodland, Waverly and Barbour. The Woodland section of the park (located between Edgewood Street, Greenfield Street and Ridgefield Street) features areas for basketball, tennis, volleyball, softball, handball, a spray pool and a swimming pool, play equipment, walking trails and a pond house. The park's pond is one of the most recent additions to the Connecticut Department of Environmental Protection's (CTDEP's) new Urban Fishing Program which seeks to provide fishing opportunities to urban areas ensuring that everyone in the state has easy access to fishing in the state's major metropolitan areas.

The Waverly section of the park (located along Waverly Street northeast of the Woodland section) features baseball and softball fields, a football field, basketball courts, play equipment and play areas, a spray pool and picnic areas. The Barbour section of the park (located along Tower Avenue northeast of the Waverly section) has a basketball court, tennis courts, a spray pool, play equipment, cricket fields and a golf course that extends into the Town of Windsor.

Upcoming projects planned for this park include improvements to the playing fields, refurbishing of carriage roads, installation of guide rails and construction of a pavilion..

Friends of the Parks and Foundations/ Trust Funds

In addition to the municipally budgeted maintenance and capital expenditures, there are "friends" organizations for most of Hartford's major parks that coordinate supplemental maintenance, plan and implement physical improvements, make programmatic decisions about the parks and undertake fundraising initiatives to

Baseball Field at Colt Park

Hyland Park

Matrix of Open Space Recreational Facilities

Facility Name	Acreage	Playscape	Pavilion	Picnic Area Benches	Tennis Court	Basketball Court	Baseball Field	Little League T-Ball	Softball Field	Soccer Field	Football Field	Water Feature Component(6)	Boat Launch	Golf Course	Indoor Pool or Spray Pool	Rec. Center	Walking Paths Trails
Aaron Fein Square	0.16																
Asylum Avenue Green	0.25																X
Barnard Park	1.57																
Batterson Park	585[1]			X		X						X	X				
Blue Hills Park & Community Center	0.94					X										X	
Bond Street Parkette	0.38																
Brackett Play Area/Kelvin D. Anderson	10.92	X		X		X									X	X	
Buckingham Square Park	0.33																
Burr Sculpture Court	N/A[2]																
Bushnell Park	33.4	X										X					X
Campfield Green	0.08																
Campfield Memorial Grounds	0.32																
Charter Oak Landing	45.1	X	X	X	X		X			X	X	X	X				X
Colt Park	108.1	X			X	X	X	X	X	X	X				X		X
Columbus Green	0.29																
Cronin Playground	10.24	X				X				X	X						
Day Playground	0.69	X				X									X		
Delucco Playground	1.08	X		X		X											
Dillon Stadium	6.28																
Elizabeth Park(3)	102.48	X				X		X	X								
Forster Heights Playground	3.02	X				X		X							X		
Franklin Square Park	0.07																
Goldfarb Memorial Park	0.5																
Goodwin Park(4)	236.05	X			X	X		X				X			X		X
Harbison Playfield	2.46																
Harriet Tubman Playground	N/A																
Hyland Park / Rocky Ridge Park	41.47					X	X	X							X	X	
Keney Park(5)	669.8	X		X	X	X	X	X	X		X	X		X	X		X
Keney Clock Tower	1.2																
Lozada Park	2.38	X				X			X						X		
New Ross Park	1.54																
Pope Park	77.03	X				X	X	X		X	X	X			X	X	X
Pope Park North	2.84	X		X	X										X		
Porter Memorial Park	0.41																
Pulaski Mall	1.66																
Ramon Quiros Playground	N/A																
Riverside Park	51.71	X									X	X	X				X
Sigourney Square	2.53	X		X		X									X		
South End Playground	6.95	X		X	X	X		X		X					X	X	
Tunnel Park	0.42																
Willie Ware Center	1.06	X				X									X	X	

Source: City of Hartford Department of Public Works and Health and Human Services & Planning Division

(1) 585-Acre park is located in the town of Farmington.

(2) Component of Wadsworth Atheneum property, which is 3.09 acres.

(3) 83.53 acres are located in West Hartford

(4) 109.96 additional acres are located in Wethersfield

(5) 133.1 additional acres are located in Windsor.

(6) Includes river access, ponds or ornamental water features.

support their goals. These organizations include Riverfront Recapture, Friends of Bushnell Park (Bushnell Park Foundation), Friends of Keney Park, Friends of Colt Park, Friends of Pope Park, Friends of Forster Park and Friends of Elizabeth Park. The organizations arose during the 1980s as the municipal parks and recreation staff was reduced, and neighborhood volunteers began to take the place of centralized city park system management.

The "friends" organizations receive donations and contributions from corporate sponsors and private sector donors, such as Aetna and Bank of America, to support the operations of their respective parks. The City of Hartford leases each park to a "friends" organization for $1 through a formal legal agreement. Without these volunteer organizations, the City of Hartford would need to budget for substantially greater financial and staff resources dedicated to the parks system.

Two additional sources of assistance are also available for Hartford's parks and open space system. The Hartford Parks Trust Fund is a trust fund held by the City that was established in 1988. The original contribution for the fund came from the sale of a piece of Batterson Park to the Town of West Hartford. The City uses the investment income from the trust as a source of funding for park capital improvements and acquisition, and may use up to 25% of the annual investment income to pay for maintenance and repair of existing parks facilities. The privately-held Knox Parks Foundation, founded in 1966 by Betty Knox, provides volunteer services to Hartford's parks for tasks such as park clean up, flower and shrub planting, and tree planting in City parks and neighborhoods. Knox Parks Foundation volunteers also develop community gardens throughout the City.

Recent Parks and Open Space Planning Efforts

In October 2007, the Trust for Public Land completed a study entitled "Renewing a Historic Legacy – The Park System of Hartford, Connecticut." This study discussed the history of Hartford and its parks system, compared Hartford's existing parks acreage and number facilities to those of other cities, and made strategic and programmatic recommendations for future parks planning based upon existing demographic, geographic and organizational considerations. The study also provided a fiscal overview of the expenditures and revenues associated with the parks system in Hartford.

Hartford's Trail System

Hartford has a growing network of hiking, biking and walking trails. One of the newest additions is the East Coast Greenway. The Greenway is the nation's first long-distance urban trail system. The Greenway is a city-to-city transportation corridor for cyclists, hikers and other

Riverside Park Trail

Ground breaking for the South Branch of the Park River Trail

Riverfront Rangers

Riverside Park Playground

non-motorized users. By connecting existing and planned trails, a continuous, safe, green route 3,000 miles long is being formed linking Maine to Florida.

It incorporates waterfront esplanades, park paths, abandoned railroad corridors and canal areas; the Greenway temporarily follows sidewalks and roadways to link some of these sections. The Greenway enters the City of Hartford from the east via the Founders Bridge and exits the City in the northwest corner along the Bloomfield border. In Hartford, the Greenway connects the Connecticut River at Mortensen's Riverfront Plaza to Bushnell Park and the South Branch of the Park River. Currently, most of the trail utilizes existing roadways. Future trail development will move more of the East Coast Greenway off-road through the City.

The South Branch Trail of the Park River Greenway utilizes publicly-owned lands along the Park River. The State of Connecticut has listed both the North and South Branches of the Park River as a designated greenways, which is required for funding eligibility. Phase One of the multi-use trail along the Park River was completed in October 2008. This 1,690 foot section of paved trail extends from Flatbush Avenue to Nilan Street. Phase Two of the trail will run southerly along the Park River from Nilan Street until it terminates at Newfield Avenue and is expected to be completed in 2010-2011.

The Capitol Region Council of Governments (CRCOG) recently completed a Regional Pedestrian and Bicycle Plan in April 2008. This plan promotes walking and biking as viable means of transportation not only within a community but also regionally. Safe and convenient bicycling and walking routes provide numerous benefits to the community. These benefits include improved mobility, a cleaner environment, a decrease in traffic congestion, a stronger economy, improved public health and a stronger sense of community. The primary actions recommended by the Plan include:

- Complete the East Coast Greenway through Central Connecticut
- Create an on-road bicycle network that will link important destinations
- Continue local trail development
- Invest in pedestrian safety improvements, including sidewalks
- Create regional standards for bicycle and pedestrian design
- Educate bicyclists, pedestrians and motorists
- Encourage bicycling and walking
- Provide targeted enforcement of traffic violations

In addition to the Park River Greenway segment of the larger East Coast Greenway, Keney Park, Goodwin Park, Bushnell Park, Riverside Park, Pope Park and other parks and open space properties in the City offer both trails and park roads

for walking and biking. Although the park roads are open to automobiles, they still provide walking, biking and jogging opportunities.

These trail networks, coupled with other local trails, city sidewalks and regional trails, provide a solid foundation for achieving an interconnected and accessible network of trails that link not only parks and open space but neighborhoods, schools, shopping centers and government facilities. When properly planned, greenways can link existing parks and open space areas with neighborhoods and community facilities such as schools, and provide a pedestrian-friendly environment to serve residents. Greenways greatly influence the natural landscape by providing a natural edge to an otherwise developed area. It is at this edge that open space contrasts with development and is so much more inviting by virtue of this contrast. Open space edges and borders can serve to enclose and define development and prevent a continuous unattractive sprawl. The maintenance of vegetative buffers along city roads and stream corridors are particularly useful in this regard, and serve as a natural filter that protects water quality.

Natural Resource Inventory

Like planning for infrastructure such as roads and sewers, communities should also inventory, plan and protect their green infrastructure. Green infrastructure is the interconnected network of protected land and water that sustains air and water quality, land resources and enhances both the aesthetic appearance of the community and the quality of life.

Waterways

Hartford has two major waterways – the Connecticut River and the Park River. The Connecticut River is New England's largest river, with a total length of over 400 miles and a drainage basin of over 11,500 square miles (over twice the size of the entire State of Connecticut). The specific features and characteristics of the river made it a natural fit for water-dependent manufacturing uses in the eighteenth and nineteenth centuries. This connection between the river and early American manufacturing was a major factor behind the development of cities such as Hartford and Springfield, Massachusetts.

Since the Connecticut River forms the entire eastern boundary of the City of Hartford, its presence has a significant impact on both the character and natural systems of the City. While viable commercial navigation of the river ends just south of Hartford, the City has capitalized on the recreational potential of the river, particularly through the efforts of Riverfront Recapture.

Hartford's other major waterway, the Park River was re-named after Hartford's first public park. The meandering river once defined the northern and eastern boundaries of Bushnell Park, and the irregular shape of Pope Park. Although one

Minor Flooding Along Connecticut River

Goodwin Park Pond

Bushnell Park

third of the Park River has been buried for flood control, and a convenient passage for I-84, the North and South Branches of the Park River, which still flow through six city neighborhoods are surrounded by open space managed by the Hartford Flood Commission.

The "non-buried" sections of the Park River can be found in two segments on the western side of the City. The South Branch of the river runs through the South West, Behind the Rocks and Frog Hollow neighborhoods, and enters the conduit just south of Park Street near Interstate 84. The North Branch emerges from the Park River Conduit north of Farmington Avenue near the intersection of Woodland Street and runs northwesterly, forming the boundary between the West End and Asylum Hill neighborhoods. The North Branch then passes through the University of Hartford campus before crossing over into West Hartford. These two branches of the river, which were originally connected, were separated by the construction of Hartford Public High School in the early 1960s.

It is along the "open" and non-channelized sections of the Park River that many of Hartford's water-related natural resources and features can be found. These include 100-year and 500-year floodplains, wetlands and areas of substantial tree cover. Through the efforts of the Park River Watershed Revitalization Initiative (an initiative sponsored by the Farmington River Watershed Association), public awareness of the watershed area and the impact that human activities have on the watershed's environmental quality is being promoted. A watershed management plan is currently being completed for the North Branch of the river.

The North Branch Park River Watershed Management Plan

The North Branch Park River Watershed Management Plan is currently underway (due February 2010) to determine possible sites for landscape restoration and stormwater management retrofits. The North Branch Park River Watershed Management is being conducted on behalf of the Ct Department of Environmental Protection, according to US EPA watershed planning guidelines. Although over 60% of the North Branch Park River Watershed is in Bloomfield, recommendations for improvement projects within Hartford City limits will be noted. Working with the state Department of Environmental Protection, Hartford could seek federal funding for green infrastructure and green jobs that could augment efforts to renew the city's scenic open space within the West End, Asylum Hill and Blue Hills. Landscape improvements and appropriate public access would greatly benefit neighborhood residents, employees within the St. Francis medical community, and students of public and private schools along the riverway.

The water quality and quantity of the North and South Branches is impacted by upstream devel-

opment within the 77 square mile Park watershed. In 2006 the MDC began a 20 year effort – the "Clean Water Project" – in order to reduce combined sewer overflows into the Park River. City of Hartford parklands and open spaces could be improved in conjunction with the "Clean Water Project" through 'low impact development' (green infrastructure) design strategies.

Wetlands

Wetlands are defined by many distinguishing features, the most notable being the presence of standing water for a period of time during the growing season; saturated soil conditions; and organisms, especially vegetation, that are adapted to or tolerant of saturated soils. Wetlands are not easily defined and definitions are variable between regulatory agencies. In Connecticut, wetlands are defined by soil type, specifically saturated or hydric soils, which are classified by the NRCS as Poorly Drained, Very Poorly Drained or Alluvial/Floodplain. Any combination of these soil classifications are considered wetland soils and are protected under the City's inland wetland regulations.

Wetlands are important for a variety of reasons, including:

- Wetlands are among the most biologically productive natural ecosystems in the world
- Wetlands provide habitat that is critical to a variety of plant and animal species, including threatened and endangered species
- Wetlands often function like natural sponges, storing water and slowly releasing it, thus reducing the likelihood of flood damage by controlling the rate and volume of runoff
- Wetlands help improve water quality by intercepting surface runoff and removing or retaining its nutrients, processing organic wastes and reducing sediment before it reaches open water
- Wetlands provide outdoor recreational opportunities (i.e., wildlife viewing/ photography, nature study)

Unique wetland types are those found on alluvial and floodplain soils. Due to the excessive permeability of the soil, these areas are very susceptible to rapid infiltration of pollutants. In Hartford, 241.3 acres or 2% of its land consists of wetland-designated soils. The locations of wetland soils are illustrated on the map titled Environmentally Sensitive Areas.

Steep Slopes

Areas of steep slopes are important to identify primarily because of their impact on development. In addition, these areas pose other hazards such as increased erosion, surface runoff, siltation and flooding of watercourses. Therefore, identifying areas of steep slopes is an important component of the natural resource

The North Branch of the Park River Trail

The North Branch of the Park River Trail

Hartford Wetlands

inventory. The areas identified as steeply sloped soils cover 64.4 acres of the city's land. These areas are illustrated on the map titled Environmentally Sensitive Areas.

FEMA Floodzones

A floodplain is a broad and relatively flat area of a river or stream valley on either side of the main watercourse. Floodplains are formed by a series of flood events, which spill over the riverbanks and work and rework the sediment. A 100 -year flood is a flood that has a one percent (1%) probability of occurring in a given year, or is likely to occur once every one hundred years.

The Federal Emergency Management Agency (FEMA) has determined areas within floodplains and their boundaries. Floodways are those areas within the floodplains that convey the floodwaters. The floodways are subject to water being carried at relatively high velocities and forces. The floodway fringes are those areas of the floodplain outside of the floodway which are subject to inundation but do not convey the floodwaters. Floodplains are delineated on the map titled Environmentally Sensitive Areas.

Riparian Corridors

Riparian corridors, or riparian buffers, are undisturbed, naturally vegetated areas contiguous with and parallel to rivers and streams. Riparian buffers protect water resources by improving water quality through filtering pollutants and sediments, stabilizing stream banks and river beds, improving wildlife habitat by providing travel corridors and improving aquatic habitat.

The recommended buffer width for riparian corridors varies depending on what the goal of the buffer is and the unique nature of each watercourse. For example, a river the size of the Park River will receive a much greater benefit from a 50' buffer than the Connecticut River. The minimum acceptable width is one that provides acceptable benefits at an acceptable cost. While this approach is not feasible for the entire city, there are some areas, in particular the Connecticut River and the North and South Branches of the Park River where some buffer implementation would be feasible.

These corridors, and their associated tributaries and waterbodies, form a network that can potentially link with the City's open space and recreation resources and existing infrastructure such as sidewalks and bridges. The City has a wonderful opportunity to develop, over time, an integrated system of open spaces, parks and recreational facilities linked by a network of greenways, sidewalks and public spaces. The Park River Greenway is an excellent example of linking open space and existing City-owned property along a river corridor.

Natural Diversity Database Listed Species

In Connecticut, the protection of unique biological communities is held to a high standard. In

support of this, the Connecticut DEP has inventoried sites across the state that contain habitats of endangered, threatened and special concern species. These habitat areas are perceived as unique and receive special protection status from the state. The state has identified these sites in a special survey called The Connecticut Natural Diversity Database, which is a centralized inventory of these unique habitat locations and represents the findings of many years' worth of biological surveys. The Natural Diversity Database breaks down the sites into the following taxonomic groups: mammals, birds, reptiles, amphibians, fish, invertebrates and plants. Within these groups, the species are further categorized as being endangered, threatened or special concern.

Information from the state's database was transcribed onto maps, represented by circles of a half-mile in radius. These sites, commonly referred to as "blobs," are represented ambiguously because of the many threats that protected species face. These threats include collection (because of their beauty or rarity), uniqueness or purported medical or economic values. Even well-intended observers and photographers have been known to accidentally destroy protected sites.

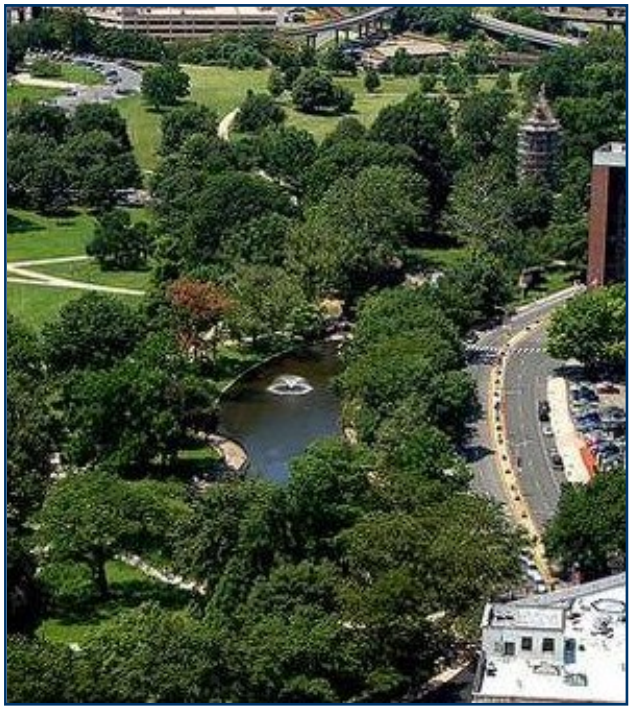
The locations of sites within the City identified by the Connecticut Natural Diversity Database are illustrated on the map titled *Environmentally Sensitive Areas.* In addition to generalizing the exact location of these sites, the category in which the sites are located has also been removed. This is to further ensure the protection of these unique habitats.

Tree Canopies

The trees and forested areas of Hartford are essential components to the city's character. This urban forest is the system of trees and associated plants that grow individually, in small groups, or under forest conditions on both public and private lands. Hartford's urban forest covers 1,142 acres or 9.8% of the city. American Forests recommend that urban areas should strive for 40% tree canopy coverage. Due to a loss of native tree species attributable to age, insects, disease and natural catastrophe, the health of Hartford woodlands is at risk. The Hartford Parks Trust Fund has allocated $180,000 over the next six years to address this issue through the "Reforestation of City Parks Project". It calls for the replanting of wooded areas with suitable tree species and for the development of at least one nursery in the City. A planting program with foresight will preserve Hartford's green spaces well for the future.

- Urban tree canopies are beneficial for a variety of reasons, including:
- Improving water quality through interception of rain, reduction in runoff, erosion stabilization, filtration of pollutants and reduction of water temperature through bank shading.

A turtle near the North Branch of the Park River



View of Tree Canopy at Bushnell Park

- Shade provided by urban trees not only lowers stream temperatures, but also lowers ambient temperatures by an average of 3 to 10°F, reducing what is known as the "urban heat island effect" created by extensive impervious surface coverage. Homeowners can reduce their heating and cooling expenses by 10% to 50% when trees are strategically planted around residences.
- Urban trees and shrubs reduce air pollution of cities by removing pollutants from the air. Trees also sequester and reduce carbon dioxide while releasing oxygen as they photosynthesize.
- Urban forests provide habitat and food for a variety of fish, birds, mammals, insects and amphibians that live in cities. Large and connected areas of urban forest offer the most valuable wildlife habitat.
- Urban trees offer an important link for connecting urban populations with natural resources. Involving residents in urban forestry activities provides an opportunity to integrate environmental stewardship with social progress.

Future Park and Open Space System

Hartford is fortunate to have a large and diverse inventory of existing parks and open space facilities, well-distributed geographically and diverse in the types of uses accommodated. In looking to the future, it will be important to maintain parks and open spaces that are adequate in extent, strategic in location and equitable in distribution in order to meet the unique active and passive recreation needs of the City's population. The future of existing parks and open space will depend in part on the efficient use of the existing facilities as well as the maintenance and rehabilitation of facilities requiring improvements. Hartford should look toward the future by identifying and prioritizing potential expansions of the parks system, while also looking to create linkages that provide desirable connections locally and regionally.

Goals and Objectives

The City should encourage enhancements, improved use, maintenance and rehabilitation of the existing parks and open space system to ensure that it is adequate in extent, strategic in location and equitable in distribution in order to meet the needs of the City's residents, as well as to protect important natural resources.

Promoting livable and sustainable neighborhoods and protecting the City's natural and built environment are two of the five key themes of One City, One Plan. In addition to the parks and open space goals listed below, goals related to these themes are identified throughout the plan and are listed together in the "Livable and Sustainable Neighborhoods" and "Natural & Built Environment" sections of the Action Agenda.

Goal 1: Update the Parks Master Plan.

Objectives:

- Form a Blue Ribbon Commission composed of representatives from the City Parks and Recreation Advisory Commission, 'friends' groups, neighborhood associations, regional environmental groups and other stakeholders in the development of short and long-term improvements to public parks and open space as a unified parks system.
- Review availability of neighborhood parks in all neighborhoods
- Review the existing park system for potential additions/deletions, including Batterson Park.
- Link open spaces to provide safe pedestrian walking & bike paths

Goal 2: Plan for park maintenance and improvements.

Objectives:

- Prepare an annual maintenance plan
- Repair and replace deteriorated infrastructure at parks such as sidewalks, benches, restrooms, fences, signage, softscaping and hardscaping, and park roads.
- Seek corporate sponsorship of new park signage to post way finding maps, points of interests, and park rules.
- Create a stewardship program to promote park maintenance by residents.
- Implement specific park improvements identified in the Hartford 2010 Plan, the Hartford 2000 Plan, the Capital Improvement Program, and neighborhood plans.

Goal 3: Protect and link existing open space.

Objectives:

- Develop clear standards for commercial uses and activities in City Parks.
- Designate existing parks as "Green Space/Open Space/Conservation" in the City's Generalized Land Use Plan.
- Renew the scenic vistas into parks and open space from the surrounding neighborhoods.
- Protect the historic nature of Hartford's parks.
- Provide safe pedestrian walking and bicycle paths between parks and schools and to the public transportation system.
- Link neighborhoods and employment areas to the riverfront via greenways, plazas, sidewalks and other pedestrian connections.

Goal 4: Increase programming and educational activities, and improve communications about these programs.

Objectives:

- Renew investment in the City's organized athletic leagues.
- Develop environmental education pro-

grams linked to the Ct DEP "No Child Left Inside" program. Build on programs such as Knox 'Green Team' and Riverfront Recapture's 'Science in the City'.
- Create digital and print inventories of all programs.
- Promote recreation programs in community facilities.
- Market existing parks and invest in park website improvements.

Goal 5: Improve park water quality.

Objectives:

- Improve water quality in all the park ponds and within the North and South Branches of the Park River by working to reduce pollution caused by stormwater run-off.

Goal 6: Improve the City's tree canopy.

Objectives:

- Emphasize the value of urban forestry and tree programs to improve the City's appearance, and attract tourists.
- Undertake efforts to monitor, maintain and enhance these resources through tree improvement programs as part of the City's maintenance and capital planning programs.

Goal 7: Reduce development impacts.

Objectives:

- Ensure that development is limited in floodplains and riparian corridors.
- Encourage the construction of "net zero" buildings to limit impacts and use of natural resources.