



2013 GOALS & OBJECTIVES

2013 GOALS

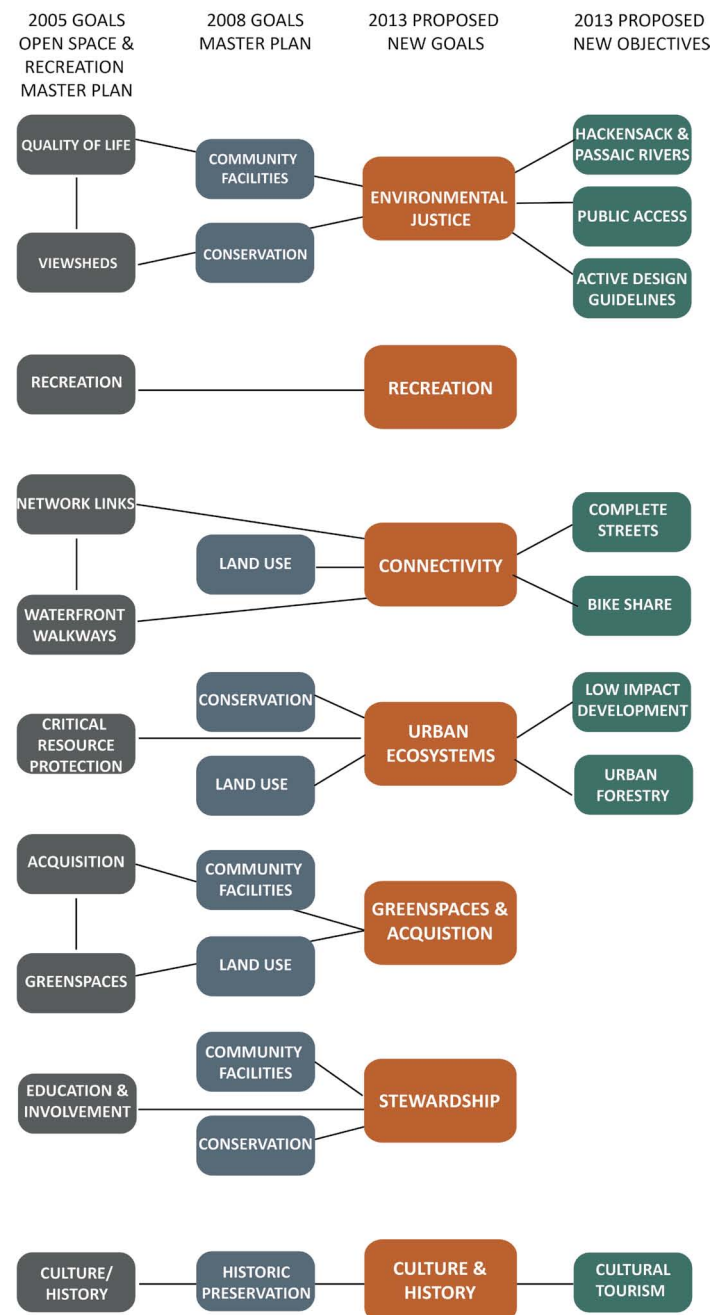
In an effort to maintain consistency with past reports as well as respond to newly recognized challenges and concerns, the Reexamination Report's goals and objectives are largely structured in the same way as the previous Open Space Report. The goals have been renamed and slightly restructured to reduce redundancies and more accurately describe the components of each goal.



Photo credit: Hudson County

Overflowing sewers and low-lying land caused streets across Hudson County to flood after Superstorm Sandy in October 2012.

After assessing the status of past goals and objectives and hearing input from citizens and stakeholders, Hudson County compiled a list of new objectives to include in the 2013 Reexamination Report. Objectives are summarized as follows: The Hackensack & Passaic Rivers, Public Access, Active Design Guidelines, Complete Streets, Bike Share, Low Impact Development and Urban Forestry. The chart below illustrates how the 2005 Open Space, Recreation and Historic Preservation Plan, the 2008 Master Plan Reexamination goals and the new 2013 objectives have been processed into seven succinct goals that are now the backbone of the 2013 Reexamination Report.



The following list of goals and their objectives give a more in depth view of the new goals and objectives structure. The goal itself is stated at the beginning of the section with a definition in the margin.

ENVIRONMENTAL JUSTICE

Goal: To recognize that improving the quality of life for Hudson County residents is a unique challenge due to its urbanized form and should be treated as a social justice issue.

Objectives:

1. Ensure access to quality open space and recreation facilities for all residents and age groups regardless of where they live, and provide a variety of amenities.
2. Work toward the goal of a ten minute walk to a park.
3. Continue to identify and document all areas and neighborhoods throughout the County that do not have access to open space and public recreation.
4. Strengthen the ability of the HCOSTF to fund projects in under-served neighborhoods and underfunded existing parks by increasing the points used to calculate scores for trust fund projects.
5. Public Access: Work with the County, municipalities, and stakeholders to ensure that all residents have access to the Hudson County waterfronts in light of NJDEP Public Access Rule changes (see "Public Access" goal).
6. Hackensack River: Reinvigorate the completion of the Hackensack River Waterfront Greenway and its implementation to ensure that all of Hudson County's residents, in particular communities in western Hudson County, have access to this natural resource.
7. Passaic River: Support the development of a Passaic River waterfront access and waterfront parks to ensure that all of Hudson County's residents have access to this natural resource.
8. Ensure that new developments provide public access to waterfront areas, recreational facilities, and open space.
9. Analyze park and recreation needs by utilizing both NJDEP Balanced Land Use Standards and National Parks and Recreation Standards and assess if these are appropriate measurements for densely populated Hudson County.
10. Meet county and municipal standards for parks and open space established in the Statewide Comprehensive Outdoor Recreation Plan.
11. Provide accessible community facilities which meet the standards of the American with Disabilities Act (ADA).
12. Encourage the reduction of regulatory and financial barriers to brownfield clean-up operations.

ENVIRONMENTAL JUSTICE is "the fair treatment and meaningful involvement of all people regardless of race, color, sex, national origin, or income with respect to the development, implementation and enforcement of environmental laws, regulations, and policies." (US EPA)



Photo credit: Hudson County

Hudson County houses dozens of former industrial sites (such as the one in the above photo) that often require expensive remediation processes to make them suitable for public use.

GOALS AND OBJECTIVES



Photo credit: Hudson County

The public waterfront walkway along the Port Liberte development (above) ensures all residents have access to the Hudson River.

RECREATION (,re-krē-'ā-shən)
“refreshment of strength and spirits after work” (Merriam-Webster)

CONNECTIVITY (kă-,nek-'ti-və-tē)– “the density of connections in path or road network and the directness of links.” (Victoria Transport Planning Institute TDM Encyclopedia)

13. Active Design Guidelines (ADG): Create walkable streets for all ages and abilities.
14. ADG: Increase the walkability of certain areas.
15. ADG: Encourage bicycle and pedestrian education programs.
16. ADG: Identify vacant lots and/or brownfields that could be used as recreation/work-out/garden areas.
17. ADG: Ensure that heavily used transit routes have safe access networks.
18. ADG: Support innovative facilities partnerships.
19. ADG: Promote spaces for farmers markets.
20. ADG: Encourage school or community groups to conduct walkability audits.
21. ADG: Encourage infrastructure improvements to encourage active transportation like walking and biking

RECREATION

Goal: Provide accessible open space and recreation opportunities to all Hudson County residents.

Objectives:

1. Address playground equipment deficits. Ensure that recreational facilities include a lifespan time of equipment on site.
2. Ensure completion of 2007 Hudson County Park and Recreation Plan recommendations for facilities improvements.
3. Increase funding priority for upgrading facilities in County Parks, and encourage the same in Municipal facilities.
4. Expand existing parks and encourage development of new parks where feasible.
5. Continue to react to public requests for new recreation facilities and facilitate public surveys.
6. Encourage municipalities to inventory and analyze all recreation facilities, public and private in an open space and recreation master plan to understand where new recreation spaces are needed and to understand the condition of the spaces.

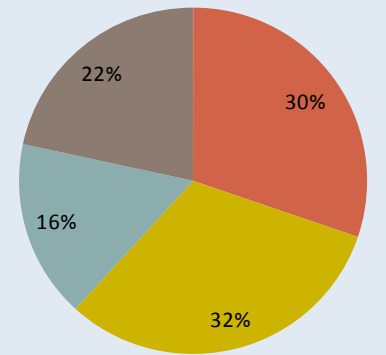
CONNECTIVITY

Goal: To link proposed and existing recreation and open space areas into a network accessible through a variety of transportation means, including public transit and bicycle or pedestrian transit.

Objectives:

1. Work with private developers to integrate waterfront developments with waterfront walkways and adjacent neighborhoods by assuring strong physical linkages and appropriate infill development, and discourage the construction of gated communities that separate the remainder of the community from the waterfront.
2. Partner with local municipalities, adjacent counties, New Jersey Meadowlands Commission, state agencies and private non-profit conservation groups for development of walkways.
3. Continue to follow the strategies outlined in the existing Hudson Waterfront Walkway Implementation Plan.
4. Develop a Passaic River Waterfront Walkway Plan.
5. Link existing residential neighborhoods with playgrounds, parks, recreation complexes and waterfront walkways via interconnected bicycle and pedestrian greenways.
6. Provide wayfinding signage to nearby parks and recreation facilities.
7. Improve signage on bikeways in County parks and throughout the county.
8. Create more East/West connections to link the waterfront areas.
9. Maximize access to cultural and historic facilities through public transportation and pedestrian walkway improvements.
10. Continue to actively participate in the ‘East Coast Greenway’ and ‘Liberty to Water Gap trail’ initiatives.
11. Complete proposed walkways and bikeways identified on the County Green Map. Promote bikeways and walkways in County Park roads.
12. Complete Streets (CS): Solicit feedback from community on transportation issues.
13. CS: Create a Bicycle and Pedestrian Advisory Board.
14. CS: Create a Disability Access Advisory Committee.
15. CS: Develop performance measures: Motorized and non-motorized measures track data integral to policy formation and structural implementation. They may also help identify areas in need of mitigation. Finally, performance measures can be used to set benchmarks or even act as readily available statistics used when seeking funding for future projects.
16. CS: Encourage individual municipalities to adopt a Complete Streets Policy. Hoboken adopted in 2010 and Jersey City in 2011.
17. CS: Experiment with temporary or pilot street alterations.
18. Bike Share (BS): Adopt the “Feasibility Report for Bike Share in Hudson County”, which was produced by the Hudson County Division of Planning in 2012.
19. BS: Endorse grant applications for further planning studies, as well as implementation funds for a Hudson County Bike Share system.
20. BS: Support the construction of bicycle infrastructure, which could serve as a network for a potential bike share system.

Do you currently use a bicycle as a mode of transportation?



- No, but only because don't own a bike
- Yes, often
- No, not really
- Yes, rarely



Photo credit: Vanessa Cruz, The Hudson Reporter

Bike lane striping on River Road gives cyclists a more recognizable place to ride.

URBAN ECOSYSTEMS - both the natural ecology and the human infrastructure of an urban environment, and the interaction between the two.



Photo credit: Hudson County

Parking lots are examples of expansive impervious surfaces. Their damaging effect can be slightly decreased by employing Low Impact Development techniques, like the trees and vegetated strips above.



Photo credit: Hudson County

100 mature trees can defer the effects of up to 100,000 gallons of rainfall each year²

URBAN ECOSYSTEMS

Goal: To encourage environmental resiliency by protecting and strengthening areas of critical open space resources, including wetlands, floodplains, steep slopes, wildlife habitat, open waters and waterfronts.

Objectives:

1. Continue to evaluate the status of critical open space resources.
2. Work towards drafting an Environmental Resources Inventory and document the types of ecosystem services in Hudson County.
3. Suggest critical open space resource protection ordinances for municipalities.
4. Pursue acquisition of remaining critical open space resource areas.
5. Reevaluate any county capital program in critical open space resource areas.
6. Continue to pursue cooperative resource protection with municipalities, adjacent counties, New Jersey Meadowlands Commission, the state, federal agencies and private nonprofit conservation groups.
7. Protect the visual resources of the "Palisades" and long range harbor viewsheds.
8. Reduce the amount of impervious coverage, which contributes to stormwater run-off, non-point source pollution and combined sewer outflows.
9. Encourage the clean-up and reuse of contaminates sites.
10. Protect environmentally sensitive areas, such as rare and endangered species habitats, steep slopes, wetlands and surface water quality.
11. Reduce pollution and maintain a healthy environment.
12. Encourage recycling and composting throughout the County.
13. Reduce water pollution and "greenhouse gas" emissions from automobiles and other mobile sources through the promotion of walking, bicycling and mass transit.
14. Reduce stormwater run-off and non-point pollution through elimination of combined sewer overflows and implementation of Best Management Practices.
15. Reduce the "urban heat island" effect through reduction of impervious coverage, utilization of green building technologies and installation of appropriate shade trees.
16. Reduce the disturbance of natural lands in floodplains and flood hazard areas.
17. Encourage energy conservation and reduce air pollution by designing land use patterns that reduce the need for additional automobile trips.
18. Discourage development or disturbance in floodplains and flood hazard areas.
19. **URBAN FORESTRY (UF):** Develop an initial Community Forestry Management Plan to implement at the county level.

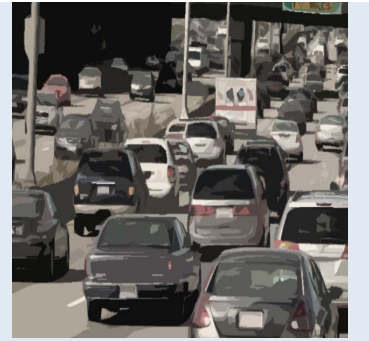
20. UF: Encourage municipalities without forestry plans to consider developing them.
21. UF: Create a Shade Tree Commission for Hudson County.
22. UF: Develop a database to analyze tree data and determine proper maintenance procedures.
23. UF: Increase the number of trees planted throughout Hudson County.
24. UF: Improve soil conditions, maintenance techniques and protection of trees to minimize future maintenance costs.
25. UF: Engage the community in forestry initiatives by providing specific training and communicate clear tree request and maintenance processes.
26. UF: Identify and manage hazardous trees.
27. UF: Educate those involved in the forestry initiative to select trees that best handle Hudson County's unique ecological conditions and provide adequate shade. Promote education and certification for urban arborists and master gardeners.
28. Support the education of park managers to strengthen the ecological function of open space and parklands to increase habitat for wildlife, spaces for flood control in floodplains and well-filtered wetlands and improve water quality.

GREEN SPACE & ACQUISITION

Goal: To actively acquire and expand green/open spaces and recreational facilities where needed and feasible.

Objectives:

1. Identify vacant parcels in each municipality as possible green spaces.
2. Provide incentives for private developments to include accessible green spaces.
3. Identify new opportunities for small, local pocket parks throughout the County.
4. Coordinate with local communities, adjacent counties, and the state.
5. Encourage the Meadowlands Commission, state and federal agencies to increase green spaces, recognizing the importance of ecosystem services at public facilities.
6. Encourage the development of marinas and ports, where appropriate.
7. Encourage municipalities to prepare inventories of publicly-owned properties to consider the use of such properties for community facilities or to be sold for private investment.
8. Use development bonuses or similar mechanisms to require new development to provide plazas, public seating areas, mini-parks, pedestrian links and waterfront walkways.
9. Increase the number of local playgrounds that are within a ½ mile of existing residential neighborhoods.
10. Increase the number of regional ball fields or recreation facilities that are within 1 mile of existing neighborhoods.



Did you know...

The 2009 National Household Transportation Survey found that 50% of all trips are less than 3 miles and **28% of trips are less than 1 mile.**

Of those trips that are less than 1 mile, 60% were carried out using a vehicle.¹

GREEN SPACE - a plot of undeveloped land separating or surrounding areas of intensive residential or industrial use that is maintained for recreational enjoyment. (dictionary.com)



STEWARDSHIP ('stū-ərd-,ship)- “the conducting, supervising, or managing of something; especially : the careful and responsible management of something entrusted to one’s care; stewardship of natural resources” (Merriam-Webster 2013)



11. Encourage municipalities to prepare inventories of publicly-owned properties and to consider the use of such properties for open space or recreation facilities.
12. Continue to list county acquisition priorities.
13. Encourage municipalities to prepare a list of municipal acquisition priorities.
14. Utilize the Hudson County Open Space Trust Fund to continue acquisition and expansion activities.
15. Partner with local municipalities, adjacent counties, the New Jersey Meadowlands Commission, state agencies, and private non-profit conservation groups for joint acquisition of Open Space to leverage available funding.

STEWARDSHIP

Goal: To educate the citizenry about existing and future Open Space and recreation opportunities, and continue efforts to increase support for these activities.

Objectives:

1. Produce a pamphlet explaining key recommendations of this plan.
2. Place the Hudson County Open Space and Recreation Plan and future reexamination plans on County’s Website and links on municipal websites.
3. Partner with municipalities, the New Jersey Meadowlands Commission, state and non-profit advocacy groups to advertise and cross-promote existing recreation programs and activities and to develop new programs.
4. Promote Open Space and Recreational Facilities online through smartphone apps.
5. Continue to create new educational signage for existing and proposed recreation areas.
6. Continue to support and promote school programs to explain benefits of Open Space and environmental protection and explain features of existing recreation programs and the benefits of physical fitness.
7. Assist New Jersey Meadowlands Commission in providing public access to, and educational programs for, wetlands and other key environmental areas of the Meadowlands.
8. Encourage intergovernmental and intermunicipal cooperation in order to eliminate redundancy and improve service efficiency in areas such as public safety, education, health, recreation and social services.
9. Make funding a higher priority for the upgrading of existing parks.
10. Provide technical assistance and support to environmental programs of biodiversity, wildlife and habitat creation watching. Facilitate the



environmental review process for new development.



Photo credit: Jersey City Reservoir Preservation Alliance

In 2012, PS 28’s 7th Grade Class won the “Disney Planet Challenge” for their “Project Reservoir”, which featured the Jersey City Reservoir #3. They competed against more than 10,000 students!

CULTURE AND HISTORY

Goal: To ensure protection of the County’s historic and cultural resources.

Objectives:

1. Preserve the integrity of the County’s historic districts and places and preserve structures of important historical significance.
2. Encourage the creation of special interest districts which build on the county’s unique cultural and historic resources.
3. Encourage municipalities to prepare inventories of properties with important historical significance.
4. Create a list of county historical resource acquisition priorities.
5. Encourage municipalities to prepare a list of municipal historical resource acquisition priorities.
6. Utilize the Open Space, Recreation and Historic Preservation Trust Fund to continue acquisition activities of these historic resources.
7. Encourage the adaptive reuse of historically significant structures, districts and sites and provide a focus for the revitalization of residential and commercial areas incorporating these renovations.
8. Consider the conversion of historic structures to community-based uses.
9. Encourage the use of façade easements to preserve the appearance of historic buildings.
10. Promote cultural and historic tourism by pursuing Scenic Byway and Heritage Trail designation.

CULTURE - “That complex whole which includes knowledge, belief, art, morals, law, custom, and any other capacities and habits acquired by man as a member of society.” (Tylor 1871)

HISTORY - “The Congress finds and declares that the preservation of this irreplaceable heritage is in the public interest so that its vital legacy of cultural, educational, aesthetic, inspirational, economic, and energy benefits will be maintained and enriched for future generations of Americans.” (National Historic Preservation Act of 1966)



Photo credit: Hudson County

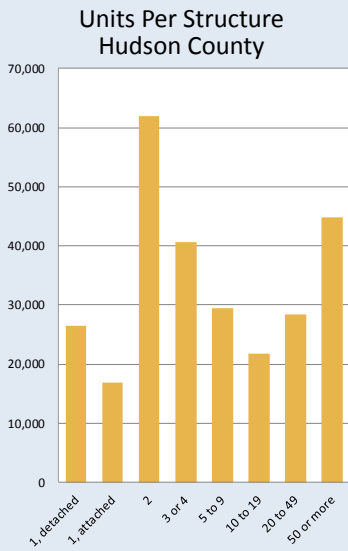
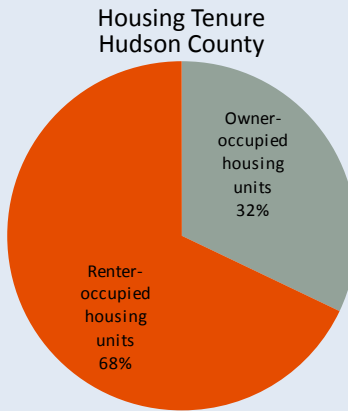
The Jersey City Public Library was awarded funds in 2012 to replace its failing 1950s windows with historically accurate, low-energy glazed windows.

ENVIRONMENTAL JUSTICE



Photo credit: Hudson County

The public waterfront walkway along the Port Liberty development ensures all residents have access to open space resources like the Hudson River.



The relationship of environmental justice to open space is the right to access the direct and indirect benefits of a variety of open space types, such as recreation areas, which include parks, athletic fields, multi-use paths, urban forests, and water bodies regardless of race, income, gender, ethnicity, or location of residence. Hudson County is a highly urbanized area. According to the 2010 U.S. Census, 67.9% of residents rent and 83.7% live in a multi-unit structure and may not have access to a yard for recreation. The ability to access open space for passive and active recreation poses an environmental justice issue in Hudson County.

Hudson County residents need equitable access to passive and active recreation facilities and parkland for their physical and mental health. Residents are also entitled to the human-related benefits of nearby open space and ecosystem services provided by healthy wetlands, urban forests, and floodplains regardless of public accessibility in these open spaces.

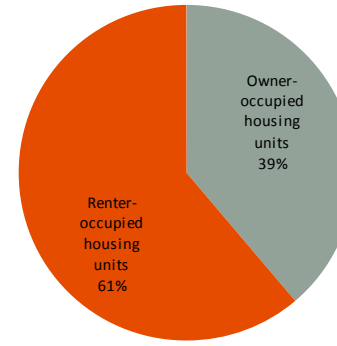
Scientists, planners, and designers have increasingly studied the role of ecosystem services in relationship to the effects of human development in urban areas. According to the EPA, the adverse effects of the urban heat island on human health can include increased breathing-related sickness and higher mortality rates. Urban landscapes with increased plantings through green roofs, street trees, urban forests, and gardens enable a reduction in temperatures and improved air quality.

The various open space types in Hudson County can mitigate the unintended consequences of development and create public spaces for passive and active recreation. Projects like the system of green corridors currently underway in the County need to continue. The City of Hoboken is working to create links between small parcels acquired for open space. Once complete, the parks will expand access to the waterfront and enable a variety of recreational needs, connecting parks, neighborhoods, and business districts. It is important to promote the reuse of waterfront edges and provide ecosystem services.

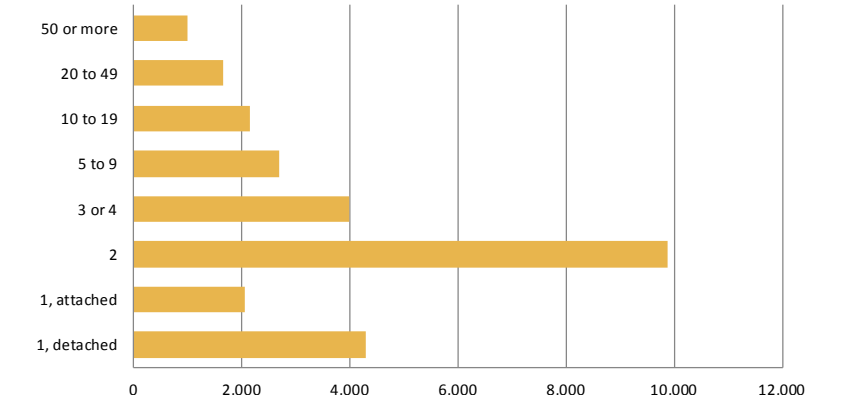
The 2005 Hudson County Open Space and Recreation Plan included goals and objectives related to environmental justice, which are listed in the next chapter along with new objectives. In this Reexamination Report, Hudson County aims to assess and proposes to continue evaluating the complicated roles of open space and recreation in a densely populated urban area to ensure that all populations living in Hudson County have equitable access to necessary open space resources. Through the study of open space types, pursue the ongoing goal of documenting open space added since 2005 and assess where new open space is needed based on community input, municipal stakeholder meetings, and New Jersey Guidelines.

The following charts describe the housing stock and number of units per structure in all 12 municipalities of Hudson County. The pie charts breakdown the percentage of owners versus renters. "Detached housing" is more popular in Secaucus while buildings with "50 or more units" dominate the Hoboken housing market.

Housing Tenure

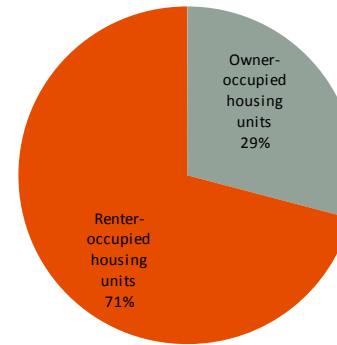


Units per Structure

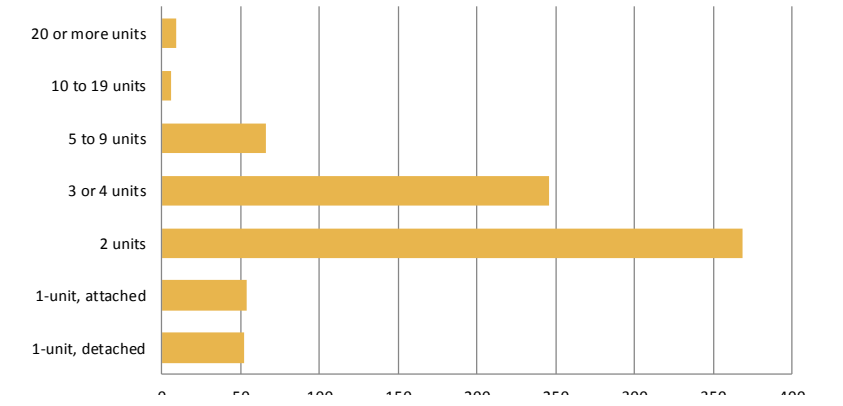


Bayonne

Housing Tenure

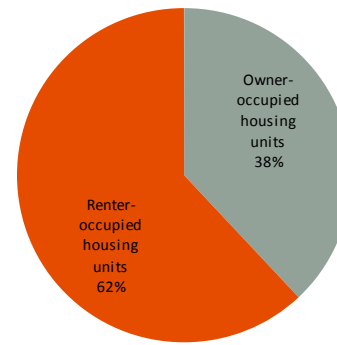


Units per Structure

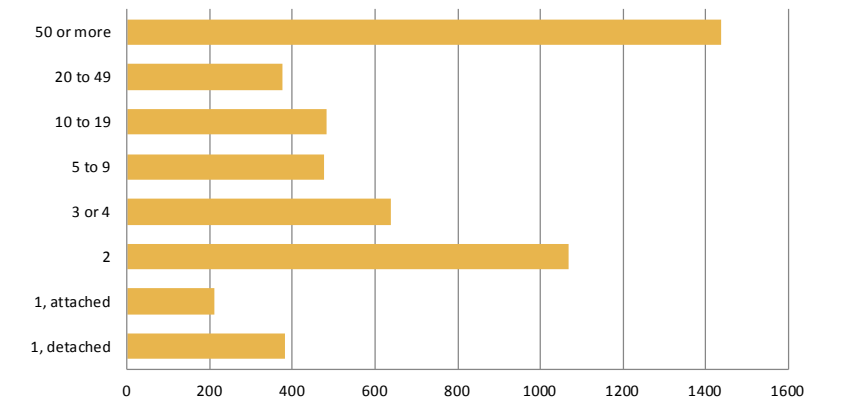


East Newark

Housing Tenure

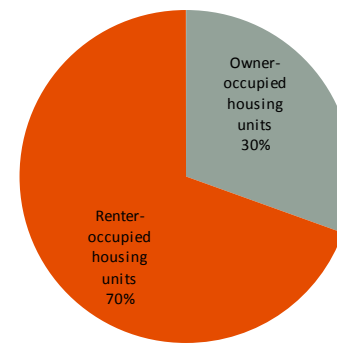


Units per Structure

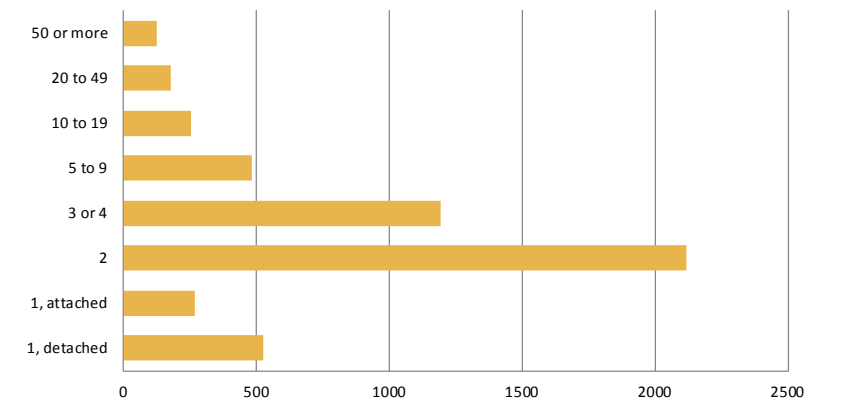


Guttenberg

Housing Tenure



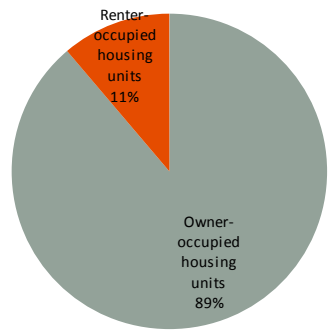
Units per Structure



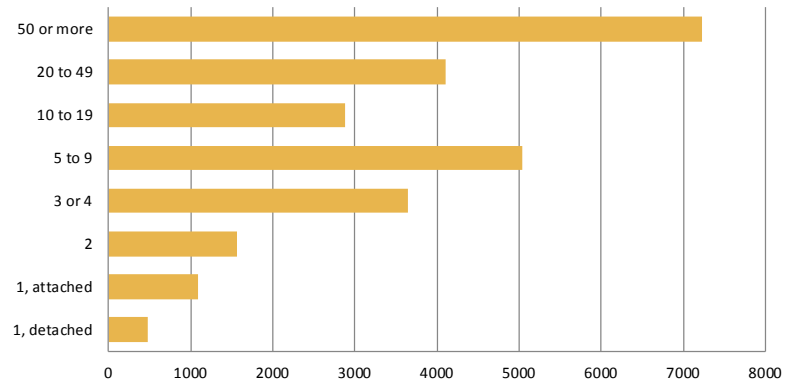
Harrison

Hoboken

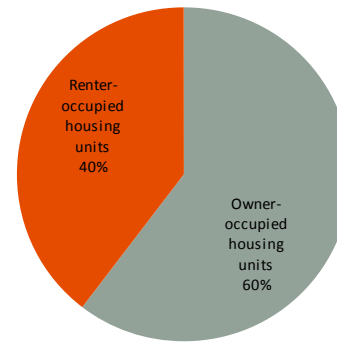
Housing Tenure



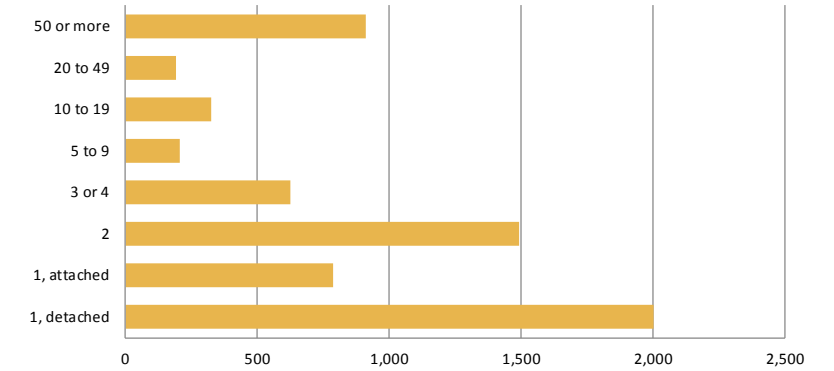
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Housing Tenure



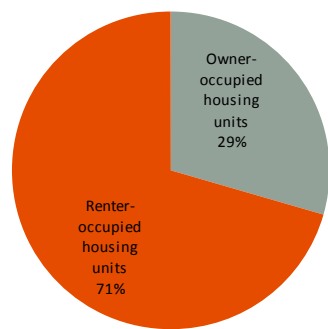
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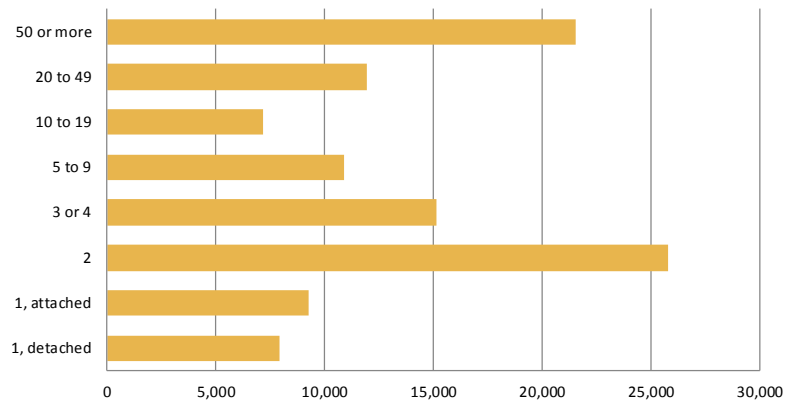
Secaucus

Jersey City

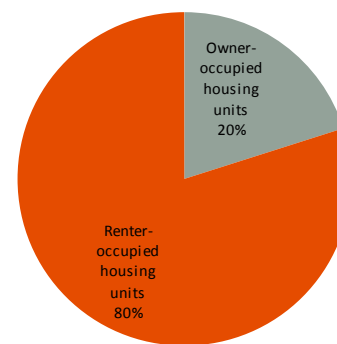
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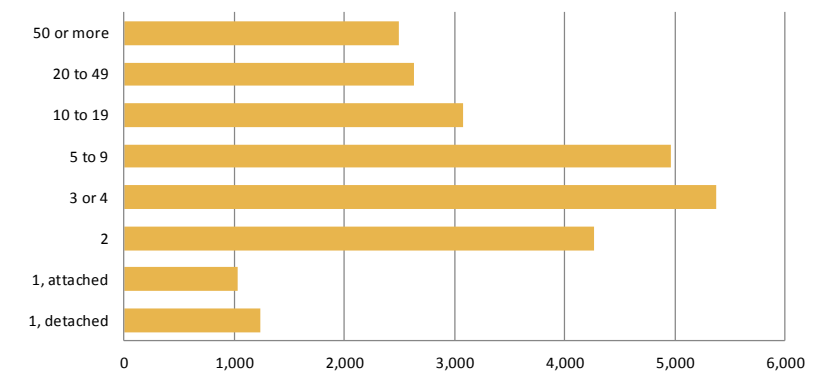
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Housing Tenure



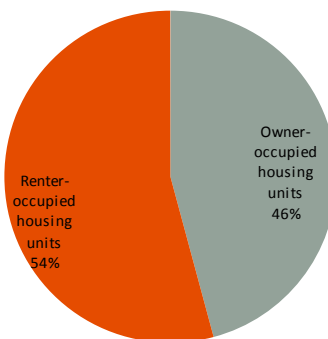
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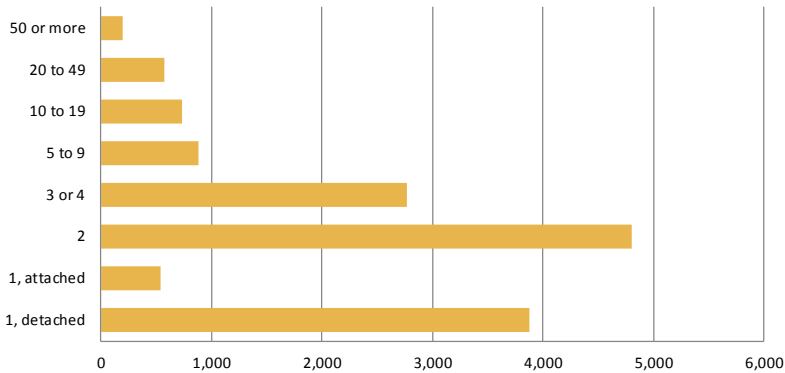
Union City

Kearny

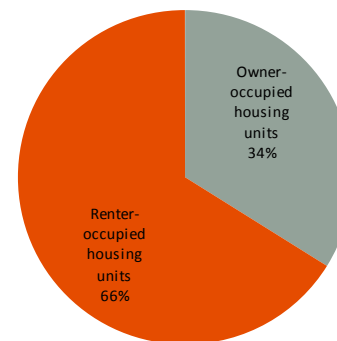
Housing Tenure



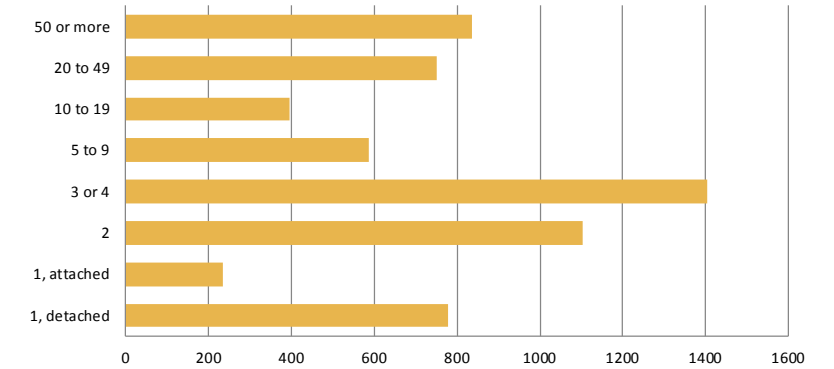
Units per Structure



Housing Tenure



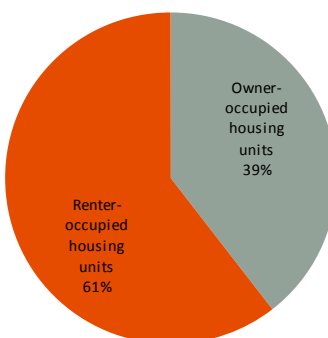
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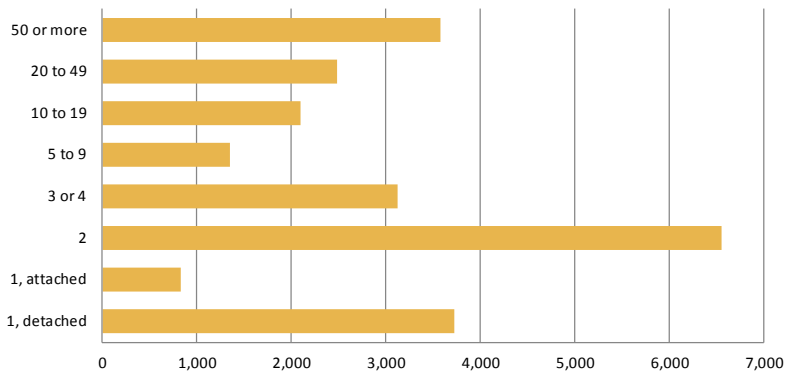
Weehawken

North Bergen

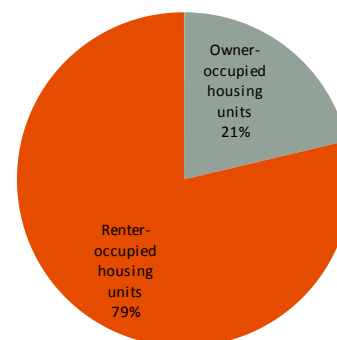
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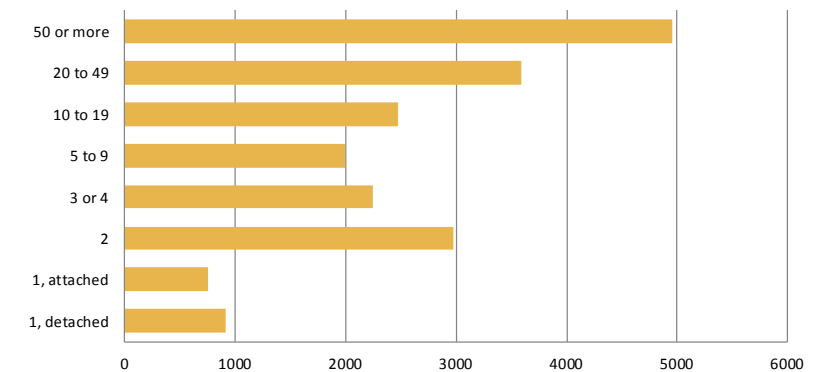
Units per Structure



Housing Tenure



Units per Structure



West New York

COMPLETE STREETS



The Complete Streets principal recognizes the fact that many trips are made without vehicles and promotes streets that accommodate not only motorists, but also cyclists, pedestrians and transit users. Furthermore, Complete Streets give access to users of all ages and physical abilities. Benefits of Complete Streets include:

- Increased safety through structural support for non-motorists, children, and the elderly.
- Reductions in traffic congestion and air pollution by enhancing accessibility to alternative modes of transportation.
- The cost to the public will decrease since streetscape design retrofits for new development will be privately funded.

In Hudson County, 25% of workers have no access to a vehicle and travel by alternative transit. Alternative transit is widely used in Jersey City where 56.3% use public transit or Harrison where 15% walk or bike to work.⁴

In December 2009, NJ DOT passed a Complete Streets Policy (Pol. No. 703) that applies to the design, construction, maintenance and operation of all federally or state funded public transportation facilities. Essex, Mercer and Monmouth County have also passed Complete Streets policies.

Hudson County joined these ranks by passing a Complete Streets Policy resolution in May 2012. The resolution requires that future and existing county roads be equipped with appropriate pedestrian, cycling and public transit accommodations. Appropriate accommodations are based on safety and accessibility, which include: countdown pedestrian signals, curb extensions, bike lanes, and a curb.

To date, of the 12 municipalities within Hudson County, only Hoboken and Jersey City have passed Complete Streets policies. However, Complete Street designs can be seen throughout the County. Bike lanes are striped along River Road making cycling safer throughout all of West New York, Guttenberg, Weehawken and North Bergen and providing complete networks for a wider range of users. Hoboken and Jersey City have also striped bike lanes and included sharrows in their street design.

Pilot projects allow communities to explore innovative urban designs without the commitment or time-consuming process of capital investments. These spaces often use inexpensive, temporary materials, like paint, that can easily be removed if found to be ineffective.

The New Jersey Department of Transportation's recently released *Guide to Creating a Complete Streets Implementation Plan* offers some guidance for implementation of local Complete Streets policies:

"There are five main elements to implementing a Complete Streets policy:

1. Updating plans, policies, and procedures to incorporate Complete Streets principles;
2. Incorporating Complete Streets into the development process;



Photo credit: The Jersey Journal

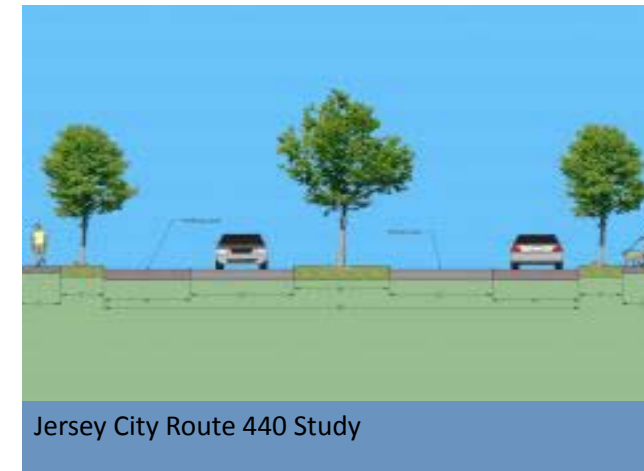
The Jersey City Plan for Bike Lanes and Sharrows (above); A bicyclist uses a bike lane on River Road in North Bergen on Tuesday, July 24, 2012 (center).



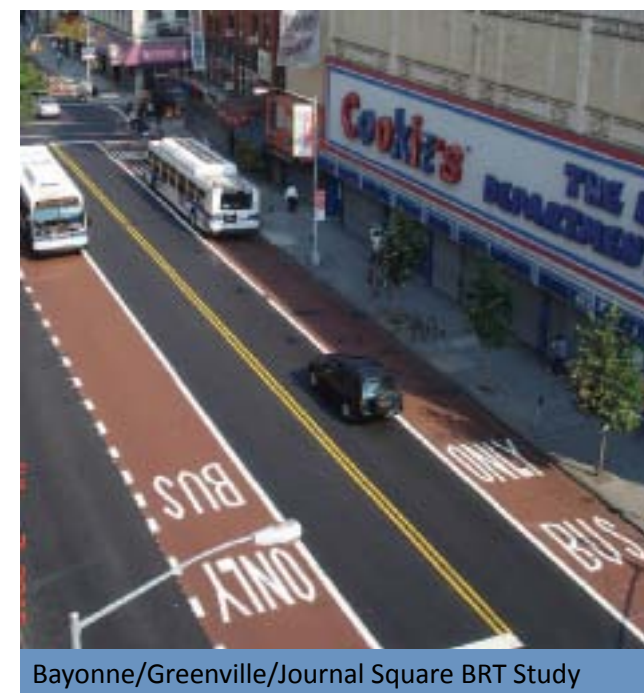
Photo credit: NJ.com

Hoboken Bike Lane

3. Building institutional capacity through training, communication, and monitoring;
4. Creating partnerships; and
5. Initiating pilot projects to build support and demonstrate the value of Complete Streets."⁵



Jersey City Route 440 Study



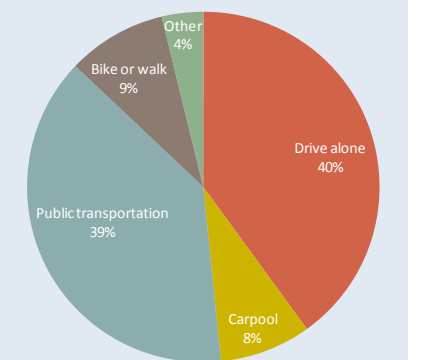
Bayonne/Greenville/Journal Square BRT Study

Integration of Complete Streets into Capital Project Delivery:

Concurrence from the Office of Bicycle and Pedestrian Programs (as the Complete Streets Subject Matter Expert) is required for any project to advance through the NJDOT Project Delivery process, ensuring that Complete Streets principles are applied to the design, funding, and construction of specific projects.

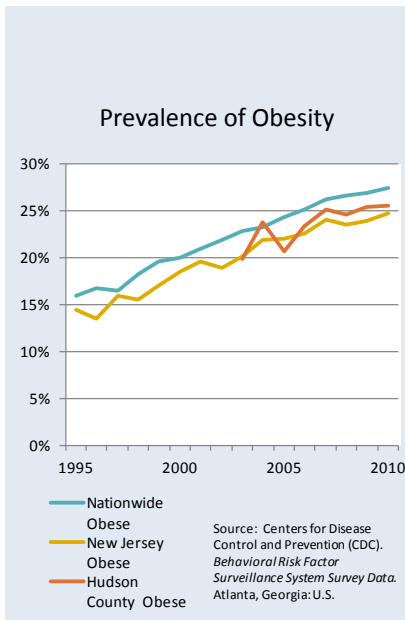
-- Excerpt from the NJDOT "Guide to Creating a Complete Streets Implementation Plan"³

Means of Transportation to Work Hudson County, NJ



Source: U.S. Census Bureau, 2006-2010 American Community Survey

ACTIVE DESIGN GUIDELINES



Hudson County has seen a steady incline in obesity rates and affiliated health problems over the past two decades. As seen above Hudson County ranks slightly better (with 25.5% of its residents being obese) in comparison to national obesity rates. However, it is slightly more obese than the rest of New Jersey.

Crime prevention through environmental design (CPTED) CPTED attempts to reduce or eliminate criminal opportunities by using elements of the environment to (1) control access; (2) provide opportunities to see and be seen; and (3) define ownership and encourage the maintenance of territory.

The past few decades have witnessed an increased number of Americans who engage in little or no physical activity. The resulting sedentary lifestyle has contributed to an increase in obesity and affiliated health problems, including high blood pressure, heart disease, and diabetes.

Encouraging active transportation helps to address the physical inactivity issue by creating a more appealing environment in which people can be active.

Identifying streets and intersections that are particularly problematic and making structural changes to improve safety will attract and enable more potential users. To mitigate non-vehicular issues, planners and engineers should be well-versed in infrastructure innovations like Crime Prevention through Environmental Design Principals.

Neighborhood design can also significantly impact physical activity and health, especially through features such as land use mix, walkability, bicycling, infrastructure, and parks and open space. Designing bus shelters for commuters to safely wait for public transportation, or water fountains along bike and walkways will encourage people to use these facilities. Open space and recreational facilities should be designed to be easily accessed by alternative transportation. Welcoming signage, bike paths, and outdoor amenities will encourage users to come by bike or foot.

The introduction of bike lanes throughout the County promotes biking for leisure and commuting. Municipalities are encouraged to promote their outdoor plazas, walkways and bike paths to get residents of Hudson County out of their cars.





Route 440, Jersey City



Ribbon Cutting for East Coast Greenway route in Lincoln Park West, Jersey City. Former Mayor Jerramiah Healy and Parks & Community Services Director Michelle Richardson Director.

The active design tools below are examples of ways in which Hudson County may encourage healthier and more active communities

ACTIVE DESIGN TOOLS	
	Public transit commutes typically involve walking or cycling to a station. Supplying bus/rail stops with shelters, benches and lighting may encourage the use of public transit. (Photo credit: Hudson County)
	Locate bicycle parking in convenient, secure areas ideally protected from the elements, such as the parking spaces provided at the 8th Street Station in Bayonne. (Photo credit: Hudson County)
	Pedestrian countdown signals help walkers make informed decisions to cross the street or not. Some even have an additional "eyes" feature (left) that remind people to watch for cars. (Photo credit: FHWA)
	Colored pavement alerts drivers to a pedestrian crossing. Truncated domes on either end of the crosswalk signal pedestrians to be cautious as they enter a new environment. (Photo credit: Nicole Heater)
	Line sidewalks with trees to provide shade and a sense of enclosure and separation from passing traffic. (Photo credit: Hudson County)
	Provide pedestrian-scale maps and signage to indicate areas of interest. Examples of such signage include those along the Jersey City Waterfront (left). (Photo credit: Hudson County)

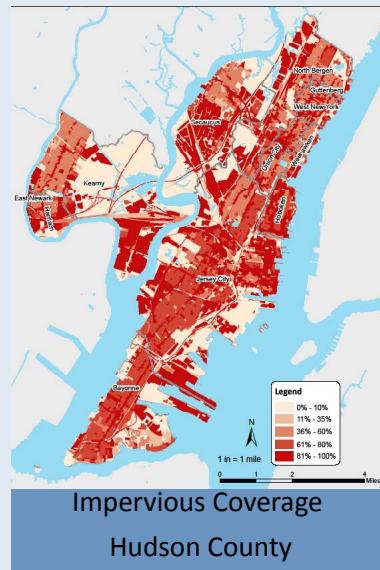


Chakaia Booker, Wave at Washington Park, Jersey City



Storms Avenue Community Garden, Jersey City

LOW IMPACT DEVELOPMENT

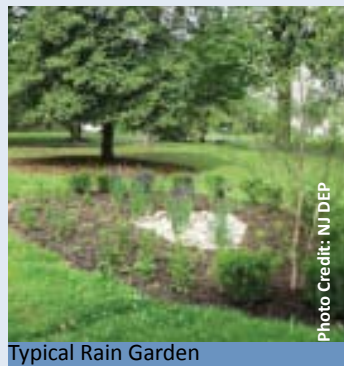


Hudson County is essentially built out with extensive impervious coverage (see map in side bar), which increases the production of stormwater runoff. Stormwater is rainwater and melted snow that runs off streets, lawns, and other surfaces. When stormwater flows over permeable open ground and soil, it is naturally absorbed and filtered. However, when the stormwater runs over solid, impervious surfaces, such as paved streets, it can collect and carry the garbage, chemicals, sediment, and other forms of pollutants that are in its path. This polluted stormwater runoff will then flow through the storm drains and into our natural waterways, such as local rivers, streams, creeks, and bays.

Low-Impact Development techniques can be employed to control this runoff. In practice, these techniques utilize engineered or natural systems to mimic natural processes and pre-development strategies. Many strategies (such as green roofs, permeable paving, rain gardens, infiltration trenches) use soils and vegetation to infiltrate, evapotranspiration, and/or recycle runoff. Other strategies focus on site design (such as reducing connected impervious surfaces, reducing the number of parking spaces, adding bike lanes, or green roofs) to produce a variety of environmental benefits.

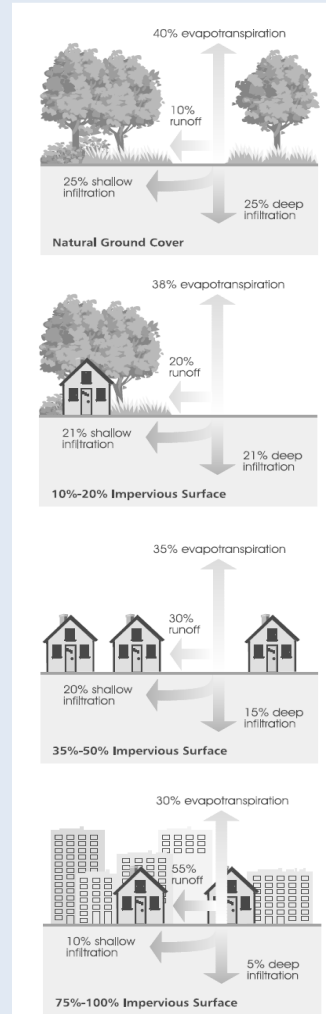
Developed areas with high concentrations of impervious surfaces are prone to becoming flooded in even moderate rainfall. Altered water channels caused by impervious surfaces can also lead to increased flooding in neighboring areas. Low impact development standards are one way to mitigate harmful effects of both on and off-site design. These issues have become even more evident in light of the flooding and storm surges that have occurred in recent storms.

Hudson County's land development regulations currently employ a number of design standards (see below) that address developmental impact issues. Developers seeking subdivision or site plan approval are required to submit an Urban Runoff Mitigation Plan that demonstrates the design measures taken to mitigate environmental development impacts. Furthermore, developers must propose a corresponding maintenance schedule that demonstrates their continued commitment to low impact development techniques. Another county mechanism relative to land development regulations is the county's Storm Water Management Plan.

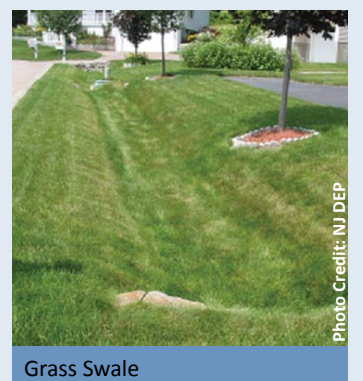


LOW IMPACT DEVELOPMENT PRACTICES ⁶	
STRATEGY	DESCRIPTION
Conservation Easements	A voluntary agreement that allows individuals/groups to limit the type of development on all or a portion of their property.
Land Compatible Design	Natural drainage patterns, native vegetation, and stabilization of soil
Native Landscaping	The use of native vegetation (particularly prairie, wetland and wooded species) on a development or redevelopment site.

Redevelopment	Development that occurs on previously developed land so that already-impervious surfaces are utilized before new impervious surface is created.
Green Parking	Techniques to reduce the contribution of parking lots to total impervious cover, including minimizing space, "compact vehicle" space, bicycle parking, and using alternative pavers in overflow parking areas.
Riparian/Forested Buffers	An area along a shoreline, wetland, or stream where development is restricted or prohibited to physically protect and separate a stream, lake, or wetland from future disturbance
Innovative Street Design	The pattern of the street and how the street is constructed to create a network of well-connected streets to connect transit options and/or improve drainage, such as adding bus/bike lanes, boulevard islands, and swales.
Protection of Natural Features	Natural features can include wetlands, riparian areas, floodplains, aquifer recharge areas, mature trees, woodlands, and restricted areas such as floodplains and steep slopes.
Green Roofs	They are effectively used to reduce stormwater runoff from commercial, industrial, and residential buildings by absorbing and storing initial precipitation.
Urban Forestry	Trees absorb water, patches of forest and the trees that line streets can help provide some of the stormwater management required in an urban setting.
Stormwater Wetlands	Structural practices similar to wet ponds that incorporate wetland plants into the design. As stormwater runoff flows through the wetland, pollutant removal is achieved through settling and biological uptake within the practice.
Bioretention / Rain Gardens	Bioretention areas are landscaping features adapted to provide on-site treatment of stormwater runoff. They are commonly located in parking lot islands or within small pockets of residential land uses.
Filter Strip	Grassed filter strips, filter strips, and grassed filters are vegetated surfaces that are designed to treat sheet flow from adjacent surfaces.
Porous Pavements	A permeable pavement surface, often built with an underlying stone reservoir that temporarily stores surface runoff before it infiltrates into the subsoil.
Infiltration Trenches	A rock-filled trench with no outlet that receives stormwater runoff and runoff is stored in the void space between the stones and infiltrates through the bottom and into the soil matrix.
Grassed Swales	Vegetated, open-channel management practices designed to treat and attenuate stormwater runoff for a specified water amount.
On-Lot Treatment	Management of runoff from rooftops, driveways and sidewalks by practices such as cisterns, rain barrels, and down spouts (also known as "Storing runoff")
On-Lot Treatment for Residences	Management of runoff from rooftops, driveways and sidewalks through practices, such the drywell, French drain, or Dutch drains. (also known as "Infiltration")
On-Lot Treatment for Residences	Management runoff from rooftops, driveways and sidewalks (also known as "Run-off diversion")



As impervious surfaces increase, the amount of rainfall absorbed into the ground decreases, causing an increase in runoff and flooding.



URBAN FORESTRY

MUNICIPALITY	CURRENT STATUS
East Newark Borough	N/A
Guttenberg Town	Initial Management Plan (Grant 2010)
North Bergen Township	Initial Management Plan (Grant 2010)
Harrison Town	Second 5-year Management Plan (Due 2007)
Hoboken City	Third 5-year Management Plan (Due 2014)
Jersey City	Third 5-year Management Plan (Due 2015)
Kearny Town	Third 5-year Management Plan (Due 2014)
Secaucus Town	Third 5-year Management Plan (Due 2014)

Nearly every municipality in Hudson County has been either approved for a Community Forestry Management Plan. Some are even working towards their 2nd and 3rd 5-year management plans. The chart above indicates the status of each municipality that's recorded as participating in the New Jersey Community Forestry Program.

Trees are an integral part of the urban fabric. They reduce runoff intensity, increase property values, provide shade to counter heat island effects, and counter vehicle induced pollution. Recent studies have found the presence of trees can even reduce stress levels and calm nerves.

During the 2007 State of the County Address, Hudson County Executive Thomas A. DeGise declared a goal of planting 1,000 trees along county roads and in parks and facilities during the next five years with 10,000 total trees over ten years. In order to achieve this objective, a well-organized and comprehensive plan is necessary which will serve as a guide to reaching this target. It is the goal of Hudson County to create a state-approved urban forestry management plan to ensure success of this goal.

In 2007, a total of 1,852 trees were inventoried along eleven Hudson County Roads. The 2007 assessment identified 37 species, of which London Plan and Callery Pear accounted for 46% and 18% respectively. The total canopy spread was estimated to be at 56,373.18 square feet. Most trees are considered to be in "good" condition and are considered young, with over half of the inventoried trees measuring less than 12" in diameter at DBH.

The Urban Forestry Management Plan will promote a progressive community forest and shade tree plan that fosters the sustainable development and maintenance of Hudson County's urban forest resources, which will benefit the environment, improve human health and psychological well being, provide economic advantages, minimize County liability, and enhance the overall quality of life for residents, workers, visitors, pedestrians and motorists alike. By taking logical steps outlined in this Management Plan, Hudson County will garner public support for plan implementation and demonstrate the long-term benefits to the environment and public safety.

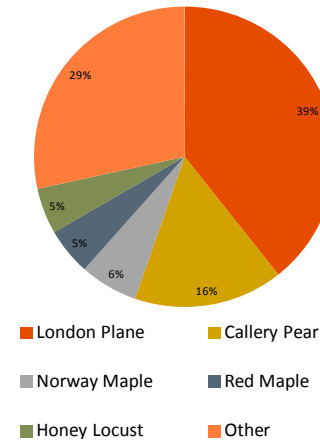
Through inventory and hazard assessment, the County will position its Urban Forestry Plan Advisory Board via a Shade Tree Commission to take corrective action prior to structural tree failure and other hazardous tree related conditions. It is acknowledged that not all hazardous tree conditions will be predicted but by implementing good maintenance and care procedures, the County can reduce the probability.

Following this Management Plan will demonstrate that Hudson County is devoting reasonable levels of resources in a planned manner to reduce the number of tree-related accidents, thereby reducing its exposure to liabilities and increasing public safety.

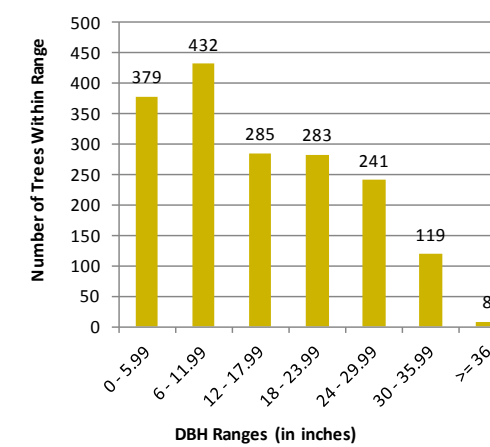
Tree-shaded homes can **cut energy bills** by 50% in the summer and their ability to protect a house from winds can reduced heating costs by 30%⁷

1 acre of trees= oxygen for 16 people, **offset pollution** produced by a car driven 26,000 each year⁸

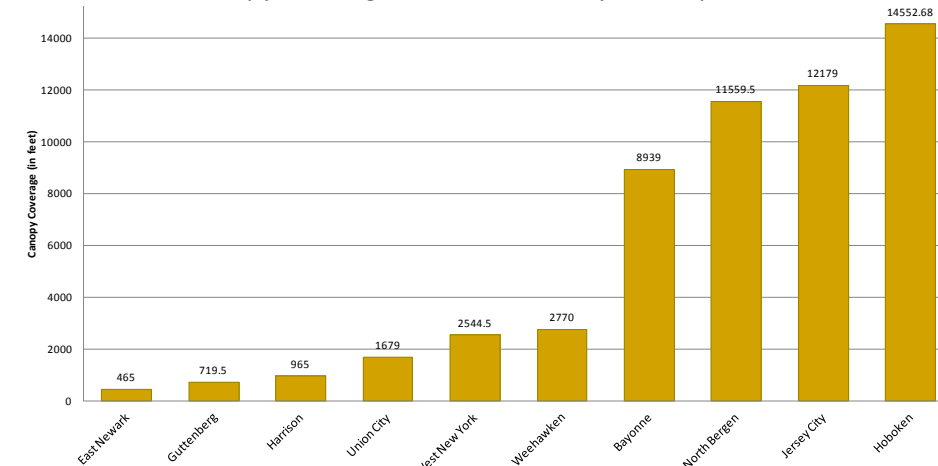
Hudson County Tree Species Distribution



Hudson County Tree Diameter at Breast Height (DBH) Distribution

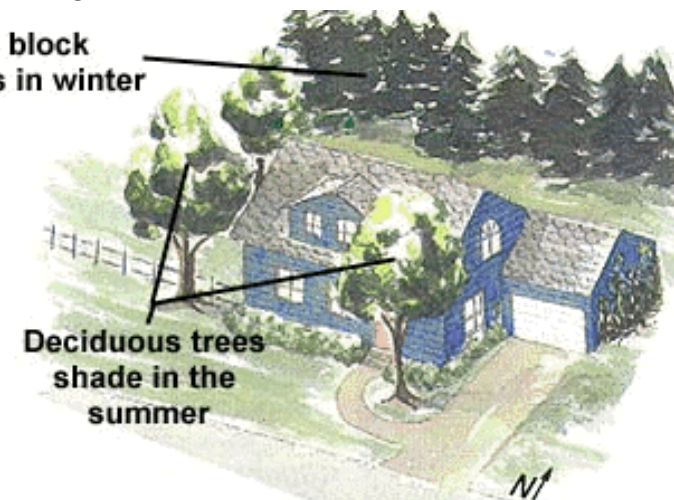


Canopy Coverage in Hudson County Municipalities



The chart above shows tree canopy coverage per municipality. Hoboken clearly has more tree canopy coverage than any other municipality in the county, though it doesn't have the largest land area.

Evergreens block north winds in winter



"In one study, 83% of realtors believe that mature trees have a "strong or moderate impact" on the salability of homes listed for under \$150,000; on homes over \$250,000, this perception increases to 98%."⁹

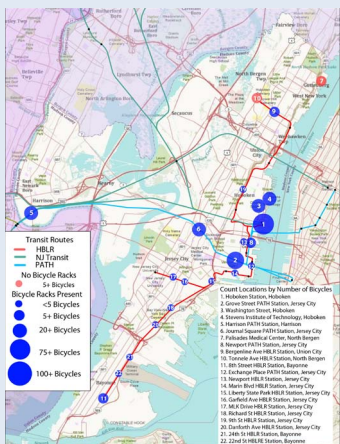
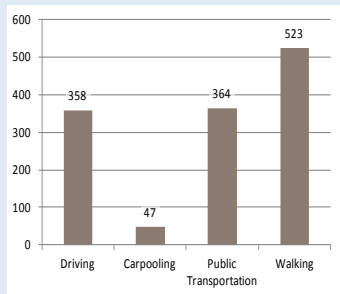
—Arbor National Mortgage & American Forests

1 LARGE FRONT YARD TREE...¹⁰

- Saves 9% of a typical residential building's total annual air conditioning cost.
- Absorbs 10 lbs of air pollutants per year.
- Intercepts 760 gallons of rainfall in its crown, thereby reducing runoff of polluted stormwater and flooding.
- Cleans 330 lbs of CO₂ from the atmosphere through direct sequestration in the tree's wood and reduced power plant emissions due to cooling energy savings.
- Adds about 1% to the sales price of the property, or about \$25 each year when annualized over a 40-year period.
- 1999 study of the Central Valley town of Modesto, CA found that for each \$1 invested in urban forest management, \$1.89 in benefits was returned to residents.

BIKE SHARE

Would you use a bike share to compliment or substitute:



Hudson County Bike Share Feasibility Study



Hudson County planners try out bikeshare system in Washington, DC.

Bike sharing has emerged world-wide as one of the fastest growing alternative transportation options for urban and suburban environments and can provide the “first and last mile” of public transit trips. Bike share networks are strategically located and offer rental plans at varied annual, monthly, and daily rates utilized by everyday commuters, recreational users, and visiting tourists at affordable rates. Bike share systems have proven especially effective in urban environments as bicycles are considered the most efficient mode of transportation for short trips, require little in terms of new infrastructure, promote a healthy community, and take the burden of safely storing a bicycle off of the user.

Hudson County has a complex make-up of 12 municipalities, with diverse populations, housing types, and industries. In comparison to other cities with successful bike share systems, Hudson County has ideal conditions for the implementation of a system. First, it is the densest multi-municipal county in the U.S., which would allow for easy and accessible layout of the docking stations. The high density of this area also means that a majority of the population live in apartments, condominiums, and multi-family dwellings. These living arrangements work well with bicycle sharing, as residents have limited space to safely secure their own bicycles. Hudson County’s transportation situation, especially in the public transit driven municipalities, lends itself to a bike sharing network.

The County has a wealth of public transportation options; especially the downtown Jersey City/Hoboken area, which features three PATH linkages to Manhattan, one NJ Transit commuter station, 10 Hudson Bergen Light Rail stations, six ferry stops, and multiple NJ Transit bus lines. While a majority of the economic core lives within one mile of a transit station, most live farther than ¼ mile (walking standard). This gap presents a perfect opportunity for bike share to shorten residents’ daily commutes. Furthermore, the PATH system, the primary link to employment in Manhattan, restricts bringing bicycles on board. Bike share could thus compliment the system, allowing for users to have bike access at the tail-end of their trip. If bike sharing stations are placed in areas of Hudson County currently underserved by public transportation, the system could greatly increase the mobility, economic opportunities, and commercial traffic to residents and businesses.

Bike share systems in the U. S. generate a large percentage of bike share rides are from tourist users. This works well with Hudson County’s tourism hotspots like Liberty State Park, the Statue of Liberty, and the Hoboken waterfront, which are visited by more than 5 million visitors a year. Many of these tourists use public transit to travel from New York City and could benefit from having bicycles available after reaching Hudson County. Since most tourism hotspots are located along the Hudson River and with public access to the waterfronts guaranteed by New Jersey regulations, there are great opportunities for scenic bikeways along the Hudson River between tourist destinations.

Through a joint staff effort of the Hudson Transportation Management Association (TMA) and the Hudson County Division of Planning, an initial analysis was conducted of Hudson County to determine the feasibility of a bike share system in Hudson County. In early 2013, Hudson County Division of Planning applied to the Together North Jersey grant program to receive funds to issue an RFP for

BIKE SHARE

a consultant to expand their research. The grant was awarded to Sam Schwartz Engineering. Their research will include tasks such as Ridership Forecast and Market Analysis as well as a Financial Assessment and Business Plan. The final product will be a comprehensive report on the feasibility of a bike share in Hudson County, and will address the logistic and financial implementation strategies to launch the bike share system.

Local efforts have proven a positive trend in support of cycling and bike share. In September 2012, the Jersey City Bike Infrastructure Working Group in Jersey City issued an important Report of recommendations to improve bike infrastructure throughout the City, including an extensive bike lane network that will be incrementally installed. In June 2013, Hoboken launched its six-month trial program, which will provide membership-based bike-share programs aimed at Hoboken residents and rent-by-the-hour bike rentals for tourists visiting on Saturdays. The pilot program involves three New York City companies, consultants E3Think, operator Bike And Roll and manufacturer Social Bicycles (SoBi). Similar to Hoboken’s Corner Cars car-sharing program, fee-paying members can reserve bikes online and by phone, officials said. Residents will be able to pick up the bikes at various locations around the city. Officials say the program is being operated at no cost to the city and the profits from the program will be split equally between operators and the city.



Bike Racks along the Hudson River Waterfront



SoBi Bike in Hoboken



2012 Jersey City Ward Tour



New York City's new CitiBike bikeshare system

PUBLIC ACCESS REQUIREMENTS

Hudson County has the exceptional geographic advantage of being surrounded by various bodies of water. These waterfronts pose endless opportunities, including economic, recreational, environmental, cultural, and transportation potential.

Through many efforts from municipal officials, County officials, resident stakeholders, advocacy groups, and planning documents, such as the *Hudson Riverfront Walkway Plan*, the Hudson Riverfront Walkway has progressed successfully since 2005. The Hudson River Walkway, from the Bayonne Bridge in Bayonne to the George Washington Bridge in Fort Lee, is approximately 18.5 linear miles and is 85% complete. Mile-long sections are complete in Jersey City, Hoboken, Weehawken, West New York and North Bergen. New segments of the Walkway are under construction in Jersey City, North Bergen and Guttenberg. Reconstruction of damages from Superstorm Sandy continues in Liberty State Park, Jersey City, Hoboken and Edgewater.

Looking to the future of western Hudson County, it is critical to open and protect the public access of the Hackensack River and Passaic River waterfronts. There are portions of the Hackensack waterfront in Bayonne, Jersey City, and Secaucus and portions of the Passaic waterfront located in Kearny, Harrison, and East Newark. It is important to recognize that there are many more low-and mod-income census tracts located near these waterfronts, especially in comparison to the Hudson River. (Please see the maps in Chapter 7- Open Space Resources.)The County wants to ensure that all of its residents have the same opportunity to enjoy and take advantage of the waterfront.

Hudson County has continued to work towards a more extensive publicly accessible waterfront network. Through the Hudson County Open Space Trust Fund, the County has awarded projects that have enhanced or will enhance access to the Hackensack and Passaic River:

- Hackensack Riverfront/Skyway Park in Jersey City – The City was awarded multiple grants for the acquisition of this future park along the Hackensack River.
- Maguillian Park in Kearny - The Town of Kearny was awarded park development funds for this upcoming waterfront park. Construction will begin in the summer of 2013.
- Passaic River Waterfront Walkway- The Town of Harrison was awarded funds to complete a section of the walkway along the Passaic River from Cleveland Avenue to Harrison Avenue north of the Bridge Street Bridge.
- Hackensack River Water Trail Stop Improvement at Laurel Hill - The Hackensack Riverkeeper was awarded funds to install an ADA compliant, dedicated canoe/kayak launch.
- Farm Road & Oak Lane Acquisition – The Town of Secaucus was awarded a grant to acquire two parcels along the Hackensack River.
- Bayonne Riverwalk Greenway- The City of Bayonne was awarded funding for the construction of a riverfront walkway through Bayonne’s Don Ahern Veteran’s Memorial Park to connect to the walkway at Stephen B. Gregg Hudson County Park.



Photo credit: Hudson County
Hudson River Waterfront Walkway, Weehawken



Photo credit: Hudson County
Hudson River Waterfront Walkway, Jersey City

Public Access to open space may be provided by a variety of design mechanisms, including pocket parks, public restrooms, public parking, walkways/trailways or boat ramps and fishing piers.

In upcoming years, the County will continue to pursue this initiative and support the municipalities in their efforts to open their waterfronts. For example, the County recognizes a potential valuable link along the Hackensack River from Secaucus to Bayonne. The County also highlights potential areas along the Passaic River, especially near the Harrison Commons and Red Bull Stadium.

Protection of these waterfronts has come to the forefront since the NJDEP recently adopted amendments to the NJ DEP Public Access Rules. The amendments have since passed and have consequently weakened public access requirements that once mandated developers to maintain on-site public easements and walkways. While the Hudson River Waterfront is protected by its own rules, the riverbanks of the Hackensack and Passaic are left vulnerable. The burden now falls on municipalities and the county to ensure that the public still has uninterrupted access to riverfronts. The County would like to offer any potential aid it can to the municipalities in their work to protect their waterfronts.

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Passaic River Waterfront, Harrison