

CHICAGO RIVER AGENDA



City of Chicago
Richard M. Daley
Mayor



Action H₂O

June 2005

TABLE OF CONTENTS

A Message from the Mayor	1
The Chicago River	2
Improving Water Quality	7
Protecting Nature and Wildlife	17
Balancing River Uses	25
Enhancing Community Life	31



As mayor and on behalf of the City of Chicago, I am proud to announce the Chicago River Agenda.

The Chicago River has a long and storied history that has captured our imaginations since Chicago's early days. The region's first settlers envisioned it as a great transportation link between the Mississippi River and Lake Michigan. Daniel Burnham pictured grand architecture and the development of the river as a recreational corridor. In his famous book *The Jungle*, Upton Sinclair exposed the dark side of development on the river and the industrial pollution fouling the water.

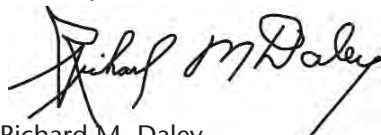
The Chicago River continues to inspire our imaginations today. As it has improved, our vision for it has changed to reflect possibilities that would have seemed like impossible dreams only a few decades ago. The Chicago River today is Chicago's Second Shoreline, a natural and cultural resource that plays many vital roles in the life of our city. It connects neighborhoods. It provides habitat for wildlife and serves as a flyway for migratory birds. It is a recreational resource for Chicagoans who paddle on its waters or bicycle along its banks. It also plays important roles in our economy as a transportation link and a destination for tourism.

This agenda will guide the work of the City of Chicago and its sister agencies as we strive to achieve this vision of the Chicago River as our Second Shoreline. It outlines four central goals for our work:

- Improving water quality
- Protecting nature and wildlife in the city
- Balancing river uses
- Enhancing neighborhood and community life

Careful stewardship of the river will ensure that it remains viable for all of the critical roles it plays in the life of our City.

Sincerely,



Richard M. Daley
Mayor



THE CHICAGO RIVER

THE CHICAGO RIVER: CHICAGO'S SECOND SHORELINE

The Chicago River is 28 miles long within City limits.

The three primary branches of the river are known as the Main Branch, the North Branch, and the South Branch. The South Fork of the South Branch is commonly known as Bubbly Creek.

Several man-made canals and slips are also part of the river system. The largest of these are the Sanitary and Ship Canal, the North Shore Channel, and the North Branch Canal.



The Chicago River is a vital part of Chicago's heritage and its status today as a world-class city. The river is being reborn as one of the city's most treasured resources, with biking paths, parks, and new homes rapidly developing on its banks.

Chicago owes its location to the Chicago River and its importance as a water link between the Great Lakes and the Gulf of Mexico. The small frontier outpost that began at the river's mouth grew very quickly into a burgeoning metropolis. As the city grew, it trans-

formed the river from a meandering prairie stream to a bustling harbor—and an open sewer. In the city's early boom years, the main stem of the river was crowded with schooners and steamer ships loaded with goods, while sewage and byproducts from the slaughterhouses, sawmills and tanneries fouled its waters. The river was dredged and straightened to improve its use for navigation and shipping, and in 1900 the reversal of its main and south branches conveyed the growing city's wastes away from Lake Michigan and its drinking water supply.



Barges from New Orleans arriving in Chicago on June 22, 1933, celebrating completion of "Lakes to Gulf Waterway." Main Branch of the Chicago River.



83 Ton Substructural River Pier Truss.
North Cofferdam - North State Street Bridge.
FitzSimons & Connell Dredge & Dock Company.
June 26th, 1941. U-3753.

Construction of the existing State Street bridge, June 26, 1941.

THE CHICAGO RIVER

BEFORE THE REVERSAL



AFTER THE REVERSAL



The Chicago River was reversed by the opening of the Sanitary and Ship Canal in 1900. The canal, built by the Sanitary District of Chicago (today called the Metropolitan Water Reclamation District), cut through a natural drainage divide separating the Chicago River and Des Plaines River basins, shown by a dotted line on the map. It was seen as an engineering marvel, and the technology was used to later dig the Panama Canal. The North Shore Channel was completed in 1909, flushing additional wastewater from the north suburbs away from Lake Michigan. The Cal-Sag Channel was completed in 1922, reversing the Calumet River. Present day city limits are shown by the shaded area.

The reversal of the river protected Lake Michigan, but the river remained an open sewer until sewage treatment plants were built in the 1920s and 1930s, marking the first of many milestones in the river's recovery. Environmental legislation and a growing environmental awareness in the 1960s and '70s brought about additional efforts to improve the river. The Metropolitan Water Reclamation District of Greater Chicago began construction of the Tunnel and Reservoir Plan, commonly known as Deep Tunnel, in 1971. This multi-billion dollar infrastructure project was designed to capture sewer overflows during rainstorms, and has had a significant impact on water quality. Citizen advocacy for an improved river also took hold in the '70s. In 1979, a group of citizens responded to a magazine article about the "friendless" river by forming Friends of the Chicago River. For over 25 years, the organization has been a consistent voice calling for improvement of the Chicago River system and rallying citizen support through events like Chicago River Day.

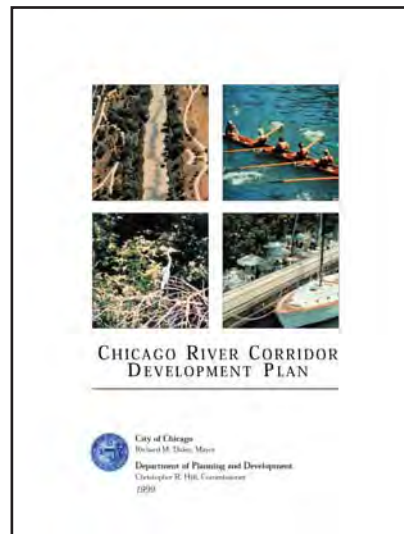
Hundreds of volunteers help take care of the river at the annual Chicago River Day clean-up and festival sponsored by the Friends of the Chicago River.



THE CHICAGO RIVER

Over the last two decades, the City of Chicago has made many improvements to revitalize the formerly neglected river. Dozens of acres of new parkland and several miles of bicycle trails and walking paths have been developed. Riverbanks by parks, schools, and residential neighborhoods have been restored to reduce erosion and improve wildlife habitat. In 2003, the City released a comprehensive Water Agenda and a guide to innovative stormwater management that laid out goals and strategies for improving water quality.

Today the City of Chicago is poised to fully reclaim the river as a centerpiece of our community that connects the rich and varied neighborhoods it runs through. Continued improvements to water quality, wildlife habitat, and public amenities will make the vision of the river as Chicago's Second Shoreline a reality.



The Chicago River Agenda builds on extensive planning and policy work that has been completed since 1990.

- 1990:** The City co-authored Urban Design Guidelines for the downtown sections of the river with Friends of the Chicago River, establishing Chicago as a national leader in the movement to reclaim urban waterways.
- 1999:** The City adopted the Chicago River Corridor Development Plan and Design Guidelines and a city-wide setback ordinance. The guidelines called for public access and a continuous trail system along the river's entire length.
- 2002:** The Chicago Park District completed a Chicago River Master Plan that laid out strategies for increasing and improving public open space on the river.
- 2003:** Mayor Daley announced the Chicago Water Agenda, a comprehensive vision for managing Chicago's water resources. The City also published "A Guide to Stormwater Best Management Practices," a booklet that outlines innovative ways to manage stormwater that are proven to work in Chicago.

The 1999, 2002 and 2003 documents are available online at www.cityofchicago.org/conservchicagotogether.

IMPROVING WATER QUALITY



Introduction

The Chicago River system has seen dramatic improvements to water quality over last few decades. Many sources of pollution have been eliminated, and remaining discharges are regulated. Since chlorination of sewage effluent was stopped in the 80's, wildlife in the river has rebounded. Combined sewer overflows (CSOs) have been significantly reduced by the Metropolitan Water Reclamation District of Greater Chicago's (MWRD) Tunnel and Reservoir Plan, also known as Deep Tunnel. One of the best indicators of these improvements is the number of fish species in the river, which has increased from only 10 in 1974 to 68 in 2004.

However, there is still work to be done to improve water quality. Heavy storms still overload the sewer system and cause CSOs several times a year. Harmful bacteria can remain in the water even after sewage has been treated. Pollutants and debris that wash off of our streets and yards also harm water quality, and the legacy of the river's historic pollution still remains in the form of contaminated sediments on the river bottom in some areas.

When the Clean Water Act was passed in 1972, it set a goal of making all of the nation's waters "fishable and swimmable." Since that time, the Chicago River has come a long way toward meeting that goal. The work of the City and MWRD to manage CSOs and stormwater, remediate sediment, remove debris and garbage, and stop illegal dumping will bring us even closer. These efforts fit together as part of a comprehensive approach to improving water quality.

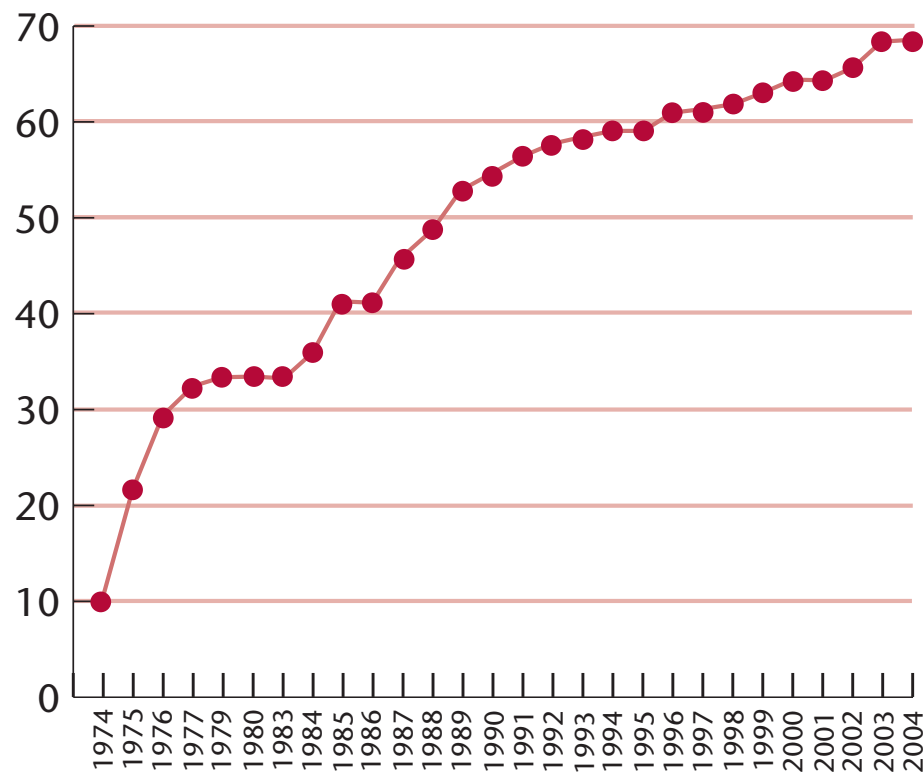
While we complete on-the-ground projects to improve the river today, we are also looking ahead to the next steps in revitalizing the river. The City will continue to work with other agencies and stakeholders to pursue concrete steps that move us toward a Chicago River that supports many recreational uses.

Fish Species in the Chicago River System

The graph to the right shows how the number of species in the Chicago River system has increased over the last 30 years. For example, smallmouth bass started coming into the waterways in 1988, and channel catfish are now found throughout the waterways. Game fish such as largemouth bass, bluegill and pumpkinseed are regularly found in the system.

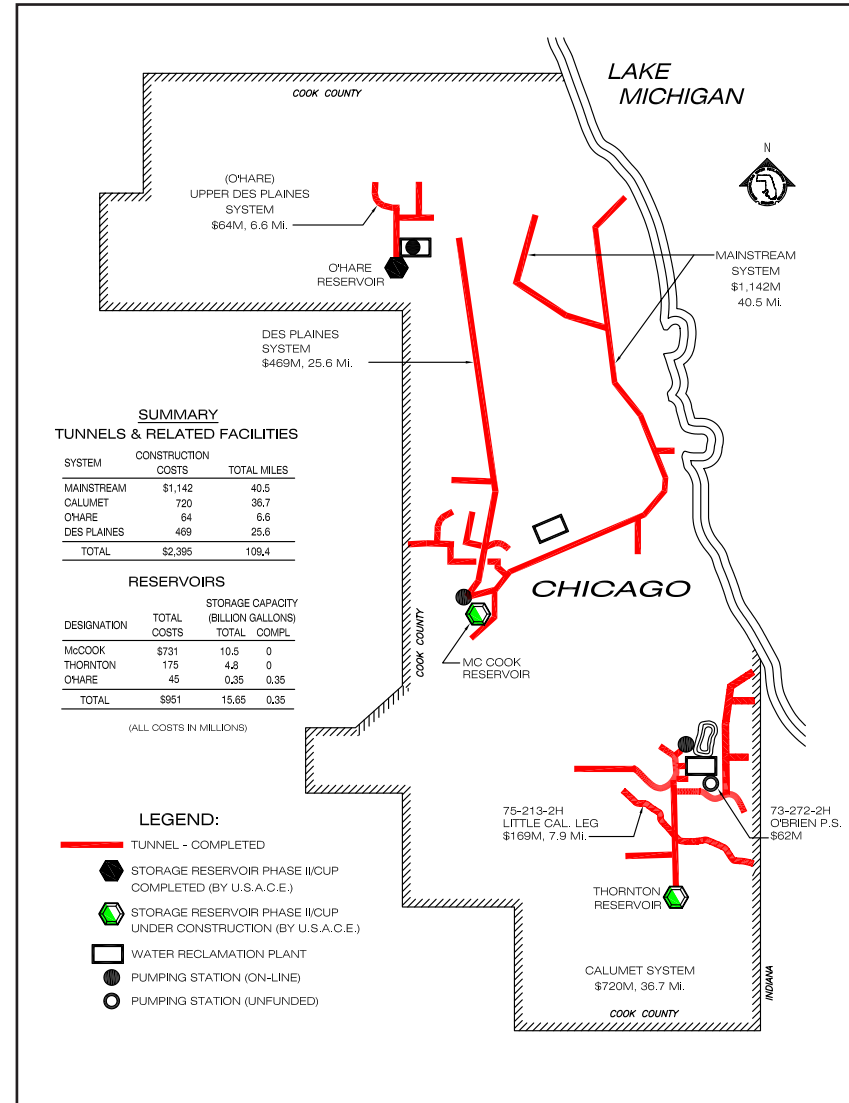
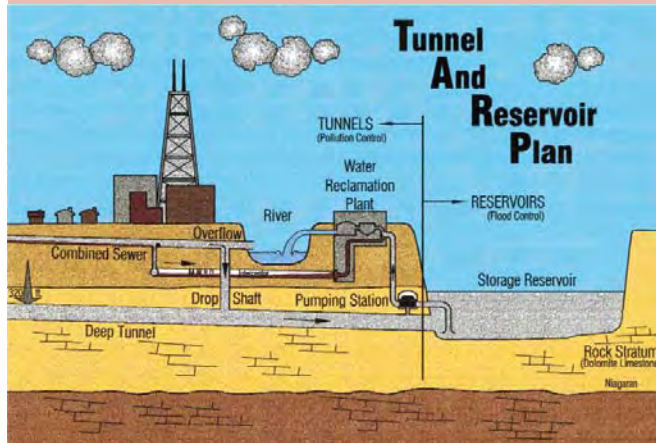
Passage of the Clean Water Act in 1972 led to dramatic improvements in water quality. Many point sources of pollution were eliminated, and the number of fish species tripled by the end of the decade. Further increases in fish species have been attributed to the cessation of effluent chlorination in 1984 and the Tunnel and Reservoir Project becoming operational in 1985.

The sampling data used for this graph are from both the Chicago and Calumet Rivers.



The Tunnel and Reservoir Plan (TARP)

In the 1970's, the Metropolitan Water Reclamation District of Greater Chicago (MWRD) began construction of TARP. The project consists of a series of tunnels deep in the bedrock under the Chicago, Calumet and Des Plaines Rivers, and three large surface reservoirs. The tunnels capture many overflows that would previously have discharged into the river. In the heaviest storms the tunnels can also become full, but they still capture the "first flush" of overflows that carries the heaviest concentration of pollutants. TARP is a key component of the region's efforts to improve water quality, and has already significantly reduced combined sewer overflows. The tunnels are all complete. The reservoirs are scheduled to be completed in phases in 2012, 2013, 2019 and 2023.



Source: MWRD

Combined Sewer Overflows (CSOs)

Action:

The City plans to eliminate three priority CSO outfalls by 2007 and another six outfalls by 2010. The City calls on the state and federal governments to provide funding for improvements to wastewater infrastructure.

This new French drain looks like a traditional alley, but it functions differently. Instead of sending water straight to the sewer, it stores water in a gravel-filled chamber below the surface, and lets the water sink into the ground. In 2003 and 2004, French drains were built in 38 alleys in Chicago.



Chicago, like many older cities, has a combined sewer system that carries sewage and stormwater in the same pipes. During heavy rains, the system can become full and cause a mixture of stormwater and sewage to overflow into the river. CSOs prevent the excess water from backing up into residents' basements.

Completion of TARP is key to reducing CSOs. In addition, through a comprehensive CSO management program, the City is implementing projects that complement TARP by improving the City-owned sewers that convey wastewater to the MWRD system. Through capital improvement programs in the Department of Water Management and the Department of Transportation, the City continually upgrades and repairs the sewer system. Sewer improvement projects currently underway are intended to result in the elimination of three CSO locations by 2007. In addition, engineering studies are underway to eliminate at least six more CSO outfall pipes by 2010, pending funding and engineering analysis. The City is also working with MWRD to analyze the sewer system so that resources can be targeted to have the greatest impact on CSOs.

In addition to improving our traditional sewer infrastructure, a major focus of Chicago's CSO management efforts is on keeping water out of the sewer system through innovative stormwater management (see pages 13 and 14).

Keeping Debris and Garbage Out of the River

Action: The City will implement a screening program for CSO outfalls and extend debris boat operations to patrol the river year-round.

Trash and debris in the river have a negative impact on water quality, wildlife and public perception of the river. Litter on land can wash into the river during rains or be blown in by wind. To keep trash from accumulating in the river, both the City Department of Streets and Sanitation and the MWRD operate boats that systematically clean the river and respond to citizen complaints. City crews also remove graffiti from bridges. Street sweeping helps to keep the river clean too, by picking up debris that can wash into the river or clog the sewers, reducing sewer capacity.

Although TARP captures the first flush of sewer overflows, floatable debris from the sewer system may still get into the river when a CSO occurs. To further reduce debris in the river, the City is implementing a

River Debris FACTS

Amount of debris collected by street sweeping in 2004: **30,229 tons**

Estimated amount of debris removed from the river by City and MWRD boats in 2004: **830 tons**

Number of CSO outfalls the City will screen with nets or floatable booms in 2005: **17**

pilot program to install nets and floatable booms on CSO outfalls. This program will evaluate if and where floatable material may be entering the river from the sewer system, and will identify the best technologies for catching floatable debris that originates from CSOs.

The City also works with private property owners to keep riverbanks clean and attractive. When illegal dumping occurs, the City takes aggressive enforcement action.

What you can do:

Residents can do their part by placing trash and recycling into appropriate receptacles, and by calling 311 to report debris or illegal dumping.

Stormwater Management

Action: The City will continue to be a leader in demonstrating the effectiveness of green infrastructure for urban stormwater management.

The City of Chicago is a leader in implementing projects and policies that reduce the amount of stormwater entering the sewer system, which helps reduce combined sewer overflows and basement flooding. From 2001 to 2003, “rain blockers” were installed in storm drain inlets throughout the city. These devices restrict the amount of water flowing into the sewer. During heavy storms when the sewers become full, the water temporarily collects in the street. The City is also implementing stormwater best management practices in many neighborhoods, including downspout disconnection, rain barrels, rain gardens, green roofs, bioswales, and permeable parking lots and alleys.

In November of 2004, the State of Illinois passed a new law giving the MWRD the authority to develop a Stormwater Management Program for Cook County. The City will work with the MWRD and stakeholders to develop policies that treat stormwater as a resource and help to improve water quality in the river system.

Leading by Example: The Ultimate Disconnected Downspout

A new stormwater management tunnel is being installed by the City and the Park District to capture clean rainwater from the new McCormick Place West Expansion and return it to the waters of Lake Michigan. The tunnel will reduce the burden on the sewer system and prevent flooding around McCormick Place.

The tunnel will be approximately 3,400 feet in length and 160 feet below the surface, extending from the McCormick Place West Expansion to terminate at Northerly Island. It is designed to handle a 100-year storm (2.1 inches of rainfall in 15 minutes). It has the capacity to divert 61.8 acres of drainage area, keeping an average of 55 million gallons of water per year out of the sewer system.

Stormwater Management

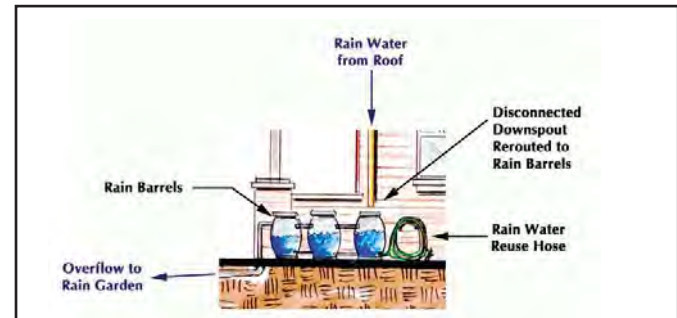
Action: The City will mandate separate storm sewers, on-site detention and filtration of stormwater for new developments near the river.

The City is drafting a new stormwater ordinance with requirements for stormwater management in new private developments. Through this effort, the City will mandate separate storm and sanitary sewers for river-edge development and treatment of stormwater runoff with stormwater best management practices.

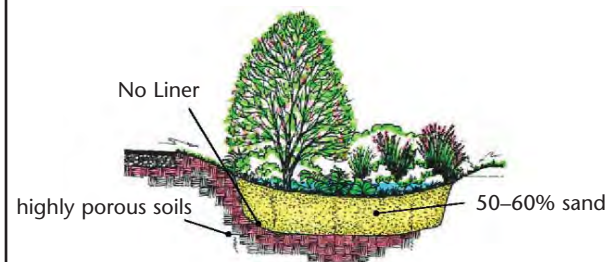
What you can do:

Effective environmentally friendly stormwater management requires participation from the private sector and homeowners. By disconnecting downspouts and making improvements that help rainwater soak into the ground, residents and business owners can further reduce the amount of stormwater that enters the sewer system.

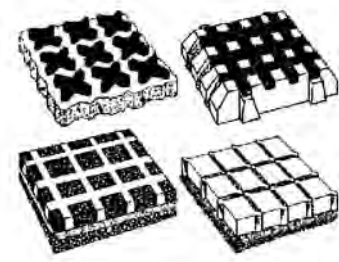
The City released "A Guide to Stormwater Best Management Practices" in 2004, which outlines design approaches, cost and maintenance information for projects that have been shown to work in Chicago. The guide is available on the web at www.cityofchicago.org/consvechicagotogether.



Rain barrels save rainwater to use in your garden.



Rain gardens are designed to help water soak into the ground.



Permeable paving materials let water infiltrate.

Effluent Disinfection

Action: The City encourages the MWRD to identify and implement cost-effective disinfection technologies.

Except during the heaviest storms, wastewater is treated before being discharged to the river. However, bacteria that cause illness can remain in the water after sewage has been treated. In the early 1980's, the MWRD used chlorination to disinfect the effluent. While this process killed bacteria, it also left byproducts in the water that could harm fish and wildlife. Chlorination was stopped in 1984.

Today, with more people using the river for recreation and interacting with the water, disinfection is being considered again to protect public health and improve the recreational value of the river. As part of the Illinois EPA's Use Attainability Analysis (see box at right), MWRD is evaluating disinfection technologies that kill harmful bacteria without leaving harmful byproducts in the water. The City supports MWRD's efforts, and encourages MWRD to implement cost-effective disinfection technologies that improve the recreational potential of the river while limiting negative impacts on the environment.



Use Attainability Analysis

The Illinois Environmental Protection Agency is completing an evaluation of Chicago area waterways called a Use Attainability Analysis (UAA). Through the UAA, the agency is working with stakeholders to gather information about current and potential recreational use and wildlife in the waterways. The results of the UAA will be used to set new water quality standards to protect current and future recreational activities and ecosystem integrity, which may include new standards for bacteria. For more information, visit www.chicagoareawaterways.org

River Sediment

Action: The City will work with other agencies and stakeholders to evaluate alternatives for remediating contaminated sediment in the river system.

As with many urban rivers and lakes, contaminated sediment is a legacy of the river’s industrial past, when disposal of untreated waste into rivers was common practice. Sediments in parts of the river contain heavy metals, organic compounds and other pollutants. These contaminants make the sediment a hostile environment for many forms of aquatic life. As fish and birds feed on animals that live on the bottom of the river, this contamination can enter the food chain.

Removing contaminated sediment through dredging is often the first remediation alternative to come to mind, and in many cases it is the best alternative. However, in some cases, contaminants are buried beneath cleaner sediment and do not pose harm to humans or aquatic

life. Disturbing the sediment to remove contamination can increase the risk of exposure to contaminants. To other cases, alternatives such as capping contaminated sediment with clean materials or using natural means such as plants and micro-organisms to break down contaminants may be preferred.

Currently, the City is working with experts and stakeholders to develop a test project for capping and natural sediment remediation methods in the Bubbly Creek area. The results of this project will help to inform future work to remediate sediment throughout the waterway.



Historic photo of Bubbly Creek under the 35th bridge: A worker inspects stockyard waste entering the creek.

PROTECTING NATURE AND WILDLIFE



Introduction

The Chicago River is one of Chicago’s longest and largest corridors of open space. Although it has been significantly altered from its pre-development conditions, it remains important habitat for wildlife. It serves as a greenway through the city, connecting patches of habitat for many creatures. It is a flyway for migratory birds and a permanent home to many species of water-fowl.

Visitors to Chicago’s parks and forest preserves along the river have reported seeing muskrat and mink feeding on the banks. Great blue heron are a common site throughout the river system. Paddlers also report seeing little green heron and the state-endangered black-crowned night heron on the water. Even areas that seem very urban at first glance may be home to a surprising amount of wildlife; beaver, fox, salamanders, and turtles have been sighted on the river in the Loop.

Fish have also made a comeback in the last thirty years, and anglers can be found on all of the river’s branches. The number of species found in the river has increased dramatically (see page 9). In addition, monitoring data show an increase in length and weight of popular game fish such as largemouth bass and bluegill sunfish.



Black-crowned Night Heron



Great Blue Heron

In-stream Habitat

Vegetation and other sources of in-stream cover provide protection from the sun, places to hide from predators, and protected areas to lay eggs. The City of Chicago and community groups have installed projects to improve fish habitat in the river at six locations. For example, when Canal Origins Park was constructed on the South Branch, the Park District left in place the remnants of old dock structures and added gravel below the waterline. At an industrial redevelopment site, the Department of Environment attached fish lunkers to the sea wall. These structures mimic a natural riverbank, providing shelter for fish. The City is planning to develop in-stream wetland habitat in locations that will not impact navigation, such as Bubbly Creek, the North Branch Canal and the Diversey Turning Basin.

Although many fish have returned to the river system, physical barriers prevent some species from thriving even where water quality is adequate. Dams prevent these species from swimming upstream to spawn or access better habitat. One significant barrier is the dam at the confluence of the North Branch and the North Shore Channel. The river was straightened and deepened when the North Shore Channel was constructed, and the dam prevents upstream erosion of the riverbed. The City will work with MWRD and stakeholders to investigate modification of the North Branch Dam for fish passage and improved water quality while preserving its erosion control benefits.

Action: By 2010, the City plans to implement at least two in-stream wetland projects in the Chicago River to improve habitat.

Action: The City will work with the Park District, the MWRD and other stakeholders to investigate modification of the North Branch Dam for fish passage.



Aquatic Invasive Species

Action:

The City will work with regional and statewide fishing groups to build support for efforts to prevent invasive species from passing through the Chicago River system.

Aquatic invasive species are a threat to the economy and to the ecology of both the Great Lakes and Mississippi River system. The Sanitary and Ship Canal provides a physical link that allows for species to pass between the two basins. Until recent decades, poor water quality prevented many species from surviving in the waterway. Improved water quality has meant that more species can live in the river, and consequently travel from one basin to another. In addition to their broader regional impact, invasive species also cause damage within the river system, competing with native species for resources and reducing biodiversity.



Asian Carp are found in the Mississippi River system, and pose a significant threat to the Great Lakes. The electric fish barrier in the Sanitary and Ship Canal was designed to prevent the fish from swimming upstream toward Lake Michigan.

The City has passed two ordinances prohibiting the sale or ownership of invasive fish species. Mayor Daley has been a leader in pushing for full funding of an electric fish barrier on the Sanitary and Ship Canal and in supporting the proposed National Aquatic Invasive Species Act. In 2003, the City hosted an Aquatic Invasive Species Summit that brought together experts to discuss the problem of dispersal via the Chicago River system. As a follow up to this summit, the City is working with stakeholders to complete a feasibility study of all options for achieving biological separation of the two basins.

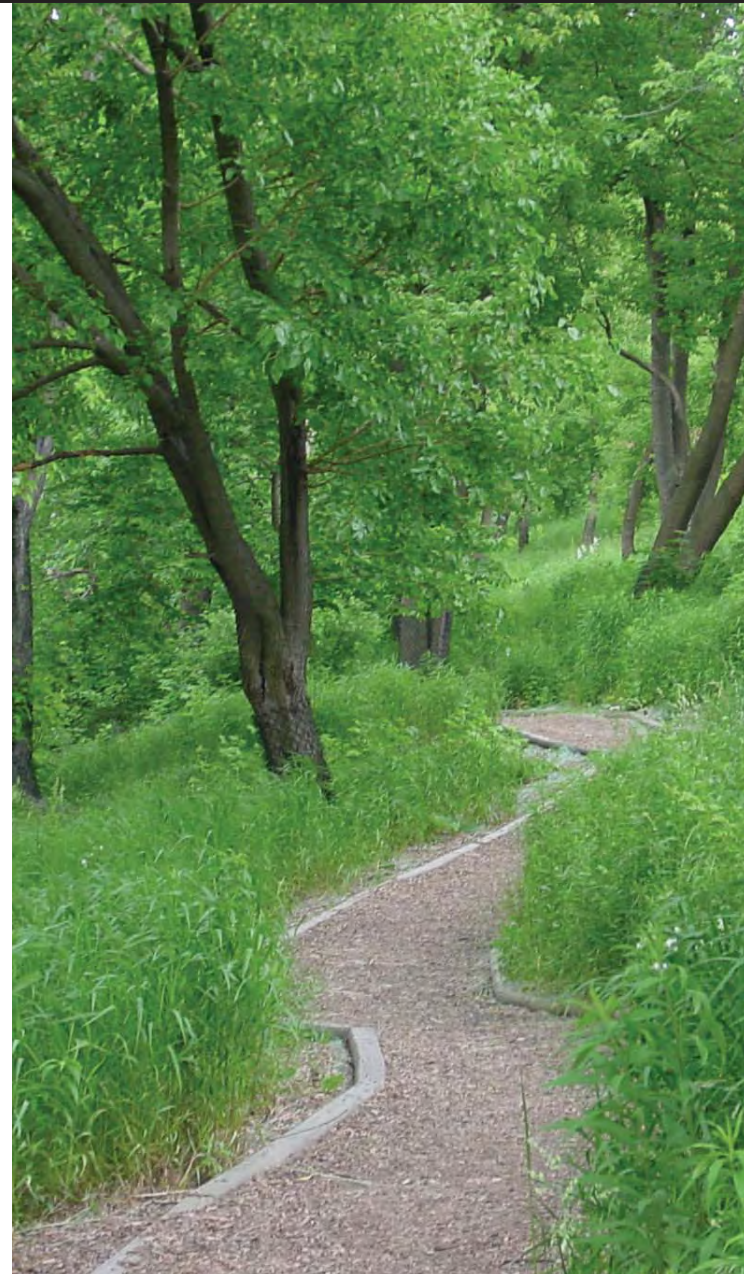
Riverbank Restoration

Action: The City and Park District plan to restore an additional three miles of public riverbank by 2010.

The banks of the Chicago River provide important habitat for wildlife. At the same time, there are many barriers to healthy wildlife habitat. Invasive plants such as buckthorn and garlic mustard shade out native understory vegetation, reducing biodiversity and causing erosion on the riverbanks. Concrete and steel sea-walls may be structurally sound, but they provide no habitat for wildlife.

The City is committed to restoring riverbanks where feasible to improve wildlife habitat, reduce erosion, and improve the appearance of the banks. Over 8,500 feet of publicly owned riverbank have been restored in recent years, including removing invasive species, planting native plants, and regrading steep or eroding banks.

A few years ago, the riverbank at Ronan Park was neglected and overgrown with weeds. Today it features a natural trail and native wildlife habitat, thanks to the restoration efforts of the Park District and community volunteers.



Riverbank Restoration

The 1999 Chicago River Corridor Plan and the 2002 Park District Chicago River Master Plan proposed locations for restoring and protecting habitat and native vegetation along the river. In order to identify additional locations, the City recently completed a project mapping the condition of all riverbanks within the city limits and cataloguing the vegetation for habitat value. This information will help to guide future policy for habitat improvement and protection, setback requirements and appropriate bank treatments.

Total miles of riverbank in the City: **58**

Ownership of riverbank within City limits

City of Chicago (not including street-ends):	4 %
Chicago Park District (owned and leased):	12 %
Metropolitan Water Reclamation District of Greater Chicago:	20 %
Forest Preserve District of Cook County:	17 %
Private:	47 %

RIVERBANKS BY TYPE AND CONDITION

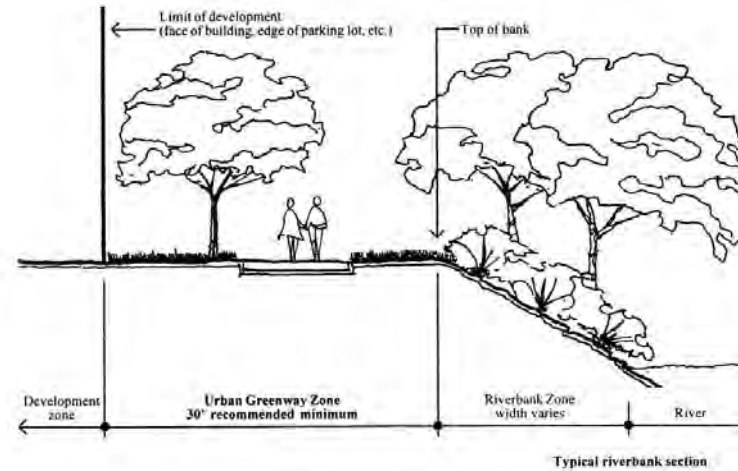
Type of Bank	Total miles of bank type	% failed or poor	% in fair condition	% new or in good condition
Seawall	22.6	16%	25 %	59 %
Earth slope	26.7	23 %	53 %	24 %
Combination of slope and wall	8.5	30 %	50 %	20 %

Private Riverbank Improvements

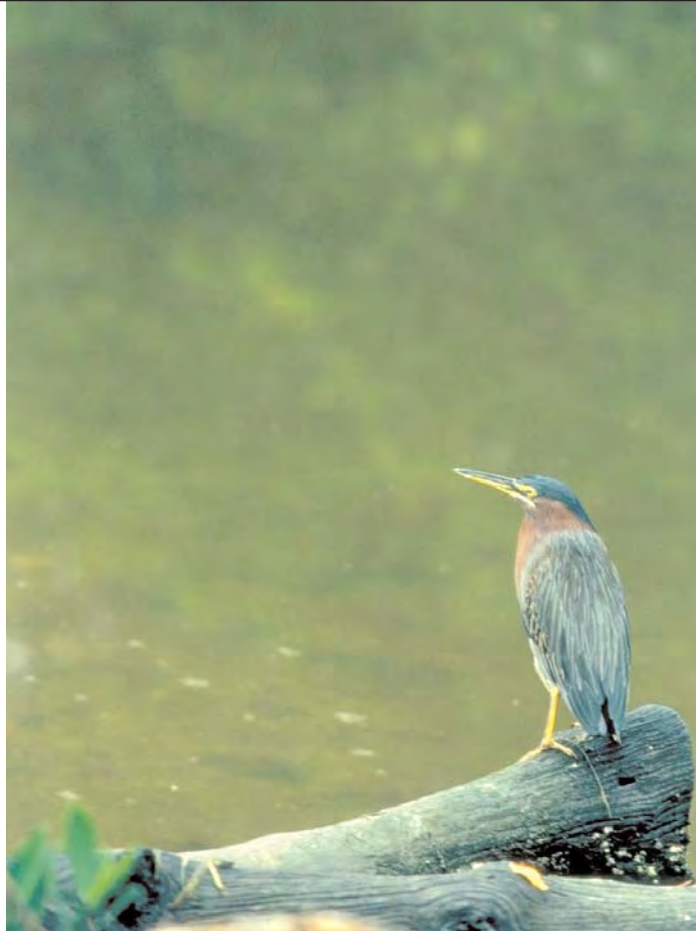
Action:

The City is updating the Chicago River Corridor Design Guidelines to encourage protection and enhancement of riverbank habitat on private land and habitat-friendly rehabilitation of riverbanks and seawalls.

Protecting and improving habitat on the Chicago River requires both public and private participation. Forty-seven percent of the river's edge is privately owned. Since 1999, a 30-foot setback has been required for all new developments along the river. However, the ordinance that established the setback requirement did not address the riverbank below the top of the bank. The City is updating the Chicago River Corridor Design Guidelines to address bank conditions, including wildlife habitat and widespread erosion problems. The Guidelines will encourage the protection and enhancement of existing habitat as well as environmentally friendly riverbank stabilization. Where space is available, a combination of regrading steep or eroding banks and establishing native vegetation is often the most cost-effective as well as the most environmentally friendly solution.



Private landowners are responsible for maintaining their riverbanks. Because rehabilitation of these riverbanks can be costly, the City has developed a program to assist landowners with repairs. Property owners located within Tax Increment Financing Districts are eligible for a cost-share improvement program for dilapidated seawalls and riverbanks. The program includes additional incentives for integration of habitat-friendly projects and restored natural riverbanks. Seawalls may be necessary in some locations due to space constraints or industrial traffic. However, where possible, the City encourages bank stabilization measures that have added habitat benefits, such as bio-engineering techniques that use plant roots to hold the soil in place.



What you can do:

Even if you don't live next to the river, you can help protect nature and wildlife by volunteering (see page 36). When you visit the river, be respectful of wildlife and dispose of litter properly.

THE CHICAGO NATURE AND WILDLIFE PLAN

The City is completing a comprehensive new plan designed to increase and improve habitat for nature and wildlife within Chicago. The plan identifies all sites within the city that have value as natural habitat, lays out action items for protecting, managing and creating more habitat, and addresses issues of research and education. The plan calls for the acquisition or lease of one thousand additional acres of natural areas and wetlands city-wide.

Key recommendations from the plan for the river include:

1. lease publicly owned sites on the river that are unprotected to conservation agencies or organizations that can provide protection and management
2. establish river habitat protection districts or zones on the river
3. establish riverbank improvement requirements, and
4. secure land and banks of the river where the river widens, along tributaries and canals, and where larger habitat areas are suitable for the construction of riparian habitat.

BALANCING RIVER USES





Introduction

The function of the Chicago River has evolved over time. Man-made channels that were originally designed for commercial shipping and flood control are now also seen as opportunities for recreational development. In former industrial areas, new residential and commercial developments are highlighting the river as an amenity. Properties with river frontage or views of the river are commanding premium prices in the real estate market. As water quality has improved, demand for open space and public access to the river has also increased.

However, the Chicago River also remains a working river, and industrial uses continue to dominate in manufacturing districts along the river. Barges bring aggregate, recycled material and other goods through the City, reducing the amount of trucks on City streets. These industries also remain an important part of Chicago's job base.

On the water, barges share the river with pleasure boaters, commercial tour boats and water taxis. The United States Coast Guard estimates that 600,000 passengers came through the Chicago Lock at the mouth of the Chicago River on commercial boat tours in 2003. Human-powered craft are also a common sight on many parts of the Chicago River. Several rowing clubs practice on the river, and paddling enthusiasts can rent canoes and kayaks from a Park District vendor, or launch their own boats at public boat launches built by the City and the Park District.

The diversity of uses on the river help to make it a vibrant asset for the City of Chicago. At the same time, balancing uses that are not easily compatible can be challenging. The City is committed to a maintaining this diversity of uses by increasing public access and protecting wildlife habitat while also protecting industrial jobs and commercial traffic.

Managing River Traffic

Action:

The City is developing a dock policy and use zones for the Chicago River.

The Chicago River varies in character and in the uses that predominate as it flows through Chicago. It is a quiet, meandering stream on the Upper North Branch, a bustling commercial thoroughfare on the Main Branch, and a hard-working industrial corridor on much of the Sanitary and Ship Canal. To balance competing uses while continuing to promote goals of public access and recreation, the City is developing use zones for the Chicago River that will provide guidance on preferred riverbank uses for commercial, industrial, recreational and wildlife habitat zones. In conjunction with these use zones, the City is developing a dock policy that will provide guidelines for private docks and moorings along the waterway while ensuring that public access remains a priority for the river-edge. These new policies will be incorporated into the municipal Harbor Ordinance and the Chicago River Corridor Design Guidelines.

The Chicago Marine Police Unit patrols the river to protect public safety and manage river traffic.



Protecting Commerce and Industry

Action:

The City will continue to support and promote a diversified and strong industrial base in the industrial corridors on the Chicago River.

Industrial activity is a critical segment of Chicago's economy, providing well-paying jobs for Chicago residents, assuring a diversified economic base, and stimulating growth and employment in other sectors of the economy. No other metropolitan area has as large a manufacturing base. Fifteen percent of Chicago's workforce, or 631,500 people, are employed in traditional manufacturing jobs.

Industrial facilities on the river rely on the ability to transfer bulk materials on the waterway and on the economies of scale provided by barge shipping. Barges also help keep trucks off the city streets; every barge on the river keeps 16 trucks off the road. 2,200,000 tons of cargo were carried on the Chicago River in 2002. Preserving the capacity for appropriate reaches of the waterway to maintain active industrial river frontage and serve as a commercial transportation route supports Chicago's diverse economic base.

To support industrial users along the Chicago River, the City has designated several Planned Manufacturing Districts (PMDs) along the waterway. PMDs provide stable zoning to support the industrial land base by buffering residential and commercial uses to create secure and stable environments for industry.

The City sees environmental improvement and economic development as complementary components of sustainable river development. The City will continue to promote environmentally friendly industrial practices, stormwater best management practices on industrial property, attractive riverfront facades, landscaped river setbacks, and improved riverbanks and seawalls.

LEADING BY EXAMPLE: GREENING INDUSTRIAL RIVERBANKS

The City of Chicago is leading by example with City-owned land on the river. In addition to public open space and parks, the City has several working facilities on the river. These facilities are important to Chicago's working infrastructure. They include ward yards, a recycling center, a maintenance facility for city vehicles, and dock space for the boats that maintain bridges or remove debris from the river. As with many industrial properties, the riverbanks at some of these facilities are in need of repair. To lead by example, the City is committed to improving riverbank stability, wildlife habitat, and aesthetics on all City-owned facilities on the river.

Increasing Public Access

Action: The City and Park District will continue to work toward completion of a multiuse trail along the entire river system.

The 1999 Chicago River Corridor Plan set a goal of developing a continuous multiuse trail along the entire river. The complex history of river-edge development in Chicago has left many barriers to public access. In some locations industrial uses make public access to the river edge unsafe. In others, past development simply did not leave room for public access. Since 1999, setbacks have been required by ordinance for new private development along the river, allowing for public access. Piece by piece, as segments of the trail are developed, a linear park is taking shape all along the river. Over 12 miles of trail have been built so far, and the City has constructed pathways to connect the trail under seven bridges.

The City is committed to working with river-edge landowners to complete a continuous public trail along at least one side of the river. In industrial corridors where safety concerns prohibit river-edge access, the City will continue to work with landowners to connect the riverfront trail as close to the river as possible. The City also recognizes the importance of looking for opportunities to link the riverfront trail out into neighborhoods that it passes by, making the river an integrated piece each neighborhood that it passes through.

Action: The City and the Park District plan to develop over 46 acres of additional river-edge parkland by 2010.

The Park District Master Plan includes the goal of acquiring land as it becomes available. Since 1995, the City and Park District have built over 32 acres of new river-front parkland. At least another 46 acres of additional parkland are planned for development.

The City has built connections for the riverfront trail under seven bridges. The Bryn Mawr Avenue connection is shown in this photo. These connections allow joggers and cyclists to enjoy the trail without crossing busy streets.



BALANCING RIVER USES

Action: The City will work with boaters to develop an education campaign about boating safety for recreational users of the river.

Recreational boating on the river grows every year. Paddlers are a common sight on the North Branch. Visit the river at dawn and you are likely to find a rowing four practicing. The City and Park District have built four launches for non-motorized boats. In 2005, an additional canoe launch will be completed at Weed Street on the North Branch, and a new public boat ramp for both motorized and non-motorized boats will be built at Western Avenue on the Sanitary and Ship Canal.

The City and the Park District work closely with professional maritime organizations and other government agencies to protect public safety on the river. While the City is actively promoting recreation on the river, recreational users need to be aware of hazards such as commercial and industrial boat traffic and water quality concerns. To help educate recreational users, the City will work with boaters to develop educational materials on boating safety.

What you can do:

Pleasure boaters should obey no wake zones in the river. All recreational users should educate themselves on boating rules of the road.



ENHANCING COMMUNITY LIFE



Introduction

The Chicago River winds its way through many neighborhoods in Chicago. Where time and care have been invested, the river is a catalyst for bringing people together. It improves quality of life by providing opportunities to gather and play or for people to experience nature in their own communities.

The river corridor also contains rich layers of history that tell the story of the development of Chicago: the shifting natural landscape, the changing infrastructure of the city, and the growth and development of neighborhoods.

The City is committed to developing projects and programming that bring people to the river and enhance community life in the neighborhoods next to the river.



The Chicago Park District and the Canal Corridor Association worked with neighborhood children to make and install plaques on the walls of a path at Canal Origins Park. The plaques depict the children's ideas of what the Chicago River means to them.



Managing the Riverfront Trail

Action:

The City will work with stakeholders to develop a management entity for the riverfront trail and a river improvement fund for riverfront trail maintenance and capital projects.



As the riverfront trail takes shape, new management needs are emerging. Currently much of the public river trail is privately owned and maintained. While private landowners have a responsibility to maintain their river-edge, the City also recognizes a need for a consistent management system to ensure that these valuable spaces continue to provide maximum public benefit.

In 2003, the City commissioned a research report on management issues for the Chicago River. The report examined river management schemes across the coun-

try and made recommendations for meeting Chicago’s river management needs. Recommendations included the establishment of a river conservancy to accept easements, take ownership of land and raise funds for river improvements.

The City is working with river-edge landowners and managers to get feedback on the recommendations, and is committed to moving forward in the development of a public-private management entity and river improvement fund.

The Main Branch Riverwalk

Action: The City will develop the Main Branch Riverwalk as a unique urban destination with year-round concessions and amenities that highlight the river as an important natural and cultural resource.

The crown jewel in the Chicago River's system of trails and walkways is the Riverwalk along Wacker Drive on the Main Branch. This reach of the Chicago River is already well known for its stunning views of downtown. Completion of the Main Branch Riverwalk will solidify the river as a major urban destination that is unique to Chicago.

The City will build an accessible river-level walkway from Lake Street to the existing riverwalk east of Michigan Avenue. The walkway will include connections under each bridge to provide for continuous enjoyment of the space, and will incorporate retail, entertainment, dining and recreational activities.



Vietnam Veterans' Memorial Plaza, the first phase of the Main Branch Riverwalk, will be completed in 2005. The complete build-out of the Riverwalk will cost an estimated \$50 million. The Chicago Department of Transportation is currently completing design and engineering work for the remainder of the project.

Bubbly Creek

Action:

The City is launching a public planning process for revitalization efforts along Bubbly Creek.

The South Fork of the South Branch is called Bubbly Creek because of the bubbles that rise to the surface from decaying organic matter on the bottom. Beginning in the late 1800's, Bubbly Creek served as a drainage channel for Union Stock Yards, which put large amounts of animal waste into the river. Since 1939, Bubbly Creek has also been an outlet for combined sewer overflows from the Racine Avenue Pumping Station, which was built by MWRD to convey sewage and stormwater to the treatment plant from a large section of the City's South Side. Organic matter in these overflows uses up oxygen in the water, leading to stagnant conditions. Steep banks prevent public access along much of the corridor.

The Bubbly Creek corridor is also one of the reaches of the river where land use is changing, and the City and other stakeholders are looking for ways to improve the function of the creek as a community asset.

A new park has been developed at the north end of the creek, and additional parkland is under development. The MWRD is researching ways to increase the amount of oxygen dissolved in the water. The City is working

with experts to develop a project to test new technology for capping the sediment and using natural materials to break down contaminants. Solutions to sediment and water quality problems will undoubtedly be expensive and take many years to complete. But the City is committed to implementing projects that will continually improve the creek for the benefit of the surrounding communities. To guide this work, the City is launching a public visioning process for the future development of the creek corridor.



Promoting Community Stewardship

Action: The City will continue to work with the Park District and stakeholders to develop and encourage community stewardship efforts on the Chicago River.

Government agencies and environmental groups can accomplish a great deal to improve the river, but government cannot do it alone. Citizen involvement in caring for the river is also key. For the river to reach its full potential as a great amenity for Chicago, citizens have to feel that the river belongs to them, and help take responsibility for its improvement.

Citizens in many areas are already caring for the river. Volunteers provide environmental stewardship at natural areas on Park District lands. Volunteers in Friends of the Chicago River’s Adopt A River program are restoring several sites in the City. The City, the Park District and the Forest Preserve District of Cook County provide support for NeighborSpace, a not-for-profit group that acquires small plots of land to be managed and maintained by local community groups, businesses, and organizations.



Volunteers remove garlic mustard from a riverbank at Chicago River Day.

Chicago businesses also serve as stewards of the river. In 2003, the City partnered with Friends of the Chicago River to launch the Adopt A River Downtown program, which provides a way for the business community to engage in the revitalization of the river. Local businesses contribute funds to help care for specific sites on the river downtown.

What you can do:

GET INVOLVED!

Contact Friends of the Chicago River:
312-939-0490 or www.chicagoriver.org

Contact the Park District: 312-742-4775
www.chicagoparkdistrict.com

Click on “Volunteer at CPD” in the upper right corner

Action: The City will continue to develop events and programming that showcase the river as a unique natural and cultural resource.

Events and Programming

The Chicago River is a wonderful setting for a wide variety of events and programming. The Main Branch in the Loop, with its canyon of skyscrapers and famous movable bridges, is one of the most iconic images of Chicago for residents and visitors alike. Popular architecture tours offer visitors a unique way to get to know Chicago. Friends of the Chicago River's Flatwater Classic canoe and kayak race brings hundreds of people to the river. Rowers use the water for a regatta in the fall, and dragon boats are raced in Chinatown in the summer. Throughout the city, the river's parks are host to neighborhood festivals, community theater, and sports events.

The City is committed to developing events and programming that highlights the river's value as a resource for Chicago and that provide a way for citizens to get involved in the river's revitalization.

In 2005, the Park District is installing interpretive signage at all of the natural areas in parks along the river. The City also leased the Michigan Avenue Bridgehouse, a national historic landmark, to Friends of the Chicago River for the development of a Chicago River museum, scheduled to open in 2005.



Red Moon Theater in Ping Tom Park, 2004



The Tall Ships Festival on the Main Branch, 2003.

For additional information

Chicago River Corridor Development Plan (1999), Chicago Department of Planning and Development
Available online: www.cityofchicago.org/conservedchicagotogether

Chicago River Corridor Design Guidelines and Standards (1999), Chicago Department of Planning and Development
Available online: www.cityofchicago.org/conservedchicagotogether

Chicago River Master Plan (2002), Chicago Park District
Available online: www.cityofchicago.org/conservedchicagotogether

The Chicago River: An Illustrated Guide to the River and its Waterways (1998), by David Solzman

The Chicago River: A Natural and Unnatural History (2000), by Libby Hill

Chicago River Habitat: An Assessment and Strategies for Improvement, Friends of the Chicago River

Nature and the River (1998), National Park Service

People and the River (1998), National Park Service

City of Chicago: www.cityofchicago.org

Chicago Park District: www.chicagoparkdistrict.com

Metropolitan Water Reclamation District of Greater Chicago: www.mwrd.org

Illinois EPA Use Attainability Analysis: www.chicagoareawaterways.org

Friends of the Chicago River: www.chicagoriver.org



Recycled Paper