

CHAPTER 9

RECOMMENDATIONS

Introduction

The extensive planning activity and public interest in the Delaware Direct Watershed has generated a number of recommendations for managing the watershed's resources. Through the Delaware Direct Watershed RCP public participation process, stakeholder recommendations were collected. The Philadelphia Water Department conducted riverbank assessments, which generated recommendations specific to the Delaware waterfront. The recommendations culled from previous and ongoing planning efforts provide the insight and expertise of professionals from multiple disciplines as well as the thousands of participants in the respective plans' outreach components. This chapter presents all of these recommendations and concludes with a list of potential grants and funding opportunities for implementation of RCP projects.

Delaware Direct Watershed Partnership

The Delaware Direct River Conservation Plan provides the foundation for the watershed management planning efforts in the Delaware Direct Watershed. The Delaware Direct Watershed Partnership will lead the implementation of the RCP and continue to guide the development of future watershed plans. The partnership consists of the members of the RCP Steering Committee, in addition to active participants that emerged from RCP public events and public meetings. These watershed partners share resources and expertise and coordinate information. The ultimate goal of the watershed planning approach is to cultivate partnerships committed to implementing watershed management plans once completed.

9.1 – Public Outreach Recommendations

The public outreach process of the Delaware Direct Watershed RCP was designed to further explore the issues, opportunities and recommendations inventoried from previous and ongoing planning efforts in the watershed. As explained in the Public Outreach chapter of this report (Chapter 3), several key principles emerged from these complementary plans.

- Claim the Delaware waterfront as a signature cultural landscape that defines Philadelphia and informs the surrounding neighborhoods.
- Provide a variety of experiences and amenities along the waterfront to residents and visitors, allowing for open access and the ability to “touch the river.”
- Balance public space as a cultural and social resource, with the opportunity to mitigate environmental impacts from human use and development.
- The imperative for government to lead by example on riverfront redevelopment, particularly where ownership and control issues are minimal and re-investment can result in multiple benefits or benefits to the community as a whole.
- The desire of Philadelphians to have distinct and individual neighborhood identities while ensuring safe, attractive and walkable access to parks, schools, restaurants, shopping, etc.

- Community input and influence on how neighborhoods are planned and developed, particularly with regard to redevelopment projects that are likely to have significant impact on the life and/or character of a neighborhood.
- Strong agreement among City residents that multi-modal transportation options such as bus, trolley and light rail are one of, if not the most, highly valued neighborhood amenity, providing relief from parking woes and the noise, congestion and pollution associated with cars.
- An understanding by citizens, professionals and municipal officials that outcomes are determined by both actions and policies: effective policies encourage desirable activities and, symbiotically, that citizen action can drive and direct municipal policy.

Building upon these points of consensus, the RCP team further explored the interests of stakeholders—including both experts and the public—through the public participation process. This approach provided for continued information sharing by those who had already made significant planning contributions within the watershed.

Workshop 1 – Pulaski Pier Park: April 2008

Overview

Approximately 40 attendees—including natural resource professionals, planning and design professionals and community leaders—convened to discuss practical next steps to explore proposals to expand, enhance and restore ecological functions at Pulaski Park, one of four public parks along the Delaware River waterfront. The Workshop included scientists, practitioners, policy experts and other watershed stakeholders with specific interests and expertise in wetland restoration, riparian rights and public parks. Attendees broke into three subgroups to review one of several proposals for Pulaski Park and to outline tasks and issues related to specific restoration and design elements proposed for Pulaski Park.

Subgroup one: Wetland restoration at Pulaski Park

- Secure funding for feasibility study for wetland restoration
- Establish goals of design wetland creation – use of the site will influence restoration goals.
- Investigate ownership of submerged lands
- Investigate removal of fill at stream edge
- Investigate permitting and regulatory requirements relating to working in navigable waters
- Keep surrounding neighborhoods and business community informed through outreach and education.

Subgroup two: Restoration of riparian areas, including piers and bulkheads at Pulaski Park

- Secure funding for feasibility study for restoration of riparian areas
- Identify specific ownership of parcels
- Identify existing hydrology, water level/tidal fluctuations, flooding issues, etc.
- Identify water quality issues
- Identify regulatory issues
- Develop civic partnerships

Subgroup three: Park expansion from existing Pulaski Pier Park into adjacent municipal property.

- Secure funding for feasibility study for park expansion
- Investigate parcel boundaries and ownerships
- Identify political boundaries and where they break
- Test the history of the fill activity
- Understand the activity of existing plans to determine what role Pulaski Park will play in connecting them
- Identify a project sponsor
- Engage the community (including users, existing surrounding landowners and residents) to identify conflicts and common interests
- Explore user needs for parking and recreation
- Investigate expansion to the south rather than the north

Each subgroup produced outlines for the three proposed means for park expansion. These outlines, if developed further, could serve as a DRAFT Requests for Proposal (RFP) from consultants who may be asked to provide ecological, engineering and planning services. A recurring recommendation from these subgroups was to seek funding for feasibility studies. The DRAFT RFP is included in Appendix B of this report.

Workshop 2 – Advanced Parking Lot Design: June 2008

Overview

As one of the largest impervious surface cover types within the City, auto-related infrastructure (e.g., parking lots) is noted in every planning and reference study and is a primary source of concern as Philadelphia struggles to meet its water pollution reduction goals. In addition to impacting stormwater, parking design impacts traffic, congestion, air quality and the pedestrian experience.

Approximately 30 attendees, including urban design, planning and policy professionals, met to consider ways to address impacts and concerns related to automobile parking. The following recommendations were identified in this workshop.

- Support the Philadelphia Water Department’s reallocation of stormwater utility fees to reflect the stormwater impact. New rate structures are one way to incentivize higher environmental performance.
- Reconsider requirements for developers to provide one private off-street parking space for every residential unit.
- Revamp current zoning and building code requirements to give developers credit for:
 - designated car share vehicle parking spaces
 - shuttle service
 - secure bicycle storage
 - access to regional rail or other major transit hubs
 - improvements to, or creation of, community parking resources
 - parking lot sharing agreements
 - other program approaches that encourage greater efficiency and use of existing parking resources

- Maximize capacity of existing parking areas on and off street, including diagonal street parking, compact car spaces, using corners and edges for scooters and motorcycles.
- Create transit-oriented development incentive zones, including restructuring the use of tax abatement to incentivize transit-oriented development.
- Encourage parking lot design standards that meet average daily use and not the peak annual usage (which is currently required).
- Building and zoning policies that encourage the highest environmental performance standards for parking buildings and infrastructure.
- Community zoning standards that require facades or other street-friendly presentation of parking facilities, whether surface or building.
- Investment and improvements to mass transit and alternate transit infrastructure to reduce the use and demand for private cars.

Workshop #3 – Green Streets & Riverfront Connections, July 2008

Overview

Recent planning efforts have focused attention on the desire of Philadelphians to reconnect with the Delaware waterfront. The RCP team used this workshop to explore the current experience of a journey to the riverfront, and examine ways to minimize both the physical and psychological barriers to connection.

Approximately 40 attendees with expertise and interest in issues related to transportation, mobility and riverfront access participated in a challenge to reach the meeting location, Penn Treaty Park on the Delaware waterfront, using atypical modes of transportation (see *Watershed Walks* section in Chapter 3). Upon reaching the meeting, four subgroups explored different aspects of green and complete street linkages specific to Penn Treaty Park. Recommendations identified in the subgroups include:

- Investigate processes and systems that have led to successful green and complete street redesign projects and operating programs in other cities and other countries.
- Conduct cost-benefit analysis for Philadelphia that considers capital and operating costs across and among agencies for green and complete street projects.
- Develop concierge services, interdepartmental checklists and other review coordination systems.
- Establish common design standards for a variety of different street types: local residential and neighborhood connectors, City thoroughfare, and inter-City boulevards.
- Develop multi-agency partnerships that will be required to design, fund and operate effective green streets. The City should begin immediately by convening a task force of the relevant agencies to forge long-term partnerships.
- Design streets for multiple uses and consider neighborhood context and impact. Streets designed only to maximize the flow of cars discourage the life and vitality of neighborhoods.
- Leverage multiple funding sources by designing streets that meet the needs of multiple users.
- Enhance streets that are already excellent from a pedestrian use standpoint through the implementation of simple upgrades such as tree plantings, improved pedestrian crossings, adding a bike lane or traffic-calming measures.

- Improve way-finding and other signage for pedestrians, particularly during construction when routes may be blocked or altered. Construction planning too frequently focuses only on the impacts on auto traffic.
- Begin large/long-term construction projects with a community process—not just to inform, but to solicit issues and concerns, and to gather input on ways in which the project can leverage resources and provide long-term community improvements.

Public Meeting: Healthy Neighborhoods, December 2008

Overview

On December 4, 2008, groups and individuals across the watershed were invited to convene and participate in a series of activities and information-sharing sessions focused on creating and sustaining healthy neighborhoods. Activities were organized to generate feedback on proposed designs and to engage in one-on-one discussions. More than 60 participants, including representatives from various neighborhood groups and non-profit organizations, were in attendance. The meeting's varied activities generated the following recommendations:

- Support designs that meet the needs of more than one user group
- Promote design ideas that are either new or tapped into an existing care or concern
- Develop designs for complex green spaces where green components, such as trees or planters, are incorporated into buildings or streetscapes
- Acknowledge the importance of neighborhood amenities (i.e., green space, cafés, grocery stores and community centers) and the pathways that provide access between them

Watershed Walk, July 2008

Overview

Issues related to connectivity, particularly the links from neighborhoods to the riverfront, have been a priority concern of planning efforts in the watershed. Watershed walks were organized in order to get participants' feedback on the experience of traveling to a riverfront destination, Penn Treaty Park. From various starting points, 35 participants arrived at the park on foot, by bicycle, by car, or via modes of public transportation.

Based on their experiences, the following recommendations were generated:

- Improve and expand access to Penn Treaty Park from Delaware Avenue
- Increase the number of bus stops on Delaware Avenue
- Produce a public transit map to riverfront destinations
- Provide guided walking tours to the public

9.2 - Riverbank Assessment Recommendations

The Delaware River Waterfront is the heart of many of the planning initiatives within the watershed. In order to gain a detailed picture of conditions along this corridor of the watershed, riverbank assessments were conducted over two consecutive days in June 2007. PWD employees performed these assessments in a boat, starting at the Darby Creek confluence and continuing upstream for 26 miles to the Poquessing Creek confluence. In addition to providing

a baseline of existing conditions, these assessments may assist with prioritizing the locations of restoration projects. The full text of assessments can be viewed in Appendix A.

The following recommendations are organized by river segment from south to north. Some of the actions require alerting riverfront property owners of steps they might take to improve the health of the river.

Darby Creek Confluence to Philadelphia International Airport (PHL)

- Contact management of boat/yacht clubs and Lagoon Night Club about Best Management Practices (BMPs).
- Contact management at Governor Printz Park about lawn care and stormwater management.
- Investigate abandoned pipe and concrete structure.

Philadelphia International Airport (PHL) to Fort Mifflin

- Contact management of United Parcel Service about Best Management Practices.
- Contact management of Fort Mifflin about lawn care and stormwater management.
- Build a fortified stone wall at UPS location.
- Investigate abandoned pumping station and oil/fuel storage facility for possible chemical runoff.
- Investigate old railroad track pier with pipes running underneath.

Fort Mifflin to Philadelphia Port Authority

- Contact the Army Corps of Engineers about stormwater management and Best Management Practices.
- Contact the Army Corps of Engineers regarding the abandoned bulkhead.
- Contact Aker Philadelphia Shipyard about stormwater management and Best Management Practices.
- Contact Aker Philadelphia Shipyard regarding abandoned structure.
- Contact the Philadelphia Regional Port Authority about Best Management Practices.
- Contact the Philadelphia Regional Port Authority regarding the abandoned piers.

Port Authority to Penn's Landing – Pier 36 Heliport

- Contact the Philadelphia Port Authority about Best Management Practices and stormwater management.
- Replace missing debris screens.
- Continue partnership with the Delaware River Waterfront Corporation.
- Investigate abandoned piers and broken bulkhead.
- Contact the Pier 36 Heliport about stormwater runoff.

Penn's Landing – Pier 36 Heliport to the Waterfront Square Condominiums

- Continue partnership with the Delaware River Waterfront Corporation.
- Contact all restaurants and residential units about stormwater management.

Waterfront Square Condominiums to Westway Terminal Co. Inc.

- Replace missing tide gates.

- Contact Westway Terminal Co. about Best Management Practices and stormwater management.
- Investigate the status of the Philadelphia Electric Co.'s buildings.
- Investigate abandoned piers and bulkheads.
- Investigate ownership of sunken boat.
- Have abandoned cars removed from banks.

Westway Terminal Co., Inc. to Bridesburg Outboard Club

- Contact municipalities regarding stormwater management and Best Management Practices.
- Contact the Bridesburg Outboard Club about stormwater management.
- Conduct clean-up of the Frankford Creek confluence.
- Investigate suspected concrete dump site.

The Bridesburg Outboard Club to the Wissinoming Yacht Club

- Contact all businesses about stormwater management and Best Management Practices.
- Contact Rohm & Haas regarding clear discharge coming from the 6-inch pipes.
- Investigate the pipeline located at the old Keiser's Tire & Battery facility.

Wissinoming Yacht Club to the Pennypack Confluence

- Contact businesses and park directors about stormwater management and Best Management Practices.
- Investigate unidentified properties.
- Investigate the vacant warehouse.

The Pennypack Confluence to the Poquessing Confluence

- Contact all businesses about stormwater management and Best Management Practices.
- Contact management of condos and townhouses about lawn care and stormwater management.

9.3 –Previous and Ongoing Planning Initiatives Recommendations

The planning efforts identified below represent an immense effort to provide informed management of the Delaware Direct watershed's resources, often involving significant input from public participation and outreach. For this reason, they served as the foundation for several processes related to this RCP. The actions and management options recommended by these plans are very specific and, in some cases, cover actions that may go beyond a typical River Conservation Plan project list.

Planning Projects Inventoried for the Delaware Direct Watershed RCP

- An Action Plan for the Central Delaware, 2008.
- Central Delaware Riverfront Master Plan
- A Civic Vision for the Central Delaware, 2007
- East Coast Greenway

- Green 2015, 2011
- Green City, Clean Waters
- GreenPlan Philadelphia, 2011
- Greenworks Philadelphia, 2009
- Natural Heritage Inventory of Philadelphia County, 2008
- New Kensington Riverfront Plan, 2008
- North Delaware Riverfront Greenway: Master Plan and Cost Benefits Analysis, 2006
- Northern Liberties Neighborhood Plan, 2005
- Northern Liberties Waterfront Plan, 2007
- Philadelphia Pedestrian and Bicycle Plan, 2010
- Water Resources Plan for the Delaware River Basin, 2004
- State of the Delaware River Basin Report, 2008

Connection to RCP Goals: Recommendations Matrix

A Recommendations Matrix was prepared in order to relate the recommendations of every planning effort to the goals of the RCP.

Delaware Direct Watershed River Conservation Plan Goals

- *Riverflow and Living Resources*: Improve stream habitat and integrity of aquatic life
- *In-river Flow Conditions*: Reduce the impact of urbanized flow on living resources
- *Water Quality and Pollutant Loads*: Improve dry and wet weather stream quality to reduce the effects on public health and aquatic life
- *River Corridors*: Protect and restore river corridors, buffers, floodplains and natural habitats including wetlands
- *Flooding*: Identify flood-prone areas and decrease flooding
- *Quality of Life*: Enhance residents' quality of life through environmental improvements
- *Recreation*: Enhance and improve recreational opportunities
- *Stewardship, Communication, and Coordination*: Foster community stewardship and improve inter-governmental, state, local and stakeholder cooperation and coordination on a watershed basis

The matrix shows the connection between planning efforts inventoried and the RCP goals, with notations where an overlap occurs. The full plans should be referenced for a higher level of detail regarding recommendations or when forming a River Registry project. Additional information, such as "who must take action" and the timeframe for action is contained in these plans.

A Civic Vision for the Central Delaware, 2007 / An Action Plan for the Central Delaware, 2008

PennPraxis (the clinical practice of the University of Pennsylvania's School of Design), the Philadelphia City Planning Commission and design consultant Wallace, Roberts & Todd

(WRT), collaborated on a conceptual “Vision Plan” for the Central Delaware Riverfront, which was funded by the William Penn Foundation and began in the fall of 2006.

An extensive civic engagement process took place as part of the planning process and included outreach to neighborhood associations, local businesses and individual citizens. The planning process resulted in the production of two reports: A Civic Vision for the Central Delaware (2007) and a follow-up report, An Action Plan for the Central Delaware: 2008–2018 (2008). Together, they call for a dramatic physical transformation of the Central Delaware Riverfront.

For More Information

A Civic Vision can be viewed or downloaded from www.planphilly.com/vision/vision
An Action Plan can be viewed or downloaded from <http://planphilly.com/action-plan-central-delaware-2008-2018>

Recommendations Matrix

The relationship between the Central Delaware Plan recommendations and the River Conservation Plan goals are presented in Table 9.1

Table 9.1 - Recommendations Matrix relating the implementation projects identified in the Civic Vision and Action Plan for the Central Delaware to the Delaware Direct Watershed River Conservation Plan Goals

	RIVER CONSERVATION PLAN GOALS							
	Riverflow & Living Resources	In-river Flow Conditions	Water Quality & Pollutant Loads	River Corridors	Flooding	Quality of Life	Recreation	Stewardship, Communication, & Coordination
A Civic Vision for Central Delaware (PennPraxis, 2007) and Action Plan for the Central Delaware (2008)								
Early Action								
Work with the Center City District to launch a two-mile interim bike trail from Pier 70 to the Benjamin Franklin Bridge that will showcase the recreational potential of the future river trail.						X	X	
Enhance Penn Treaty Park and Pulaski Park through collaborative initiatives with the state Department of Conservation and Natural Resources (DCNR) and local community groups.							X	
Evaluate the cost and feasibility of creating park space at the terminus of the Lehigh Avenue rail viaduct.							X	
Construct tidal wetlands, meadows and floodplain forest at the existing finger piers adjacent to Pier 70 in conjunction with efforts by the Philadelphia Water Department and the Pennsylvania Department of Environmental Protection's efforts to meet the federal mandate of the Clean Water Act.	X		X	X		X		
Work with the Penn's Landing Corporation to craft a Request for Qualifications and Request for Proposals for the redevelopment of the Festival Pier/Incinerator site as an integrated public park space and development parcel.						X	X	
Draft and adopt an interim zoning overlay to establish development standards for the central Delaware. At a minimum, the zoning ordinance should mandate a 100-foot buffer for public riverfront access where feasible and create use and design guidelines for riverfront development.				X		X		X
Short Term Initiative - Background Projects								
Institute policies to provide density bonuses to developers to foster the development of mixed-income housing, "sustainable" buildings, historic preservation, and adaptive reuse, and transit-oriented development.						X		X
Establish a trust to target priority land acquisitions for public open space.				X		X		X
Conduct additional research on potential funding sources and management structures. Mobilize city and state officials to begin implementing the strategies proposed.						X		X

	RIVER CONSERVATION PLAN GOALS							
	Riverflow & Living Resources	In-river Flow Conditions	Water Quality & Pollutant Loads	River Corridors	Flooding	Quality of Life	Recreation	Stewardship, Communication, & Coordination
A Civic Vision for Central Delaware (PennPraxis, 2007) and Action Plan for the Central Delaware (2008)								
Form a historic preservation task force to ensure that historical structures within the project area are preserved and that tours or markers illustrate the riverfronts' evolution from its colonial and industrial eras to the present.						X		
Modify the official city plan to extend key city streets to the riverfront and establish the ideal alignment for the redesigned Delaware Boulevard.						X		
Conduct a feasibility study for the proposed transportation network along the central Delaware, focusing on reconstructing I-95 at Center City and connecting Market Street and Old City with Delaware Boulevard and the river.						X		
Capitalize on the transit-alternatives analysis being undertaken by the Delaware Regional Port Authority to develop an implementation plan for mass transportation options along the riverfront.						X		
Adopt a Complete Streets policy to ensure that standards for multimodal movement and public access are met.						X	X	
Assess feasibility of and locations for water-based recreation activities given the central Delaware's water currents and industrial uses.						X	X	
Conduct an ecological study that outlines the impact future riverfront development on the Delaware watershed.	X	X		X	X	X		
Encourage ongoing planning studies at the neighborhood level.						X		X
Encourage collaboration between the City Planning Commission and the Bicycle/Pedestrian Advisory Task Force on a study of how to integrate car sharing and bike sharing into the central Delaware transit network.							X	X
Coordinate a public-education campaign to ensure ongoing support for the civic vision.								X
Short-Term Initiatives, High Visibility Projects								
Design, construct, and expand the interim riverfront trail that will be implemented as one of the civic vision's early action projects	X					X	X	X
Create spaces for a range of active uses underneath I-95 including stormwater parks, rain gardens, green parking, pedestrian trails and paths, recreation facilities and civic portals.						X	X	

	RIVER CONSERVATION PLAN GOALS							
	Riverflow & Living Resources	In-river Flow Conditions	Water Quality & Pollutant Loads	River Corridors	Flooding	Quality of Life	Recreation	Stewardship, Communication, & Coordination
A Civic Vision for Central Delaware (PennPraxis, 2007) and Action Plan for the Central Delaware (2008)								
Begin the redesign of Delaware Boulevard, a roadway that will serve as the spine of future riverfront activity, widening sidewalks to encourage greater pedestrian activity and incorporating a landscaped median along the length of the entire boulevard.						X	X	
Acquire the necessary rights-of-ways required to establish the boulevard along the entire length of the riverfront. This would include another between Cumberland Street and Lehigh Avenue, and an extension of Lehigh Ave from Richmond Street to Delaware Boulevard a small area of private property between Dyott Street and Schirra Drive.						X		
Begin to extend major Philadelphia streets to the riverfront at key locations to provide connections to the river and serve as gateways to the neighborhoods. These essential connector streets include Lehigh Avenue, Cumberland Street, Columbia Avenue, Spring Garden St, Frankford Ave (connecting with Ellen Street), Washington Avenue, Dock Street, Reed Street and Tasker Street .			X			X	X	
Develop a series of signature parks.							X	
Work with Conrail and possibly the Pennsylvania Industrial Development Corporation (PIDC) to ensure that the portions of the Port Richmond rail yards adjacent to the river remain accessible to the public despite the potential for the property to become a light industrial center.						X	X	X
Establish dedicated rights-of-way for buses along Delaware Boulevard to improve the efficiency of public riverfront transit. Bus Rapid Transit (BRT) can serve Philadelphia well as an interim approach to improved mass transportation along the riverfront.						X		X
Finish design and construction of the Festival Pier/Incinerator site at Spring Garden Street. The city-owned parcel could be designed to include commerce, culture, open space, and development. In conjunction with this development, investments should be made in the Spring Garden Street station of the Market-Frankford line.						X	X	

	RIVER CONSERVATION PLAN GOALS							
	Riverflow & Living Resources	In-river Flow Conditions	Water Quality & Pollutant Loads	River Corridors	Flooding	Quality of Life	Recreation	Stewardship, Communication, & Coordination
A Civic Vision for Central Delaware (PennPraxis, 2007) and Action Plan for the Central Delaware (2008)								
Develop green space and create public riverfront access at the foot of Washington and Snyder Avenues in South Philadelphia. These riverfront parks may include tidal wetlands and revitalized piers to provide new venues for fishing and boat docking.	X					X	X	
Establish a water-taxi system to support riverfront activity and provide connections north and south along the river and east to Camden.							X	
Mid-Term Initiatives								
Develop partnerships. There are multiple opportunities for collaboration between city and state agencies. In particular, integrated planning efforts between PennDOT and the PWD could help these agencies maximize the limited funding each agency has for infrastructure improvements.								X
Complete Delaware Boulevard. In the mid-term, the boulevard should be implemented from Lehigh Avenue to Allegheny Avenue along the river's edge.						X		
Work with PennDOT to realize long-term interchange reconstruction roadway improvements in conjunction with the Girard Avenue						X		
Construct the additional streets necessary to build the proposed street network that would extend Philadelphia's city grid on the west side of I-95 to the river's edge. A network of streets, with its accompanying infrastructure for utilities (sewer, water, power, etc.), offers a ready template for new types of development.						X		X
Complete the riverfront trail so that it is continuous throughout the project area. This trail will serve as Philadelphia's portion of the East Coast Greenway, which links Maine to Florida by a continuous bike path.						X	X	X
Add amenities to the riverfront including, water recreation, public art, historical markers, attractive landscaping and active programming that helps define the trail and parks.						X		X
Long-Term Initiatives								
Complete the development of Delaware Boulevard. Increased population density, public-space amenities, mass transit, and an integrated road network could dramatically alter the character of what is currently Delaware Avenue/Columbus Boulevard.						X		

	RIVER CONSERVATION PLAN GOALS							
	Riverflow & Living Resources	In-river Flow Conditions	Water Quality & Pollutant Loads	River Corridors	Flooding	Quality of Life	Recreation	Stewardship, Communication, & Coordination
A Civic Vision for Central Delaware (PennPraxis, 2007) and Action Plan for the Central Delaware (2008)								
Begin the reconstruction of I-95 in the southern and central sections of the central Delaware. Collaborative partnerships between city, state and federal agencies in the short- and mid-term could result in new ways of thinking about the future of the interstate; thereby reconnecting the city to the riverfront by eliminating the barrier-like quality of I-95.						X		X
Complete the open space and marina at Penn's Landing, creating a signature green space on the Delaware through an international design competition.							X	
Redevelop the PECO site as an alternative energy generator or a commercial, performance or art space. The adaptive reuse of this iconic building would create a new landmark along the riverfront and complement an improved Penn Treaty Park.						X		
Begin to develop new, medium-density, mixed-use development between Washington and Oregon Avenues as the big-box retail buildings in South Philadelphia near the end of their economic cycle.						X		
Complete the transition of the Port Richmond rail yards into a business park and mixed-use community.						X		

Central Delaware Master Plan

The Central Delaware Riverfront Master Plan is a \$1 million planning effort for the area between I-95 and the Delaware River and between Oregon and Allegheny Avenues. The plan will develop overall recommendations for land use and transportation, including zoning and design guideline recommendations. The plan will also map a new system of parks, trails, streets and development sites along with phasing recommendations and cost estimates. A key principle of the plan is to utilize public investment in a public realm of parks, trails and streets in order to leverage private investment on adjacent parcels.

For More Information

To stay up-to-date on Central Delaware River planning efforts, visit:
www.plancentraldelaware.com.

Recommendations Matrix

The relationship between the Central Delaware Riverfront Master Plan recommendations and the River Conservation Plan goals is presented in Table 9.2.

Table 9.2 - Recommendation Matrix relating the implementation projects identified in the Central Delaware Riverfront Master Plan to the Delaware Direct Watershed River Conservation Plan Goals

	RIVER CONSERVATION PLAN GOALS							
	Riverflow & Living Resources	In-river Flow Conditions	Water Quality & Pollutant Loads	River Corridors	Flooding	Quality of Life	Recreation	Stewardship, Communication, & Coordination
Central Delaware Riverfront Master Plan								
Incorporate parks along riverfront and space the parks about every ½ mile along the riverfront.	X		X	X	X	X	X	
Integrate continuous multi-use recreation trail that connects to parks.				X		X	X	X
Develop comprehensive street network that is identified for circulation and transportation with certain streets designated as connector streets.						X	X	X

East Coast Greenway

The East Coast Greenway (ECG) is a project to create a 3,000-mile urban path that links the major cities of the Atlantic coast of the United States from Calais, Maine to Key West, Florida. The path is for non-motorized human transportation (i.e., biking).

The East Coast Greenway enters Morrisville, Pennsylvania from Trenton over the Calhoun Street Bridge. It follows PA Bicycle Route E for much of the 55-mile route, through Bucks, Philadelphia and Delaware counties. The route ends in Delaware, near Marcus Hook. Pennsylvania will contain 43 miles of the ECG trail.

Among others, some of the projects currently in planning and design are:

- Delaware Canal State Park Trail
- K&T Rail Trail
- Botanic Park Trail
- Tinicum- Ft. Mifflin Trail

Furthermore, the Delaware River City Corporation (DRCC) is creating the North Delaware Riverfront Greenway, an eight-mile link in the ECG in Philadelphia that will connect the Delaware and Schuylkill Rivers.

For More Information

For more information on the East Coast Greenway, visit: <http://www.greenway.org/pa.aspx>.

Matrix Recommendations

The relationship between the East Coast Greenway recommendations and the River Conservation Plan goals is presented in Table 9.3.

Table 9.3 - Recommendation Matrix relating the implementation projects identified in the East Coast Greenway to the Delaware Direct Watershed River Conservation Plan Goals

	RIVER CONSERVATION PLAN GOALS							
	Riverflow & Living Resources	In-river Flow Conditions	Water Quality & Pollutant Loads	River Corridors	Flooding	Quality of Life	Recreation	Stewardship, Communication, & Coordination
East Coast Greenway								
To develop the North Delaware Riverfront Greenway, an eight-mile link in the East Coast Greenway that will connect the Delaware and Schuylkill rivers in Philadelphia						X	X	X

Green2015: An Action Plan for the First 500 Acres

The goal of Green2015, produced by PennPraxis for Philadelphia Parks and Recreation (PP&R), is to unite city government and neighborhood residents to transform 500 acres of empty or underused land in Philadelphia into parks for neighbors to enjoy by 2015. New parks on formerly vacant land will transform neighborhoods, create jobs, help reduce crime and provide access to fresh food.

For More Information

For more information on Green2015, please visit: <http://planphilly.com/green2015-action-plan-first-500-acres>.

Recommendations Matrix

The relationship between the Green2015's recommendations and the River Conservation Plan goals are presented in Table 9.4.

Table 9.4 - Recommendation Matrix relating the implementation projects identified in Green 2015 to the Delaware Direct Watershed River Conservation Plan Goals

	RIVER CONSERVATION PLAN GOALS							
	Riverflow & Living Resources	In-river Flow Conditions	Water Quality & Pollutant Loads	River Corridors	Flooding	Quality of Life	Recreation	Stewardship, Communication, & Coordination
Green 2015								
To create 500 new acres of “greened public space” by 2015 in order to increase public access to parks and recreational resources	X	X	X	X	X	X	X	X
Serve neighborhoods with less green space first, providing parks within a reasonable walking distance of all city residents.						X	X	X
Create parks that enhance people’s relationships and create stronger communities.						X	X	X
Identify future green spaces that will act as catalysts for the revitalization of underutilized industrial sites, vacant land and their surrounding communities.								X
Green space created for 2015 must meet the city’s long-term vision for open space.			X			X	X	X
New green space should provide a multitude of benefits for city residents.						X	X	X
Create diverse and multifunctional spaces for changing age groups, recreation types and animal habitats.	X					X	X	X
Raise the funds necessary to acquire, design, implement and maintain new city parks.								X
Engage partners and collaborations between public and private sectors								X
Transform one or two recreation centers as demonstration projects to test low-maintenance design ideas and sustainable-design principles.						X	X	
Coordinate policy initiatives to green schoolyards and make them assets for students and neighborhoods.						X	X	X
Reduce the impediments to transforming schoolyards into parks.								X
Create a streamlined process for identifying and transforming public vacant land into public parks and green spaces.								X
Create a database to track the progress of parks projects and identify priority sites for green space.								X
Meet with public agencies to discuss low-cost transfer of publicly owned vacant land for the purpose of creating new city parks.								X

	RIVER CONSERVATION PLAN GOALS							
	Riverflow & Living Resources	In-river Flow Conditions	Water Quality & Pollutant Loads	River Corridors	Flooding	Quality of Life	Recreation	Stewardship, Communication, & Coordination
Green 2015								
Work with PIDC to identify PIDC-managed properties where park space can help support economic development.								X
Coordinate with PWD and private land-owners who have expressed interest in greening their parcels to manage stormwater and reduce the associated fees.	X	X	X	X	X			X
Work with the Philadelphia International Airport to ensure that public access is granted on a portion of the 82 acres of wetland sites						X	X	X
Create a "rail corridor watch list"								X
Complete all watershed parks and river trails to ensure continued public access for pedestrians and cyclists.						X	X	X
Create small-scale bike and pedestrian corridors following the course of a historic stream.						X	X	
Provide on-grade bike and pedestrian routes to existing parks following a street right of way						X	X	
Use existing rail corridors (some active, some vacant) to create major, separated bike and pedestrian connections that link citizens to existing waterfront parks and that contain significant planting.						X	X	

Green City, Clean Waters

Green City, Clean Waters (also known as the Combined Sewer Overflow (CSO) Long Term Control Plan Update) is the Philadelphia Water Department's plan that describes how the City of Philadelphia proposes to invest approximately \$2 billion over the next 25 years to transform the health of the City's waterways through a sustainable, land-based approach. Green City, Clean Waters will leave behind a green legacy for future generations and incorporate a balance between ecology, economics and equity. Every dollar spent is intended to provide a maximum return in benefits to the public and the environment.

For More Information

For more information on Green City, Clean Waters, visit: www.phillywatersheds.org.

Recommendations Matrix

The relationship between Green City, Clean Waters recommendations and the River Conservation are in table 9.5

Table 9.5 - Recommendation Matrix relating the implementation projects identified in Green City, Clean Waters to the Delaware Direct Watershed River Conservation Plan Goals

	RIVER CONSERVATION PLAN GOALS							
	Riverflow & Living Resources	In-river Flow Conditions	Water Quality & Pollutant Loads	River Corridors	Flooding	Quality of Life	Recreation	Stewardship, Communication, & Coordination
Green City, Clean Waters								
Large-scale implementation of green stormwater infrastructure to manage runoff at the source on public land and to reduce demands on sewer infrastructure	X	X	X			X	X	X
Requirements and incentives for green stormwater infrastructure to manage runoff at the source on private land and to reduce demands on sewer infrastructure	X	X	X			X		X
A large-scale street tree program to improve appearance and to manage stormwater at the source on City streets	X		X			X		X
Increased access to and improved recreational opportunities along green and attractive stream corridors and waterfronts	X	X	X	X	X	X	X	X
Preserved open space utilized to manage stormwater at the source	X		X		X	X	X	X
Converted vacant and abandoned lands to open space and responsible redevelopment	X	X	X		X	X	X	X
Restored streams with physical habitat enhancements that support healthy aquatic creatures	X							
Additional infrastructure-based controls when necessary to meet appropriate water quality standards		X	X					

GreenPlan Philadelphia

GreenPlan Philadelphia is the City's Parks and Recreation Department's blueprint for sustainable open space. It is the City's first planning project that targets its parks, recreation areas, and open spaces. GreenPlan Philadelphia will guide and inform decision-making about open space use, acquisition, development, funding and management. The mission of GreenPlan Philadelphia is to reconnect all Philadelphians to green parks and open space by developing a long-term vision, preparing a strategic plan and implementing the plan's recommendations over the next 15 years. Implementing it will ensure that open space continues to enhance the environmental, social and economic well-being of our City.

For More Information

For more information on GreenPlan Philadelphia plan:

<http://www.greenplanphiladelphia.com/>

Recommendations Matrix

The relationship between the Greenworks targets and the River Conservation Plan goals are presented in Table 9.6

Table 9.6 - Recommendation Matrix relating the implementation targets identified in GreenPlan Philadelphia to the Delaware Direct Watershed River Conservation Plan Goals

	RIVER CONSERVATION PLAN GOALS							
	Riverflow & Living Resources	In-river Flow Conditions	Water Quality & Pollutant Loads	River Corridors	Flooding	Quality of Life	Recreation	Stewardship, Communication, & Coordination
GreenPlan Philadelphia								
Achieve at least 30 percent tree cover in every neighborhood	X		X			X		
Support tree planting and stewardship within the city's communities	X		X			X		X
Expand the use of stormwater management elements to help meet the City's Stormwater reduction target of managing the first inch of rainwater to reduce burdens on the sewer system	X	X	X			X		X
Improve existing meadows, and create 220 acres of new meadows	X							
Ensure that there is a trail within a half mile of all residents						X	X	
Connect independent trail systems in a comprehensive citywide system						X	X	
Supplement the proposed trail systems with 300 miles of on-street						X	X	
Create 200 acres of new or improved urban stream banks and tidal/non-tidal wetlands				X				
Promote the creation of commercial urban agriculture projects that are profitable and environmentally responsible, beginning with a goal of 10 projects within the first five years	X					X		
Expand the use of pervious surfaces to help meet the City's stormwater- reduction target of managing the first inch of rainwater			X			X		
Expand the use of heat reflective surfaces to reduce urban head island effects						X		
Use open space resources to meet Philadelphia's renewable energy requirements and reduce dependence on fossil fuels.	X		X			X		
Increase park space to ten acres of parkland per thousand residents.			X			X	X	

	RIVER CONSERVATION PLAN GOALS							
	Riverflow & Living Resources	In-river Flow Conditions	Water Quality & Pollutant Loads	River Corridors	Flooding	Quality of Life	Recreation	Stewardship, Communication, & Coordination
GreenPlan Philadelphia								
Ensure that all residents are adequately served by parks and recreation centers						X	X	
Green 100 additional schoolyards through the Campus parks Program			X			X		
Reduce vacant land and structure abandonment from 10% to 5% of privately held parcels. (60,000 to 28,000 parcels)						X		
Develop parkland and open space connectors along the city's riverfronts	X		X	X		X	X	
Create and average of two public river- access points per mile along the Delaware and Schuylkill Rivers								
Create a citywide network of 1,400 miles of green streets			X			X		
Apply measures recommended in GreenPlan Philadelphia to large-scale master-planned private developments	X		X			X	X	
Increase the use of integrated building design measures that augment sustainability goals for open space, public space, and natural systems	X		X			X		
Improve the performance of plazas, sidewalks, and landscaped spaces pursuant to GreenPlan Philadelphia targets and recommendations						X		
Upgrade cleanliness standards along utility and rail corridors and in passenger-rail facilities. Apply GreenPlan Philadelphia measures within rights-of-way						X		
Use programs at parks and other public facilities to expand environmental-education opportunities						X		X
Create broad citizen and interest-group understanding of GreenPlan Philadelphia, the City's green-performance objectives, and the opportunities available in the city's diverse open-space resources						X		X
Institutionalize GreenPlan Philadelphia within city government						X		X
Implement rigorous maintenance practices to provide safe, high-quality, sustainable public open space	X		X			X		
Achieve excellence in environmental design			X			X		

	RIVER CONSERVATION PLAN GOALS							
	Riverflow & Living Resources	In-river Flow Conditions	Water Quality & Pollutant Loads	River Corridors	Flooding	Quality of Life	Recreation	Stewardship, Communication, & Coordination
GreenPlan Philadelphia								
Strengthen and expand private stewardship, partnerships, and volunteer efforts in parks and other public open-space facilities						X		X
Regularly measure and update the progress of GreenPlan Philadelphia. Revise targets and goals as circumstances warrant						X		X
Support GreenPlan Philadelphia implementation with increased capacity to collect, analyze and maintain relevant data						X		X
Increase private funding participation to achieve 30% of funding for GreenPlan Philadelphia initiatives through non-governmental sources						X		
Diversify public funding sources for GreenPlan Philadelphia initiatives	X		X			X	X	
Diversify funding, and strategically prioritize the capital needs of Fairmount Park, the Department of Recreation, and GreenPlan Philadelphia initiatives						X	X	

Greenworks Philadelphia, 2009

The Mayor's Office of Sustainability's Greenworks Philadelphia is the six-year plan to help make Philadelphia the greenest city in America. Greenworks Philadelphia envisions a city in which residents and businesses benefit from lower energy costs, cleaner air, greener neighborhoods, better transit and new jobs. It also acknowledges that broad visions are meaningless unless backed by specific, measurable and achievable shorter-term targets. Therefore, Greenworks Philadelphia also presents the specific steps that all Philadelphians—not just their government—must take over the next seven years to reinvent the City.

Greenworks Philadelphia builds upon the 2007 Local Action Plan for Climate Change, which was produced by the Sustainability Working Group, a task force of municipal employees. The Local Action Plan outlined a series of steps that the City of Philadelphia government should take to reduce greenhouse gas emissions by 10 percent by 2010. Many of these efforts are already underway and are described in Greenworks Philadelphia. Also incorporated are the goals of GreenPlan, the City's open space plan.

Greenworks Philadelphia considers sustainability through five lenses: Energy, Environment, Equity, Economy and Engagement. For each category, an overarching goal was set, with measurable targets and specific initiatives designed and described to help Philadelphia reach the targets by 2015. These goals, targets, and initiatives have been refined over the past 10 months by the Sustainability Working Group with input and feedback from City employees, local and national non-profit organizations and civic and business leaders, including members of the Mayor's Sustainability Advisory Board.

For More Information

For more information on the GreenWorks plan :

<http://www.phila.gov/green/greenworks/2009-greenworks-report.html>

Recommendations Matrix

The relationship between the Greenworks recommendations and the River Conservation Plan goals are presented in Table 9.7.

Table 9.7 - Recommendations Matrix relating the implementation projects identified in Greenworks Philadelphia to the Delaware Direct Watershed River Conservation Plan Goals

	RIVER CONSERVATION PLAN GOALS							
	Riverflow & Living Resources	In-river Flow Conditions	Water Quality & Pollutant Loads	River Corridors	Flooding	Quality of Life	Recreation	Stewardship, Communication, & Coordination
Greenworks Philadelphia (City of Philadelphia, 2009)								
Lower City Government Energy Consumption by 30 Percent						X		
Reduce Citywide Building Energy Consumption by 10 Percent						X		
Retrofit 15 Percent of Housing Stock with Insulation, Air Sealing and Cool Roofs						X		
Purchase and Generate 20 Percent of Electricity Used in Philadelphia from Alternative Energy Sources						X		
Reduce Greenhouse Gas Emissions by 20 Percent	X					X		
Improve Air Quality toward Attainment of Federal Standards						X		
Divert 70 Percent of Solid Waste from Landfill						X		
Manage Stormwater to Meet Federal Standards	X	X	X					
Provide Park and Recreation Resources within 10 Minutes of 75 Percent of Residents						X	X	
Bring Local Food within 10 Minutes of 75 Percent of Residents						X		
Increase Tree Coverage toward 30 Percent in All Neighborhoods by 2025						X		
Reduce Vehicle Miles Traveled by 10 Percent						X		
Increase the State of Good Repair in Resilient Infrastructure						X		
Double the Number of Low- and High-Skill Green Jobs						X		X

Natural Heritage Inventory for Philadelphia County, 2008

The Philadelphia County Natural Heritage Inventory is a document compiled and prepared by the Pennsylvania Natural Heritage Program (PNHP). The PNHP is a partnership between The Western Pennsylvania Conservancy, The Department of Conservation and Natural Resources, The PA Fish and Boat Commission and, The PA Game Commission. It contains information on the general locations of rare, threatened and endangered species; of the highest quality natural areas in the county; and areas in need of restoration to native habitat. It is not an inventory of all open space and it is based on the best available information. It is intended as a conservation tool and should in no way be treated or used as a field guide.

Accompanying each site description are general management and restoration recommendations that would help to ensure the protection and continued existence of these natural communities, rare plants and animals while enhancing the quality of existing green space and open space. Recommendations are based on the biological needs of these elements (communities and species) and the efforts necessary to maintain the health of the overall natural system. Managed areas, such as federal, state, city lands; private preserves; and conservation easements, are also provided on the maps, where information was available. The maps are useful in determining where gaps occur in the protection of local significant habitats, natural communities and rare species.

For More Information

For more information on the Natural Heritage Inventory report for Philadelphia:
http://www.naturalheritage.state.pa.us/CNAI_Download.aspx

Recommendations Matrix

The relationship between the Natural Heritage Inventory recommendations and the River Conservation Plan goals are presented in Table 9.8.

Table 9.8 - Recommendation Matrix relating the implementation projects identified in the Natural Heritage Inventory report for Philadelphia to the Delaware Direct Watershed River Conservation Plan Goals

	RIVER CONSERVATION PLAN GOALS							
	Riverflow & Living Resources	In-river Flow Conditions	Water Quality & Pollutant Loads	River Corridors	Flooding	Quality of Life	Recreation	Stewardship, Communication, & Coordination
Natural Heritage Inventory for Philadelphia County (Western PA Conservancy, 2008)								
Consider conservation initiatives and tools for natural areas on private land	X		X	X		X		
Orient management and restoration plans to address species of special concern and Natural communities as targets of conservation (not simply open or multi-use space) through the active maintenance of existing high quality natural area and restoration of more degraded spaces	X			X		X		
Protect bodies of water with adequate natural buffers	X		X	X		X		
Provide for buffers around natural areas	X		X	X		X		
Increase the connectivity of the city's green space with surrounding landscapes						X	X	X
Encourage and utilize existing grassroots organizations interested in preserving and restoring the city's natural areas								X
Manage for control of known invasive species and early detection of new invasive species in key natural area				X		X		
Promote community education on the importance of ecological health in urban environments								X
Incorporate Natural Heritage Inventory information into city planning efforts	X	X	X	X				

New Kensington Riverfront Plan, 2008

The New Kensington Community Development Corporation (NKCDC) produced the New Kensington Riverfront Plan. It is a plan that focuses on the New Kensington stretch of the river and emphasizes a balance between development and open space, creating gateways into the community, and creating a framework for implementation. The plan was guided by a broad task force of stakeholders.

For More Information

The Riverfront Plan can be downloaded at:

http://nkcdc.org/content.asp?cat=LANDUSE&varcontentcat=LAND_USE_WATERFRONT

Recommendations Matrix

The relationships between the New Kensington Riverfront Plan implementation projects and the River Conservation Plan goals are presented in Table 9.9.

Table 9.9 - Recommendation Matrix relating the implementation projects identified in New Kensington Riverfront Plan to the Delaware Direct Watershed River Conservation Plan Goals

	RIVER CONSERVATION PLAN GOALS							
	Riverflow & Living Resources	In-river Flow Conditions	Water Quality & Pollutant Loads	River Corridors	Flooding	Quality of Life	Recreation	Stewardship, Communication, & Coordination
New Kensington Riverfront Plan (WRT, 2008)								
Frankford Avenue Streetscape and Gateways			X			X		
Columbia Avenue Streetscape and Gateways			X			X		
Frankford Avenue Riverfront Access						X	X	
Penn Treaty Park Enhancements						X	X	
Pulaski Park Expansion						X	X	
Girard Interchange Accessibility Improvements						X	X	
Frankford Creek corridor	X	X	X	X	X	X	X	X

North Delaware Riverfront Greenway: Master Plan and Cost Benefit Analysis, 2006

The North Delaware Riverfront is a valuable resource to the entire City of Philadelphia. With more than 700 acres of vacant and underutilized land, the riverfront has the potential for greenway development in concert with mixed-use, commercial and residential development. While some of the existing properties need environmental clean-up, a properly developed continuous greenway and trail system (as proposed in the Greenway Plan) will provide an area devoted to public recreation, open space and economic development for new and existing riverfront neighborhoods.

The North Delaware Riverfront Greenway Master Plan and Cost Benefit Analysis, prepared by the Pennsylvania Environmental Council, Northeast River Task Force and various City agencies, focuses on the implementation of a "Public Greenway" that maximizes return of public investment, the creation of new revenue and significant recreational areas and open spaces for the City of Philadelphia. The analysis contains three alternative greenway scenarios. A consultant team (Greenways Incorporated, Econsult Corporation, and Schelter and Associates) worked to gather all relevant data for the plan, solicit public input, review priorities and synthesize all the information into a final implementation plan.

The recommendations for this report are presented as six neighborhood maps with proposed trail alignments. These graphics can be accessed by following this link: <http://www.drcc-phila.org/maps%201.htm>

For More Information

For more information on the North Delaware Riverfront Greenway Plan: <http://www.drcc-phila.org/plans.htm>

Recommendations Matrix

The relationship between the North Delaware Riverfront Greenway recommendations and the River Conservation Plan goals are presented in Table 9.10

Table 9.10 - Recommendations Matrix relating the implementation projects identified in North Delaware Riverfront Greenway to the Delaware Direct Watershed River Conservation Plan Goals

	RIVER CONSERVATION PLAN GOALS							
	Riverflow & Living Resources	In-river Flow Conditions	Water Quality & Pollutant Loads	River Corridors	Flooding	Quality of Life	Recreation	Stewardship, Communication, & Coordination
North Delaware Riverfront Greenway, 2006								
<i>Plan recommendations are in a graphical format and can be accessed on the web:</i> http://www.drcc-phila.org/maps%201.htm	X	X		X		X	X	X

Northern Liberties Neighborhood Plan, 2005

The Northern Liberties Neighborhood Plan, prepared by Interface Studio for the Northern Liberties Neighbors Association (NLNA), seeks to amplify the community's uniqueness and provides a guide that represents the community's goals for the neighborhood's future. The document is also a tool to organize the planning efforts and coordination with City agencies and other stakeholders/investors that will be partners in the implementation of the plan. Completed in 2005, GIS and three-dimensional modeling techniques were utilized to help community members quantify and comprehend the changes underway, while also enabling them to visualize the impact of proposed future development. Through the planning process, local stakeholders were encouraged to establish priorities and goals for the neighborhood's redevelopment, improvements were identified for open space and major streets, and policies were recommended to retain the community's mixed-use character.

For More Information

The full plan can be downloaded at
http://www.nlina.org/images/NLNA_Plan_WebVersion.pdf

Recommendations Matrix

The relationship between the Northern Liberties Neighborhood Plan recommendations and the River Conservation Plan goals are presented in Table 9.11.

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Table 9.11 - Recommendation Matrix relating the implementation projects identified in Northern Liberties Neighborhood Plan to the Delaware Direct Watershed River Conservation Plan Goals

	RIVER CONSERVATION PLAN GOALS							
	Riverflow & Living Resources	In-river Flow Conditions	Water Quality & Pollutant Loads	River Corridors	Flooding	Quality of Life	Recreation	Stewardship, Communication, & Coordination
Northern Liberties Neighborhood Plan (Interface Studios, 2005)								
Reinforce the diversity of the neighborhood's population and the unique collective identity								
Promote excellence in design through Urban Design Committee and Zoning Committee Activity								X
For large, new, residential developments, advocate for affordable units						X		
Complete the Northern Liberties Community Center						X		
Encourage public art by local artists including the design of new street furniture and lighting						X		
Expand the NLNA website to collect, organize and distribute local stories and histories								X
Promote and expand organized community events						X		X
Preserve the collaged landscape and mosaic of land uses								
Limit conversion of commercial properties for residential development						X		
Encourage commercial use on Girard, Spring Garden, and 2nd Street						X		
Form a business association with the legitimacy and support of a wide range of local businesses								X
Create a business retention and marketing initiative								X
Create and adopt guiding principles for the redevelopment of key commercial properties								X

	RIVER CONSERVATION PLAN GOALS							
	Riverflow & Living Resources	In-river Flow Conditions	Water Quality & Pollutant Loads	River Corridors	Flooding	Quality of Life	Recreation	Stewardship, Communication, & Coordination
Northern Liberties Neighborhood Plan (Interface Studios, 2005)								
<i>Re-establish 2nd Street as the heart of the neighborhood</i>								
Encourage ground floor commercial use for every parcel between Spring Garden Street and Girard Avenue								X
Undertake traffic calming measures at key intersections and change 2nd Street's one-way traffic flow to two-way						X		
Significantly improve the physical character of 2nd Street between Poplar and Fairmount including conceptual ideas for creating new public space, greening, and traffic management.								X
<i>Adopt a "Green" philosophy and demand low-impact development techniques</i>								
Promote low-impact development and green building technologies through the Zoning Committee and Urban Design Committee through new open space requirements and green expectations on new development	X	X	X			X		
Educate neighborhood residents about effective individual efforts to reduce the impact of development on the environment						X		X
Reactivate the Tree Tenders program and target new tree plantings			X			X		X
Identify, acquire, secure, and improve the neighborhood's inventory of open space						X	X	
Create an Open Space Fund funded by developers who cannot meet the new open space requirements – funds will be used to maintain and expand local green space						X	X	X

	RIVER CONSERVATION PLAN GOALS							
	Riverflow & Living Resources	In-river Flow Conditions	Water Quality & Pollutant Loads	River Corridors	Flooding	Quality of Life	Recreation	Stewardship, Communication, & Coordination
Northern Liberties Neighborhood Plan (Interface Studios, 2005)								
<i>Foster a seamless transition between the traditional neighborhood fabric and the developing waterfront</i>								
Oppose any future restrictions to waterfront access						X		
Improve pedestrian crossings to the waterfront at Frankford, Brown, and Spring Garden						X	X	
Seek funds for streetscape improvements for Fairmount, Brown, and Laurel						X		
Develop active park space and parking under the highway and EI to creatively reuse vacant, under utilized space retrofit for an alive and growing neighborhood						X	X	
<i>Ensure livability through optimized mobility</i>								
Limit curb cuts for parking along major streets								X
Advocate for increased SEPTA ridership								X
Improve bicycle and pedestrian facilities						X	X	
Improve signage and information about on-street parking						X		X
Develop a shared parking approach to under utilized lots along Green Street						X		X
Create new parking lots						X		X

	RIVER CONSERVATION PLAN GOALS							
	Riverflow & Living Resources	In-river Flow Conditions	Water Quality & Pollutant Loads	River Corridors	Flooding	Quality of Life	Recreation	Stewardship, Communication, & Coordination
Northern Liberties Neighborhood Plan (Interface Studios, 2005)								
<i>Build capacity within the NLNA; generate desirable change</i>								
Charge a nominal fee for project review								
Expand the NLNA Volunteer Base through an outreach campaign and greater awareness in local press, the web and in key local gathering spaces								X
Develop transparency in the zoning review process and expectations and automate application submittal and review by the NLNA								X
Maintain a database of new development proposals and outcomes								X
Form a coalition with surrounding neighborhood groups to address issues of common concern.								X

Northern Liberties Waterfront Plan, 2007

The Northern Liberties Waterfront Plan was released in April 2007 by the Northern Liberties Neighbors Association. This community-based riverfront vision guides development from the Benjamin Franklin Bridge to Penn Treaty Park. Commissioned by NLNA and financed by local developers, it is the first community plan to address land along the central Delaware. The plan focuses on ideas for narrowing the gap between the river and its neighbors, such as east-west “civic incisions” that reclaim important connector streets as public space, manicured parks under portions of I-95, and floating trail elements in the river that will allow people to travel along a continuous riverfront trail despite private control of riparian land.

For More Information

The full plan can be downloaded at www.nlna.org/images/NLNA_WaterfrontPlan_Web.pdf

Recommendations Matrix

The relationship between the Northern Liberties Waterfront Plan recommendations and the River Conservation Plan goals are presented in Table 9.12.

Table 9.12 - Recommendation Matrix relating the implementation projects identified in Northern Liberties Waterfront Plan to the Delaware Direct Watershed River Conservation Plan Goals

	RIVER CONSERVATION PLAN GOALS							
	Riverflow & Living Resources	In-river Flow Conditions	Water Quality & Pollutant Loads	River Corridors	Flooding	Quality of Life	Recreation	Stewardship, Communication, & Coordination
Northern Liberties Waterfront Plan (Interface Studios, 2007)								
Activity Channel / Waterfront Trail: Continuous public access along the riverfront via a linked waterfront trail is a basic right. Our approach is to treat the trail as one public amenity comprising three very different characteristics							X	
Trail as expanded sidewalk: There are moments when the trail must operate as an active part of Delaware Avenue. Embrace these moments, and ensure that the sidewalk is designed to handle active bicycle lanes and other necessary amenities.						X	X	
Trail along the River's edge: Where possible, require new developments to provide at least a 50-foot public right-of-way in perpetuity. Where properties are deeper, advocate for a 150-foot right-of-way.	X	X		X		X	X	
Trail floating along the water: Where opportunities to build a 50-foot trail are lost, bypass them. Create a floating trail that allows people to experience the feel of the water. One benefit is that the trail will create inlets, each of which can adopt a distinct personality.						X	X	
A Natural River's Edge: A natural riparian edge along the River can bring enormous benefits. A number of areas where the riparian edge can and should be improved have been identified.	X	X	X	X	X	X	X	

	RIVER CONSERVATION PLAN GOALS							
	Riverflow & Living Resources	In-river Flow Conditions	Water Quality & Pollutant Loads	River Corridors	Flooding	Quality of Life	Recreation	Stewardship, Communication, & Coordination
Northern Liberties Waterfront Plan (Interface Studios, 2007)								
Play Space: It was strongly expressed that the waterfront should consist of multiple parks, linked to one another and the adjacent neighborhoods. This includes improving and expanding Penn Treaty Park to the south along the coastline in an expanded right-of-way; creating small, passive plazas; developing a new park under I-95 to foster stronger connections between Northern Liberties, Fishtown, and the waterfront; transforming the parking lot on Festival Pier into an active park; and capping Spring Garden with a public gateway to the River.						X	X	
Green Links: The perpendicular streets – Callowhill, Fairmount, Brown, Poplar, Laurel, Frankford, Shackamaxon, Marlborough and Columbia must remain active, neighborhood-serving, and green.						X	X	
In the case of Shackamaxon, Marlborough and Columbia Streets, the former right-of-ways that extended from Delaware Avenue to the River should be recovered providing connections to the waterfront trail system between development sites.						X	X	
Civic Incisions: Both Spring Garden Street and Delaware Avenue should be reclaimed as a civic gesture of the community, facilitating east-west connections and promoting more pedestrian activity.						X	X	

	RIVER CONSERVATION PLAN GOALS							
	Riverflow & Living Resources	In-river Flow Conditions	Water Quality & Pollutant Loads	River Corridors	Flooding	Quality of Life	Recreation	Stewardship, Communication, & Coordination
Northern Liberties Waterfront Plan (Interface Studios, 2007)								
To act as a true riverfront boulevard, Delaware Avenue needs improved intersections, crosswalks (including electronic countdowns) and additional landscaping. Long-term improvements include new light rail and expanded bicycle lanes to provide alternative modes of transportation.						X	X	
To more strongly connect the Spring Garden El station to the River, Spring Garden Street between the station and Delaware Avenue should be transformed into a linear park by planting the median with wild grasses, removing street parking, adding landscaping and enhancing the bicycle lanes.						X	X	
Bus stops, message boards / kiosks and benches should be designed with the community's industrial past and artistic present in focus.						X	X	
I-95 Insulation: I-95 is a barrier that must be addressed. Creative attention to I-95's edges are essential, and the community should have the chance to influence the look, feel and function of these edges from the ground up. There are 4 proposals for I-95:						X		X
Create new open space where the highway is lofted above the City grid						X	X	
Selectively excavate under the highway to reconnect streets once severed by I-95, most notably Poplar Street;								X
Re-plant the berms along the highway edge to accommodate a strong row of trees that frame views to the waterfront as well as swales to improve stormwater management;	X	X	X	X		X		

	RIVER CONSERVATION PLAN GOALS							
	Riverflow & Living Resources	In-river Flow Conditions	Water Quality & Pollutant Loads	River Corridors	Flooding	Quality of Life	Recreation	Stewardship, Communication, & Coordination
Northern Liberties Waterfront Plan (Interface Studios, 2007)								
Build new infiltration planters at the base of the highway walls, and treat the wall surfaces with vines and murals	X	X	X	X		X		
A Multi-Modal Waterfront: The waterfront should offer the best of multiple forms of transportation including public transit, automobile access, cycling and walking.						X		
Improve the Frankford / Laurel / Delaware intersection – Re-routing Frankford Avenue to intersect with Delaware Avenue at a right angle thereby creating a new plaza as a gateway to Fishtown.						X		
Change Callowhill Street to two-way traffic. The complicated intersection at 2nd and Callowhill where I-95 traffic descends into the City should be redesigned to allow for two-way traffic.						X		
Improve the Spring Garden El Station wrapping the interior of the underpass with a metal mesh and rear lighting to improve the physical appearance of the underpass.						X		
Pursue water taxi and river ferry service.						X	X	X
Insert light rail onto Delaware Avenue.						X		
Apertures: 11 locations have been identified as opportunities to create varied installations that express these hidden historical and cultural narratives. .						X		X
An Adaptive Environment: A calendar of events needs to be created that populates the River with unique experiences from farmers' markets to art shows and concerts throughout the year.						X		X

Philadelphia Pedestrian and Bicycle Plan

The Pedestrian and Bicycle Plan identifies strategies to increase the number and frequency of people walking and bicycling in the City by improving the connectivity, safety, convenience and attractiveness of Philadelphia's pedestrian and bicycle networks.

An expanded bikeway network will not only make bicycling safer and more convenient, but will also help to promote a wider recognition and acceptance of bicycling as a viable transportation mode. Likewise, improving the pedestrian network will enhance the safety, comfort, efficiency and attractiveness of walking in Philadelphia.

The plan includes physical infrastructure recommendations, as well as recommendations for policies, regulations, design standards, and programs that affect walking and bicycling Citywide.

For More Information

The full plan can be viewed and downloaded at http://www.bicyclecoalition.org/files/Philadelphi_PandB_Plan_Final_lowres.pdf

Recommendations Matrix

The relationship between the Philadelphia Pedestrian and Bicycle Plan recommendations and the River Conservation Plan goals are presented in Table 9.13.

Table 9.13 - Recommendation Matrix relating the implementation projects identified in the Philadelphia Pedestrian and Bicycle Plan to the Delaware Direct Watershed River Conservation Plan Goals

	RIVER CONSERVATION PLAN GOALS							
	Riverflow & Living Resources	In-river Flow Conditions	Water Quality & Pollutant Loads	River Corridors	Flooding	Quality of Life	Recreation	Stewardship, Communication, & Coordination
Philadelphia Pedestrian and Bicycle Plan								
General Approaches to Implementing Plan Recommendations								
Re-convene and institutionalize the Bicycle and Pedestrian Advisory Task Force to monitor progress on the implementation of physical improvements and policy changes recommended in the Plan, and to advise the City on new pedestrian and bicycle issues as they arise						X	X	X
Coordinate pedestrian and bicycle recommendations to avoid potential conflicts and take advantage of opportunities for dual improvements.						X	X	X
Act on opportunities to make pedestrian and bicycle network improvements, whether through specific spot improvements, as part of corridor projects (such as resurfacing, restriping, or streetscape projects), or as part of development/redevelopment projects.						X	X	X
Establish a collaborative relationship with parallel and complementary projects, such as storm water management (Green City, Clean Waters) and curb ramp replacement.						X	X	X
Pursue additional funding to program the design and construction of pedestrian and bicycle improvements on a priority basis.						X	X	
Pedestrian Network Policy Recommendations								
Establish sidewalk design guidelines						X	X	
Improve sidewalk furnishings						X	X	
Improve street crossings						X	X	
Expand and improve pedestrian signals						X	X	
Improve Driveways and Lay-Bys						X	X	

	RIVER CONSERVATION PLAN GOALS							
	Riverflow & Living Resources	In-river Flow Conditions	Water Quality & Pollutant Loads	River Corridors	Flooding	Quality of Life	Recreation	Stewardship, Communication, & Coordination
Philadelphia Pedestrian and Bicycle Plan								
Support requirements for sidewalks in new development						X	X	
Establish sidewalk retrofit guidelines						X	X	
Bicycle Network Policy Recommendations								
Expand bicycle network design						X	X	
Improve Bicycle Treatment at Intersections						X	X	
Provide more bicycle parking						X	X	
Improve bicycle access to transit						X	X	
Health and Safety Policy Recommendations								
Educate , enforce and encourage health and safety policy recommendations						X	X	
Management and Monitoring Policy Recommendations								
Mitigate construction disruption						X	X	
Maintain existing pedestrian network						X	X	
Support management of sidewalk encroachments						X	X	
Prepare bicycle detours						X	X	
Address policy for bicycles in buildings						X	X	
Improve crash reporting and records						X	X	
Improve and increase pedestrian and bicyclist counts						X	X	

Water Resources Plan for the Delaware River Basin, 2004 (Basin Plan)

The purpose of the Basin Plan is to provide a unified framework for addressing new and historic water resource issues and problems in the Delaware River Basin. The Plan emphasizes an integrated approach, recognizing, for example, that water supply and water quality cannot be managed separately; that groundwater and surface water are two aspects of the same resource, separated in time and space but fundamentally interrelated. Integrated management means considering all aspects of the water resource in decision-making. Conversely, it means recognizing that a wide range of decisions—not just those traditionally associated with water management—can affect our water resources.

The Plan sets a direction for policy and management decisions over the next 30 years and should be used as a guide for policy setting, decision-making and prioritizing actions originating from governmental units, private entities, organizations and individuals. It forms a framework within which existing and new programs can be incorporated and coordinated for effective results.

For More Information

To view this report: <http://www.state.nj.us/drbc/basinplan.htm>

Recommendations Matrix

The relationships between the Water Resources Plan for the Delaware River Basin recommendations and the River Conservation Plan goals are presented in Table 9.14 below.

Table 9.14 - Recommendation Matrix relating the implementation projects identified the Water Resources Plan for the Delaware River Basin to the Delaware Direct Watershed River Conservation Plan Goals

	RIVER CONSERVATION PLAN GOALS							
	Riverflow & Living Resources	In-river Flow Conditions	Water Quality & Pollutant Loads	River Corridors	Flooding	Quality of Life	Recreation	Stewardship, Communication, & Coordination
Water Resources Plan for the Delaware River (DRBC, 2004)								
GOAL 1.1: Equitably balance the multiple demands on the limited water resources of the Basin, while preserving and enhancing conditions in watersheds to maintain or achieve ecological integrity.								
a. Develop an integrated resource management strategy to determine amount of water available for allocation considering: 1) Water budget 2) Instream flow needs 3) Ground water availability 4) Assessment tools 5) Degree of hydrologic/biologic disruption	X	X	X	X				
b. Assess the ecological integrity of watersheds and integrate the criteria into water allocation strategies		X						
c. Discourage and where necessary manage any expanded or future transfers of water and wastewater into or out of the Basin to minimize and mitigate environmental or other negative impacts, while giving consideration to feasible alternatives, the water needs of the sending basin, and the efficient use in the receiving basin of available resources		X	X					
d. Assess existing transfers of water and wastewater into or out of the Basin in light of changes, such as new water resource management strategies, technologies, storage, planning, and/or demand		X	X					

	RIVER CONSERVATION PLAN GOALS							
	Riverflow & Living Resources	In-river Flow Conditions	Water Quality & Pollutant Loads	River Corridors	Flooding	Quality of Life	Recreation	Stewardship, Communication, & Coordination
Water Resources Plan for the Delaware River (DRBC, 2004)								
e. Manage future and expanded transfers of water and wastewater among watersheds to minimize and mitigate environmental or other negative impacts, while giving consideration to feasible alternatives, the water needs of sending watershed and the efficient use in the receiving watershed of available resources		X						
f. Assess existing watershed transfers of water and wastewater in light of changes, such as new water resource management strategies, technologies, storage, planning, and/or demand		X						
g. For future droughts ensure the equitable allocation of water supplies for essential domestic, commercial, industrial, power generation, and agricultural uses, while maintaining ecological integrity of aquatic ecosystems		X				X		
GOAL 1.2: Ensure an adequate supply of suitable quality water to restore, protect and enhance aquatic ecosystems and wildlife resources.								
a. Integrate in-stream flow and estuary fresh water inflow requirements for the support of healthy aquatic ecosystems into water resource regulations and decision-making	X	X	X					
b. Where water quality meets or is better than standards for the protection of aquatic life and wildlife, implement anti-degradation regulations, policies and/or other mechanisms to maintain or improve existing water quality	X	X	X					

	RIVER CONSERVATION PLAN GOALS							
	Riverflow & Living Resources	In-river Flow Conditions	Water Quality & Pollutant Loads	River Corridors	Flooding	Quality of Life	Recreation	Stewardship, Communication, & Coordination
Water Resources Plan for the Delaware River (DRBC, 2004)								
c. Where water quality is not sufficient to protect aquatic life and wildlife, employ strategies to provide protection through the implementation of TMDLs and other regulatory and non-regulatory means	X	X	X					
GOAL 1.3: Ensure an adequate and reliable supply of suitable quality water to satisfy public water supply and self-supplied domestic, commercial, industrial, agricultural, and power generation water needs								
a. For normal hydrologic conditions ensure supplies for projected public and self-supplied domestic, commercial, industrial, agricultural, and power generation demands through 2030		X						
b. Plan under drought of record conditions, to provide adequate supplies for projected public and self-supplied domestic, commercial, industrial, agricultural, and power generation demands through 2030		X						
c. Ensure maximum feasible efficiency of water use across all sectors, prioritizing efforts based on the existence of watershed transfers and/or substantial consumptive use; including promoting water conservation technology and habits, leak detection and repair, pricing incentives, etc.		X						
d. Increase the beneficial reuse and recycling of reclaimed water		X						
e. Where water quality meets or is better than standards for the protection of drinking water, implement anti-degradation regulations, policies and/ or other mechanisms to maintain or improve existing water quality			X					

	RIVER CONSERVATION PLAN GOALS							
	Riverflow & Living Resources	In-river Flow Conditions	Water Quality & Pollutant Loads	River Corridors	Flooding	Quality of Life	Recreation	Stewardship, Communication, & Coordination
Water Resources Plan for the Delaware River (DRBC, 2004)								
f. Where water quality does not meet standards for the protection of drinking water, employ strategies to achieve standards through the implementation of TMDLs and/or other regulatory and non-regulatory means			X			X		
g. Protect the quality of public and industrial water supplies by preventing the isochlor from exceeding 180 parts per million at river mile 98			X					
h. Develop flow and transport models and tools to track large scale accidental and intentional contaminant releases to 1) Assess the impacts to water intakes and basin water resources and 2) Direct emergency response actions	X	X	X					
i. Develop water supply contingency plans to address critical water needs in the event of the loss of usable source water and water intake or distribution infrastructure			X					

	RIVER CONSERVATION PLAN GOALS							
	Riverflow & Living Resources	In-river Flow Conditions	Water Quality & Pollutant Loads	River Corridors	Flooding	Quality of Life	Recreation	Stewardship, Communication, & Coordination
Water Resources Plan for the Delaware River (DRBC, 2004)								
<i>GOAL 1.4: Ensure adequate and suitable quality stream flows for flow-dependent recreational activities</i>								
a. Integrate consideration of flow regimes to support water-based recreation in the river and tributaries into allocation and management decisions							X	
b. Where water quality meets or is better than standards for the protection of recreational uses, implement anti-degradation regulations, policies, and/ or other mechanisms to maintain or improve existing water quality			X				X	
c. Where water quality does not meet standards for the protection of recreational uses, employ strategies to achieve standards through the implementation of TMDLs and/or other mechanisms			X				X	
<i>GOAL 2.1: Prevent or minimize flood-induced loss of life and property, and protect floodplain ecology.</i>								
a. Upgrade and modernize flood warning and forecasting capabilities					X	X		X
b. Characterize flood damage risks; prioritize and implement actions to reduce risk and losses, and address human induced ecological impacts of hydromodification		X			X	X		
<i>GOAL 2.2: Enhance water-based recreation in the river and its tributaries.</i>								
a. Develop a recreational water use and public access plan for the Basin that provides for: 1) Increased public access 2) Improved recreational experiences for all users through signage, guides, provision of destination points, linkage to other recreational opportunities, etc. 3) Increased availability of pump-out facilities, etc						X	X	

	RIVER CONSERVATION PLAN GOALS							
	Riverflow & Living Resources	In-river Flow Conditions	Water Quality & Pollutant Loads	River Corridors	Flooding	Quality of Life	Recreation	Stewardship, Communication, & Coordination
Water Resources Plan for the Delaware River (DRBC, 2004)								
b. Develop identified recreational facilities and amenities per Basin-wide Recreation Plan							X	
c. Create a continuous network of water trails for the river, tributaries and lakes						X	X	
d. Reduce or prevent generation of debris and trash and expand clean up programs in river and tributaries						X	X	
e. Develop an inter-state campaign to promote the Basin as a recreation and tourist destination						X	X	X
f. Ensure that recreational uses do not impair the ecological integrity of aquatic and riparian ecosystems	X						X	
g. Support and encourage watershed communities to incorporate water based recreational assets in planning and management, including requirements in subdivision ordinances							X	X
GOAL 2.3: Protect, conserve and restore healthy and biologically diverse riparian and aquatic ecosystems.								
a. Implement conservation plans for populations, assemblages and communities of indigenous aquatic and terrestrial plants and animals (Consider habitat needs for water quality and availability, reproduction, food supply and refuge from predation)	X							
b. Implement fisheries management plans to sustain commercially and recreationally important species of the Basin	X							
c. Increase the quality, diversity and function of wetlands throughout the Basin.	X		X	X				
d. Implement strategies to protect critical riparian and aquatic habitat	X			X				
e. Implement invasive species management throughout the Basin	X	X		X				

	RIVER CONSERVATION PLAN GOALS							
	Riverflow & Living Resources	In-river Flow Conditions	Water Quality & Pollutant Loads	River Corridors	Flooding	Quality of Life	Recreation	Stewardship, Communication, & Coordination
Water Resources Plan for the Delaware River (DRBC, 2004)								
f. Employ regional approaches to sediment management to improve the beneficial use of dredged materials in habitat restoration		X						
g. Prioritize and remove impediments to fish passage		X						
h. Stabilize stream channels based on systemic analysis of causes of instability		X		X				
GOAL 3.1: Preserve and restore natural hydrologic cycles in the Basin's watersheds.								
a. Encourage and support land use designs that maintain pre-development response to storm events with respect to infiltration and runoff volume, velocity, and quality		X	X					X
b. Address adverse effects from existing land use practices			X					
c. Discourage land use and stormwater management practices that exacerbate hazardous conditions, e.g. sinkholes, flooding, etc					X	X		
GOAL 3.2: Maintain and restore the integrity and function of high-value water resource landscapes.								
a. Map high value water resource landscapes and assist watershed communities in prioritizing these resources for protection	X							X
b. Develop guidance for performance standards that protect the function of high value water resource landscapes	X							X
c. Encourage and assist watershed communities to prioritize high value water resource landscaping for land preservation programs	X							X
d. Minimize contamination threats to drinking water supplies utilizing information from source water assessment programs			X			X		X
GOAL 3.3: Fully integrate water resource considerations into land use planning and growth management.								

	RIVER CONSERVATION PLAN GOALS							
	Riverflow & Living Resources	In-river Flow Conditions	Water Quality & Pollutant Loads	River Corridors	Flooding	Quality of Life	Recreation	Stewardship, Communication, & Coordination
Water Resources Plan for the Delaware River (DRBC, 2004)								
a. Develop watershed assessments to identify priority water resource issues that should be considered in community land use plans and ordinances								X
b. Encourage and support watershed communities working together on regional planning and growth management								X
c. Ensure availability of land and water resources data, analytical tools, and models to guide local and regional land use and growth management planning and decision-making								X
d. Adopt and implement plans and ordinances that incorporate scientifically sound and legally implementable provisions for the protection and enhancement of water resources (States to support and encourage; local and county government to implement; private and non-governmental organizations to partner)								X
e. Integrate water resource elements into local, multi-municipal, regional, and state agency and authorities' plans, regulations, and decision-making processes								X
GOAL 3.4: Encourage development and redevelopment in areas where growth can improve the economic viability of local communities while providing for the protection and enhancement of the water resources of the Basin; discourage development and redevelopment where it may impair water resources and their related natural resources.								
a. Identify and prioritize areas that would benefit environmentally and economically from redevelopment			X			X		
b. Develop criteria and incentives for coordinated review processes that facilitate development and redevelopment consistent with the goal								X

	RIVER CONSERVATION PLAN GOALS							
	Riverflow & Living Resources	In-river Flow Conditions	Water Quality & Pollutant Loads	River Corridors	Flooding	Quality of Life	Recreation	Stewardship, Communication, & Coordination
Water Resources Plan for the Delaware River (DRBC, 2004)								
c. Develop criteria and disincentives to be applied during coordinated review processes that discourage development, and redevelopment inconsistent with the goal								X
d. Maintain and make necessary and prudent changes to existing navigable waterways and ports and use regional approaches to manage dredged materials		X	X			X		
GOAL 3.5: Physically and visually emphasize and strengthen the social, historic, cultural, recreational and economic connections of communities to the Basin's waterways.								
a. Encourage waterside re-development, that emphasizes public access as well as aesthetic, historic, recreational, economic and cultural values						X	X	X
b. Create waterway transit opportunities for residents, commuters and visitors						X	X	X
GOAL 4.1: Improve coordination and cooperation in the management of water resources in the Basin.								
a. Achieve consistency in the implementation of water quality standards that apply to the shared waters of the Basin			X					X
b. Ensure at state boundaries that downstream state water quality standards are attained			X					
c. Achieve comparable monitoring, documentation and accurate reporting of data that involve the basin-wide water resources of the Basin								X
d. Achieve consistency in protection of public health in regard to consuming fish and shellfish, due to chemical contamination, in regard to the shared waters of the Basin			X			X		

	RIVER CONSERVATION PLAN GOALS							
	Riverflow & Living Resources	In-river Flow Conditions	Water Quality & Pollutant Loads	River Corridors	Flooding	Quality of Life	Recreation	Stewardship, Communication, & Coordination
Water Resources Plan for the Delaware River (DRBC, 2004)								
e. Achieve consistency in content and communication of advice for primary contact recreational use of shared waters								X
f. For future drought conditions, improve exchange of hydrologic information, drought status reports, and drought restrictions among DRBC, states, and public								X
g. Foster communication among state and local watershed programs and processes								X
h. Improve coordination of stormwater management programs and practices								X
i. Encourage communication for water resource planning among the watershed communities and counties within a watershed								X
j. Improve coordination among State Coastal Zone Management programs								X
k. Improve coordination for invasive species management								X
l. Evaluate and coordinate funding for flood mitigation								X
m. Support and implement watershed based trading, where appropriate, as a tool to complement traditional approaches to water quality management and improvement			X					X
GOAL 4.2: Increase sharing of data, information, and ideas among Basin stakeholders and reduce duplication of effort.								
a. Complete framework data layers for the entire basin plus several selected GIS layers accessible via the internet								X
b. Make digital data layers and water related databases available to view and download, integrated across political boundaries								X

	RIVER CONSERVATION PLAN GOALS							
	Riverflow & Living Resources	In-river Flow Conditions	Water Quality & Pollutant Loads	River Corridors	Flooding	Quality of Life	Recreation	Stewardship, Communication, & Coordination
Water Resources Plan for the Delaware River (DRBC, 2004)								
c. Develop a database of ongoing management activities to foster partnerships and reduce duplication of efforts								X
d. Improve methods of communication with and among local governments on water resource issues and provide adequate opportunities for discussion of key issues								X
e. Increase opportunities for the sharing of ideas, data, technology and information among public and private sector professionals involved in water resource issues								X
f. Increase opportunities for technology transfer among water resource professionals								X
GOAL 4.3: Secure adequate resources for programs and projects that encourage cooperative water resources planning and management.								
a. Inventory existing resources and identify gaps to implement Basin Plan Objectives								X
b. Explore additional resource opportunities								X
c. Increase opportunities to leverage federal, state and other funds for water resource planning, protection and restoration								X
GOAL 4.4: Ensure that water resource partners support and execute water resources management in accordance with the Guiding Principles, Goals and Objectives of the Basin Plan.								
a. Create or enhance formal partnerships for the purpose of implementing the Basin Plan Objectives								X
GOAL 4.5: Utilize the planning and regulatory powers of a regional governmental authority, the Delaware River Basin Commission, to facilitate coordination and cooperation.								
a. Enhance DRBC Comprehensive Plan to promote coordination and achievement of the Basin Plan Objectives								X
GOAL 5.1: Establish a Basin-wide sense of place.								

	RIVER CONSERVATION PLAN GOALS							
	Riverflow & Living Resources	In-river Flow Conditions	Water Quality & Pollutant Loads	River Corridors	Flooding	Quality of Life	Recreation	Stewardship, Communication, & Coordination
Water Resources Plan for the Delaware River (DRBC, 2004)								
a. Create awareness and understanding of the river and associated resources so that citizens, businesses and officials are motivated to describe their home or place of business in terms of their watershed						X		X
b. Create awareness and understanding of the river and associated resources so that citizens, businesses and officials are motivated to act in ways that help protect and restore the watershed						X		X
c. Continue and expand the use of Internet and mass media resources to educate the public about water resources use, waterway corridor management, land management for water resources protection, institutional cooperation and coordination for water resource management, and education for water resource management and stewardship				X				X
d. Maintain a clearinghouse for information on local watershed efforts, such as river conservation plans, restoration and preservation efforts – and opportunities for financial and technical assistance								X
e. Make education and outreach a priority to achieve public awareness and personal involvement on behalf of the Basin and local watersheds								X
f. Increase participation in volunteer water resource projects and programs in the Basin								X
g. Increase the number of projects, programs and opportunities for citizen participation in water resources management protection and enhancement by 25%								X

	RIVER CONSERVATION PLAN GOALS							
	Riverflow & Living Resources	In-river Flow Conditions	Water Quality & Pollutant Loads	River Corridors	Flooding	Quality of Life	Recreation	Stewardship, Communication, & Coordination
Water Resources Plan for the Delaware River (DRBC, 2004)								
h. Engage under-represented populations in water resource issues and stewardship								X
i. Implement a watershed signage program for the main stem Delaware River and all of its major tributaries and on state and interstate highways in the Basin								X
j. Provide information to enhance the ability of citizen and community groups to participate in restoration activities on their property and in their local watersheds								X
GOAL 5.2: Increase student and youth awareness, understanding, and active participation in water resources issues.								
a. Develop and initiate a strategy to incorporate watershed curricula in the education standards of the four Basin states								X
b. Provide a water resources related outdoor experience for every student in the watershed before high school graduation								X
c. Continue to promote and expand school programs that provide active participation in watershed protection, restoration, monitoring and awareness building								X
d. Maintain a web-based clearinghouse specifically for educators								X
GOAL 5.3: Increase private sector awareness, understanding, and active participation in water resources issues.								
a. Collect and disseminate to members of the commercial community information about water resources issues								X
b. Highlight demonstration projects that provide technology and information transfer to commercial interests in the Basin								X
c. Encourage private sector funding and participation in partnerships, initiatives and enhancement endeavors								X

	RIVER CONSERVATION PLAN GOALS							
	Riverflow & Living Resources	In-river Flow Conditions	Water Quality & Pollutant Loads	River Corridors	Flooding	Quality of Life	Recreation	Stewardship, Communication, & Coordination
Water Resources Plan for the Delaware River (DRBC, 2004)								
<i>GOAL 5.4: Increase local public officials' awareness, understanding, and active participation in water resources issues.</i>								
a. Provide outreach and technical assistance programs targeted at local public officials, professional staff and consultants								X
b. Work with local governments to identify small watersheds where community-based actions are essential to meeting DRB preservation and restoration goals								X
c. Work with watershed community officials and organizations, and supply resources to develop effective water resource programs								X
d. Enhance funding for locally based programs that pursue restoration and protection projects								X

Delaware River: State of the Basin Report, 2008

In 1999, the Delaware River Basin Commission (DRBC) began a process to develop a new and unifying vision for water resources management in the Delaware River Basin. The Water Resources Plan for the Delaware River Basin (Basin Plan), unveiled in 2004, presents a direction for integrated water resource management, acknowledging the connection between land and water and valuing aquatic habitat protection while ensuring adequate flows and supplies for human needs. In accepting the new Basin Plan, the governors of each participating state directed the preparation of a periodic environmental conditions report. The State of the Basin Report is designed to serve as a benchmark of current conditions and a point of reference for gauging progress toward management goals. It also provides a platform for measuring and reporting future progress in water resource management, and a guide for adjusting monitoring and assessment programs. Finally, it is intended to communicate our understanding of the health of the Basin, to increase public involvement in the Delaware River Basin and Estuary Program activities, and to build consensus on a broad array of actions that can be taken to continue to improve water quality, water availability, and to enhance the living resources of the Delaware River Basin.

For More Information

For more information about this report: <http://www.state.nj.us/drbc/>

Recommendations Matrix

The relationships between the Delaware River: State of the Basin Report recommendations listed above and the River Conservation Plan goals are presented in Table 9.15.

Table 9.15 - Recommendation Matrix relating the implementation projects identified in Delaware River: State of the Basin Report to the Delaware Direct Watershed River Conservation Plan Goals

	RIVER CONSERVATION PLAN GOALS							
	Riverflow & Living Resources	In-river Flow Conditions	Water Quality & Pollutant Loads	River Corridors	Flooding	Quality of Life	Recreation	Stewardship, Communication, & Coordination
State of the Basin, 2008 (DRBC, 2008)								
Enhance continuous monitoring of water quality. Continuous monitoring of some water quality parameters—particularly dissolved oxygen, pH and temperature—is necessary for accurate condition assessment.			X					
Link monitoring to water quality concerns and criteria. Each parameter of concern should be reviewed to determine its appropriate monitoring frequency., Coordination is necessary to ensure that agencies monitor within similar periods and for similar chemical forms.			X					
Enhance capacity for landscape change analysis. Land use/land cover data were among the most problematic to obtain and use since no single intra-basin organization coordinates or assembles timely land use and land cover data for the entire basin. A significant gap needs to be filled for adequate landscape change assessment.	X					X		X
Link landscape and population assessment. Landscape change and population reporting should be synchronized to provide a more robust assessment of development patterns and potential impacts to water resources.						X		X

	RIVER CONSERVATION PLAN GOALS							
	Riverflow & Living Resources	In-river Flow Conditions	Water Quality & Pollutant Loads	River Corridors	Flooding	Quality of Life	Recreation	Stewardship, Communication, & Coordination
State of the Basin, 2008 (DRBC, 2008)								
Increase data accessibility and mapping capability. While significant progress has been made to improve the retrieval of water data, some water-availability data still reside on local management systems that are difficult or impossible to obtain electronically. Monitoring and assessment data should include a geographic coding to allow them to be spatially represented.		X	X					X
Indicator selection was primarily based on data availability and completeness. Additional indicators should be considered for future reporting.								X
Evaluate water quality and hydrologic indicators. The use of additional chemical or flow indicators may be advisable. Coordination of state data collection would greatly enhance tributary evaluation.		X	X					X
Programmatic goals and objectives of the Water Resources Plan for the Delaware River Basin (Basin Plan) and the Comprehensive Conservation Management Plan (CCMP) for the Delaware Estuary should be reviewed to inform the selection of additional appropriate indicators.								X

9.4 – GRANT AND FUNDING OPPORTUNITIES

The implementation of the recommendations in this chapter may be eligible for various grant funding. The following resources provide a starting point for investigating funding options.

Environmental eGrants

Environmental eGrants is an electronic grants system that provides one-stop shopping to the grantee community for all Pennsylvania Department of Environmental Protection (DEP) and Department of Conservation and Natural Resources (DCNR) grants. Environmental eGrants standardizes the application process and provides an environmentally friendly way to submit a grant application to DEP or DCNR through a secure internet connection.

Information can be obtained on the following grants:

- DCNR Community Conservation Partnerships Program (C2P2)** described below**
- DCNR Wild Resource Conservation Program
- DCNR Heritage Area Grants
- DCNR Volunteer Fire Assistance
- DCNR TreeVitalize
- DEP Coastal Zone Management
- DEP Community Cleanup Grant
- DEP PA Conservation Works!
- DEP PA Green Energy Works! Combined Heat and Power
- DEP PA Green Energy Works! Biogas
- DEP PA Green Energy Works! Solar
- DEP Grants and Loans

For more information: <https://www.grants.dcnr.state.pa.us/>

Community Conservation Partnerships Program (C2P2)

Local governments, county governments and non-profit organizations can apply for Community Conservation Partnerships Program (C2P2) funding to assist them with addressing their recreation and conservation needs as well as supporting economically beneficial recreational tourism initiatives. There are three basic grant project types: planning, acquisition and development.

The C2P2 contains the following grant components:

- Community Recreation
- Land Trusts
- Rails-to-Trails
- Rivers Conservation
- Snowmobile/ATV
- Heritage Areas
- Land and Water Conservation Fund
- Recreational Trails

All components have been combined into one annual application cycle (generally in the Spring), and use a single application format and process with one grant manual and one set of application forms. Applications selected for federal LWCF funding require some supplemental information to enable submission of the application to the National Park Service (NPS). Generally, all components require a match, usually 50 percent of cash or in-kind contributions. For more information, <http://www.dcnr.state.pa.us/brc/grants/>

Pennsylvania Department of Environmental Protection

The Pennsylvania Department of Environmental Protection has created a very useful factsheet that describes the potential funding sources for watershed groups. Name and phone number contacts for state, federal, public and private programs are provided along with a program description and whether the funding can be used for project planning or implementation. [Click here](#) to download the factsheet.

<http://www.sourcewaterprotection.org/pdf/DEP%20Funding%20for%20Watershed%20Groups.pdf>

Catalog of Federal Funding Sources for Watershed Protection

The United States Environmental Protection Agency website has a searchable database of federal funding sources for watershed protection projects. The database includes information on financial assistance sources (grants, loans, cost-sharing) available to fund a variety of watershed protection projects.

<http://cfpub.epa.gov/fedfund/>

Delaware River Basin Commission

The DRBC has a list of information and opportunities for watershed associations within the Delaware River Basin available on their website. Information on state, federal, public and private funding organizations is provided at

<http://www.state.nj.us/drbc/watershedgroupsinfo.htm>

William Penn Foundation - Environment and Communities Grants

The William Penn Foundation's Environment and Communities grants promote the protection, conservation, and restoration of Philadelphia's water resources. These grants support policy reform as well as promote local projects that test applications of regulations and demonstrate new practices or approaches.

<http://www.williampennfoundation.org/ecFundingPriorityProtectandConserve.aspx>