

A photograph of a river flowing through an urban landscape. On the left, a building is covered in dense green ivy. In the foreground, there is a lush, green riverbank with various plants and flowers. The river reflects the surrounding greenery and the city skyline in the distance. The sky is clear and blue.

**RETHINK WHAT A  
RIVER CAN BE**

An aerial photograph of Chicago, showing the dense downtown skyline with numerous skyscrapers, including the Willis Tower. The foreground shows a mix of urban development, including parking lots, roads, and some green spaces. A river is visible on the left side. Overlaid on the image are three text boxes and three arrows. The text boxes are white with black text. The arrows are black. The text 'Chicago Residents' is at the top center. The text 'Built Environment' is at the bottom left. The text 'Natural World' is at the bottom right. An arrow points from 'Chicago Residents' down to 'Built Environment'. Another arrow points from 'Chicago Residents' up to 'Natural World'. A third arrow points from 'Built Environment' right to 'Natural World'.

**Chicago Residents**

**Built Environment**

**Natural World**





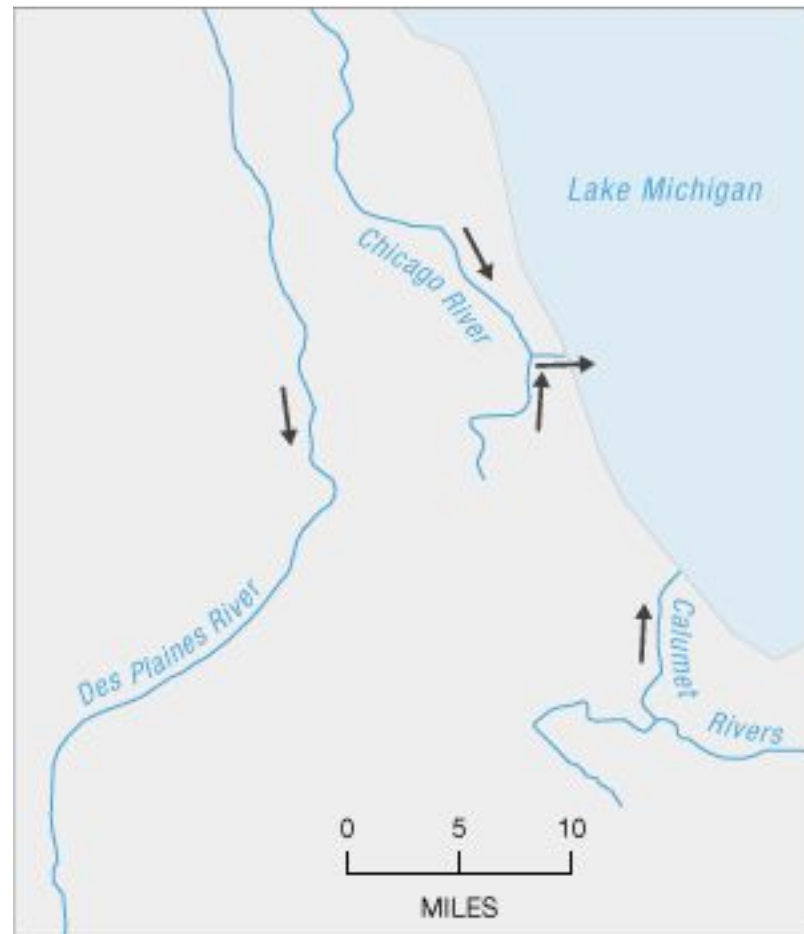


CHICAGO RIVER  
MELLEN PHOTO

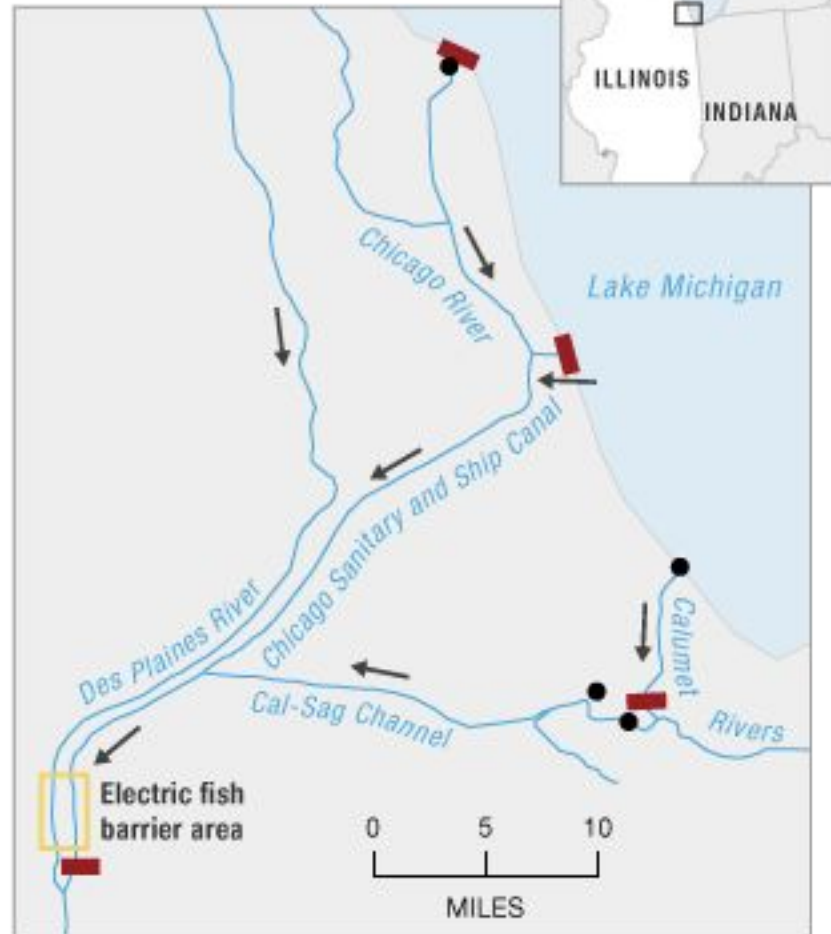


← Direction of flow   ■ Locks   ● Sites testing positive for Asian carp and DNA

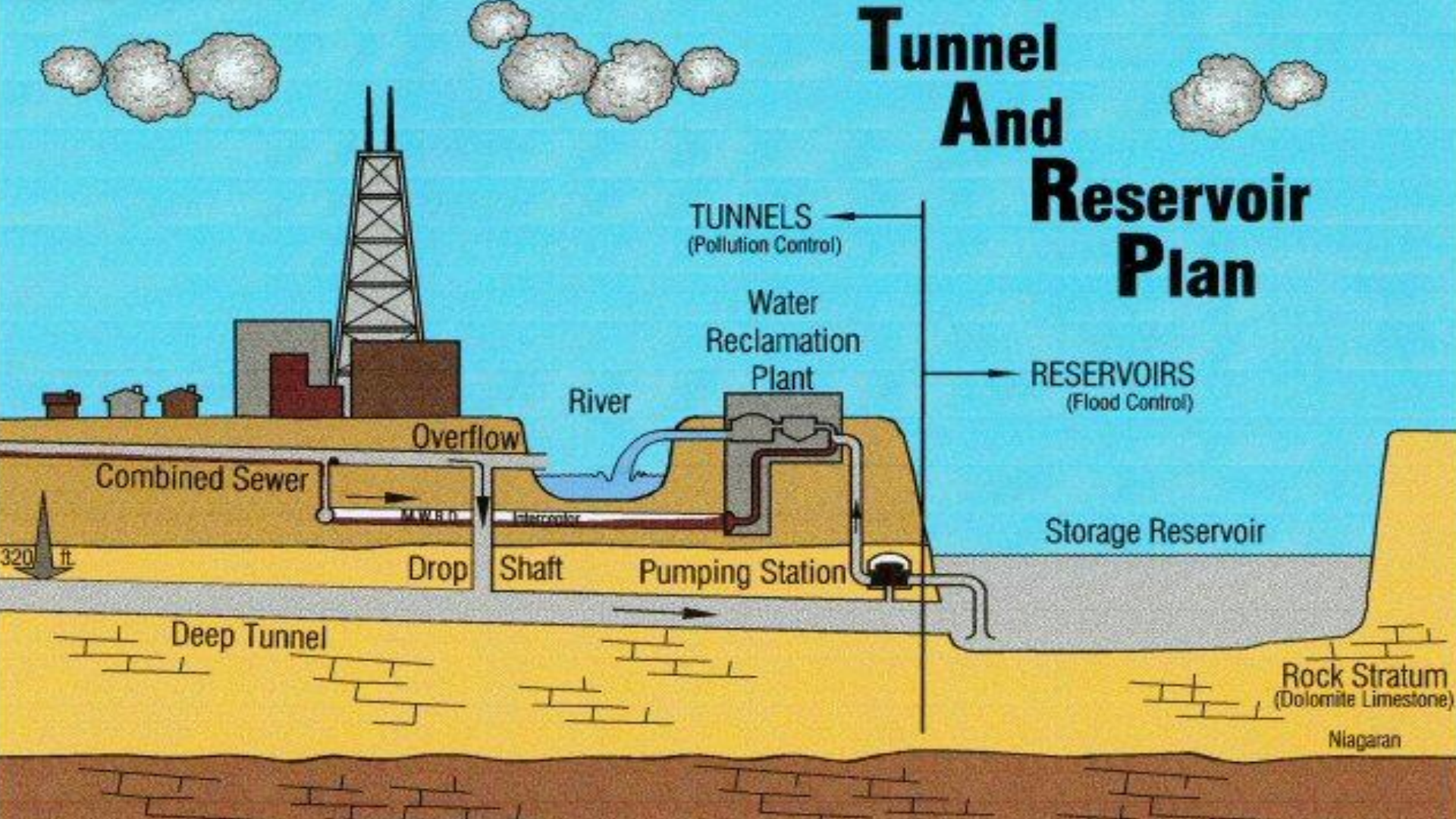
### Before Diversion



### After Diversion



# Tunnel And Reservoir Plan









# **CHICAGO AND ITS RIVER STILL FACE BIG PROBLEMS**







$\frac{2}{3}$ in Rain = sewage dumped into river  
1.5in Rain = river drained into lake



















# Top Sources of Nutrient Pollution

## Municipal Sewage

Human sewage is the most common source of nutrient pollution, particularly in South America, Asia, and Africa.



## Agricultural Fertilizers

Often applied to crops in excess, chemical fertilizers containing nitrogen and phosphorus seep into groundwater or are washed away as runoff.



## Livestock Waste

Manure from animal production, which is often used as fertilizer, contributes additional nitrogen and phosphorus.



## Stormwater Drainage

Stormwater runoff washes nutrients from residential lawns and impervious surfaces into nearby rivers and streams.



## Aquaculture

Direct discharge of excrement, uneaten food, and other organic waste generates concentrated amounts of nitrogen and phosphorus in the waters surrounding fish farms.













Chicago's Next Big Vision...

# THE WILD MILE

PHASE 1 | 2017

PHASE 2 | 2018

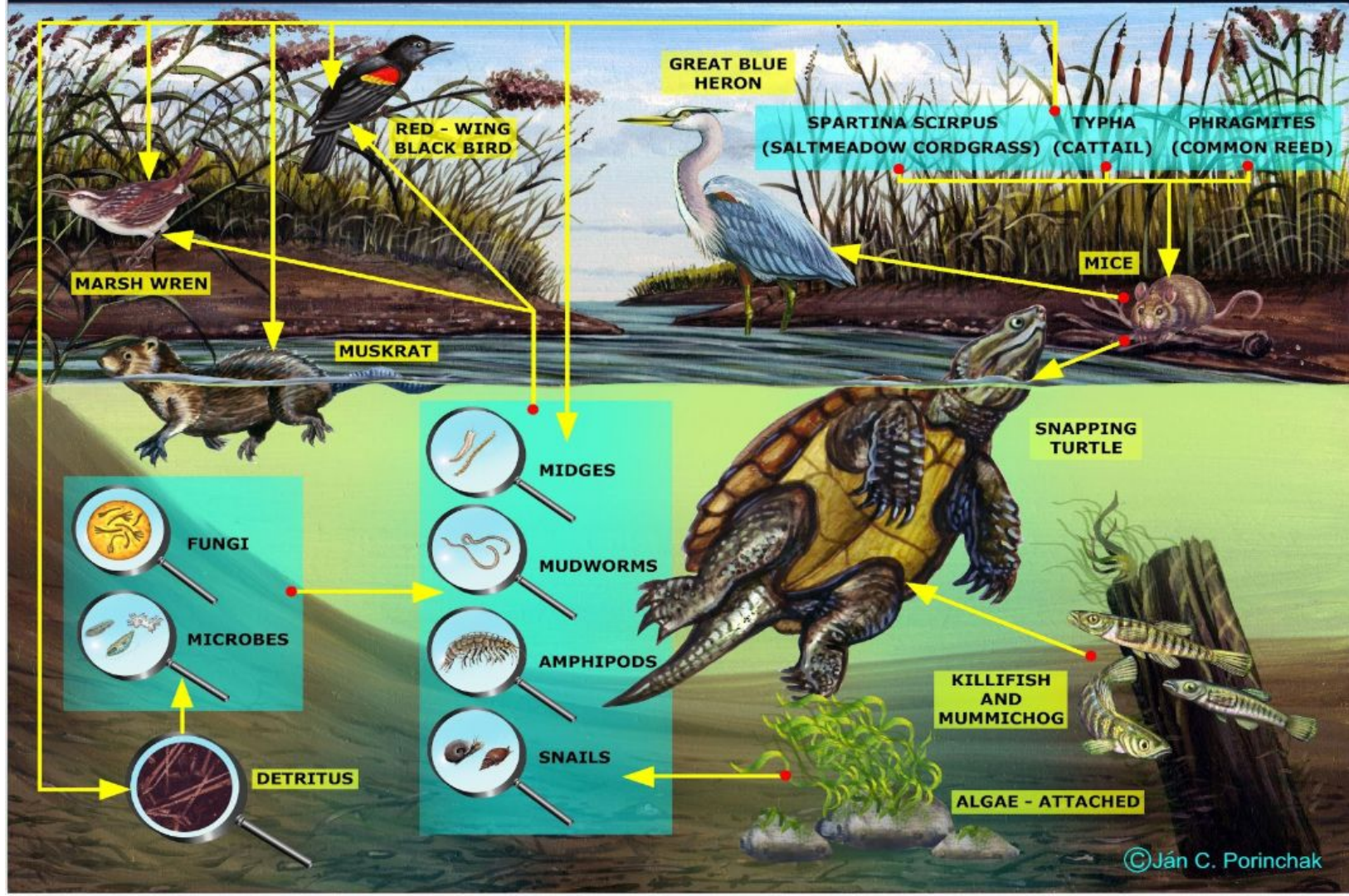
PHASE 3 | 2020











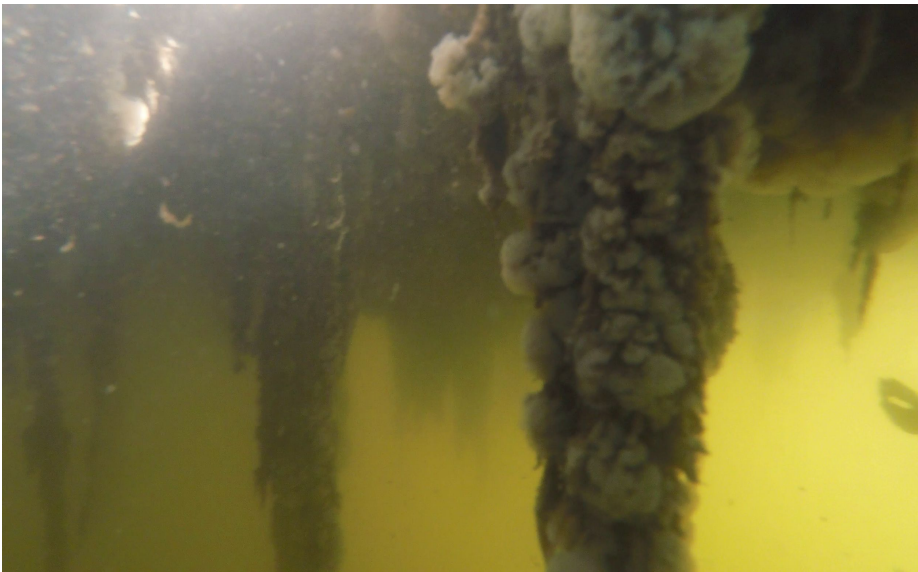








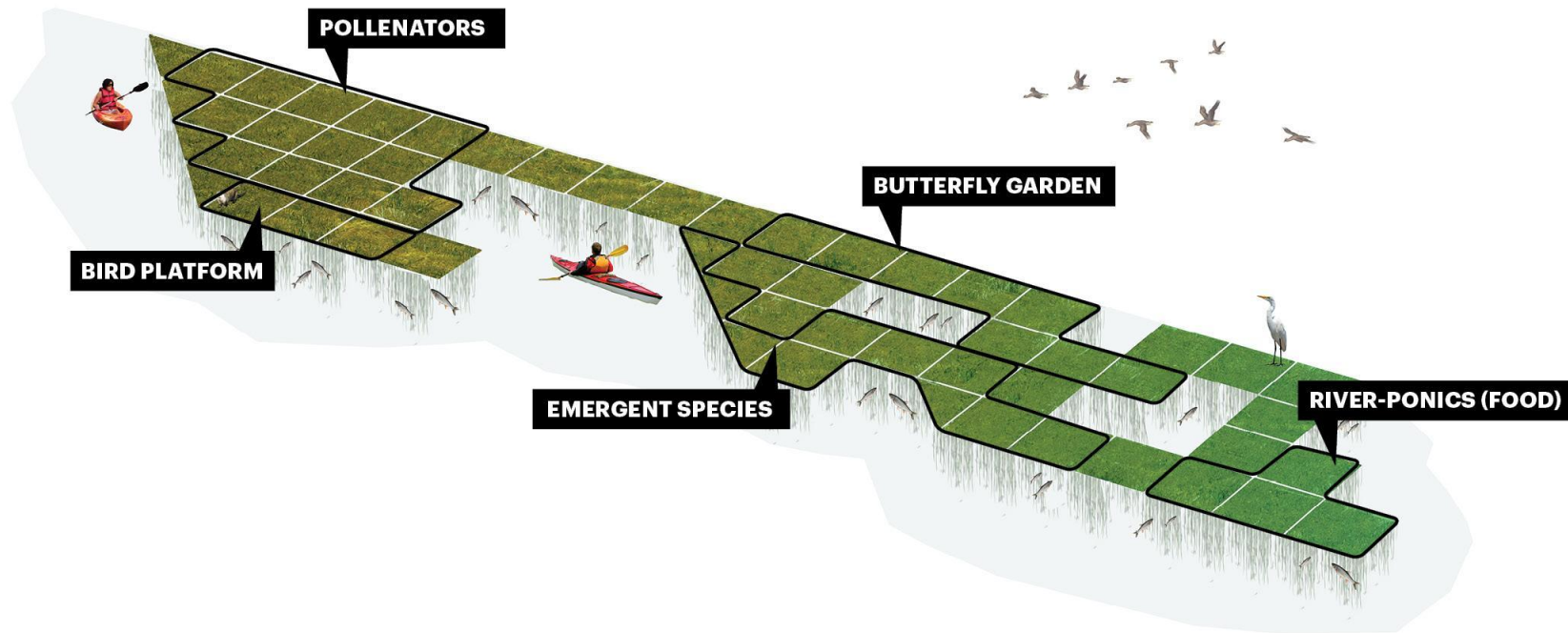






# A Modular Design, An Incremental Approach

**Phase 1** A testbed for river habitat, biofiltration, and growing food in the Chicago River





# Phase II: Learning Platform









# THE WILD MILE WILL BE MORE THAN JUST A PARK











UrbanRiver.org



# Chicago Tribune



"We can bring  
— Andy Casper, director



# GROWING COMMUNITY INVOLVEMENT AT ALL LEVELS



ABEL URIBE/CHICAGO TRIBUNE

All Damato and others from Urban Rivers place a floating garden module in the Chicago River. The modules are part of a long-term project.

## 'Wild mile' in the works on stretch of Chicago River

Green group and Shedd put gardens in old industrial channel to lure new life

By PATRICK M. O'CONNELL  
Chicago Tribune

From the Cherry Avenue Bridge, the rehabilitated span for trains and pedestrians at the northern tip of Goose Island, the North Branch Canal of the Chicago River looks like a silky, murky mess. The riverbanks are

scarred with concrete and wooden and metal retaining walls. Unruly trees pay the water, their sagging branches capturing a tangle of plastic bags and beer cans.

But look southward from this point only a few steps from the

nish of North Avenue, toward the Lincoln Park World Foods store, and the river is alive with floating tufts of greenery. The gardens are the beginning of a vision to turn the old industrial channel on Goose Island's eastern edge into a "wild mile," an eco-park of floating plants, wetlands, kayak piers and public walkways.

Soon these water gardens, the work of Urban Rivers, will have companions. By the beginning of

July, a new set of native plant gardens will float in the canal, courtesy of a partnership between the environmental nonprofit and the Shedd Aquarium. Shedd's river "island" will add 260 square feet of native plants such as swamp rose mallows, marsh marigold, Dudley's rush and queen-of-the-prairie to the 1,500 square feet installed a year ago by Urban Rivers.

Turn to River, Page 25

LAS VEGAS — President Donald Trump pressed his tough immigration stance at a Nevada political convention Saturday, telling hundreds "we have to be very strong" to keep people, including violent gang members, from entering the country illegally.

Trump was in Las Vegas to boost the candidacy of Dean Heller, the only Republican U.S. senator seeking re-election in a state that Democrat Hillary Clinton won in 2016. Trump and Heller have papered over their once prickly relationship to present a united front in their shared goal of helping Republicans maintain, if not expand, their 51-49 majority in the Senate.

In remarks to several hundred people attending the Nevada GOP Convention, Trump portrayed himself as tough against illegal immigration, saying at one

experience wildlife in one of the largest metropolises in the United States." Turning the postindustrial landscape into a thriving ecological oasis will take time, but changing the character and composition of the waterway, organizers say, will benefit area residents, employees of nearby businesses and visitors at an often-overlooked section of the river. The aim making the river a living entity.

The floating gardens are made of an inert growing medium called coconut coir, made from coconut husks, which is rolled into tubes bound together with plastic mesh and frames of stainless steel. The Shedd project will include submerged, modified wooden pellets that will be studied with leaves, an effort to attract minnows, tadpoles and invertebrates under the water. These gardens also will have turtle logs and a water hose. The aquarium staff will set up underwater beds, which will be monitored by several cameras providing a live feed of the river activity, to help attract fish.

Turn to Border, Page 35

U.S. on sidelines as Cuba faces major changes  
Nation & World, Page 33

Downtown office space is key to nab tech workers  
Business

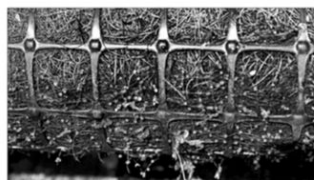
The Shedd's collaboration with Urban Rivers adds a scientific dimension to the endeavor. Shedd researchers, and eventually volunteers, will closely monitor and analyze the floating gardens' effects on the canal and riverine. Shedd researchers have been focusing more on the Chicago River and other local waterways recently, expanding the aquarium's work beyond the Great Lakes and oceans. The partnership with Urban Rivers developed from involvement in citywide planning efforts focused on improving the river.

"This design is all wild-life-fest. We want to enjoy it and be able to experience it — but we want to see wildlife come to these spaces and see how well they do," said Jason Weger, director of conservation and a Kickerstraw project.

The Urban Rivers floating gardens on the east side of the canal was initially 300 square feet but has since tripled. The goal is to eventually build 60,000 to 70,000 square feet of floating gardens beyond the North Avenue and Halsted street bridges. Shedd's gardens, with a price tag of about \$20,000, will be installed on the western bank of the canal, complementing the Urban Rivers greenery.

Carp eggs cling to a floating garden. The presence of the fish affects the overall biodiversity of the ecosystem. "It's a feedback loop," said Andy Casper of the Shedd Aquarium.

The floating gardens are attracting birds — and their eggs — and boosting dwindling populations of monarch butterflies. In addition, carp have been using the basis for mating.



Carps eggs cling to a floating garden. The presence of the fish affects the overall biodiversity of the ecosystem. "It's a feedback loop," said Andy Casper of the Shedd Aquarium.



SOURCES: Urban Rivers, Shedd Aquarium

and spike prefisher are attracting dragonflies and monarch butterflies. In the water beneath and around the floating modules, common carp thrash and flop in the water, mating. "The more of the habitat that exists in this area, wildlife will benefit from this as an island in itself," Weger said. "We're seeing the carp come to this spot and they're enjoying it and being able to utilize it for what it is, but we want to see more connectivity." Casper said the gardens provide a safe, secluded place for the carp to lay their eggs. The plant roots provide protection from predators and the sides of the modules are a convenient spot for the eggs. Casper says he'll be most concerned of fish, but the simple addition can have a ripple effect on the overall biodiversity of the ecosystem. "It's all a feedback loop," Casper said. The presence of carp can kick-start more diversity among fish species in the river, as bass can feed on overabundant and young carp. "The nice thing about the modules is that you get these four different kinds of habitat that you don't really find in a river," Casper said. "It's not supposed to be just fish only or just birds only, but you've seen the

swallows and the night herons, they're feeding on the fish that are living in the habitats that we're putting in. So it's directly for fish but indirectly for all of the other animals. That's how you build the food web back."

The Shedd gardens will be installed into the river on July 6, and a week later the aquarium will begin its Kickerstraw for Conservation program, in which volunteers will be able to help the Shedd collect data on the island. Volunteers will tally the number and variety of plants and animals on and near the floating gardens. Interested volunteers can sign up at [www.shedd.org/kickerstraw](http://www.shedd.org/kickerstraw). Collecting data will not only help quantify the impact of the gardens but also allow the scientists to test their benefits.

"We need to get people to actually envision what the river would look like if it were all hard rock and solid walls," Casper said. "But then we also need the second level, which is, OK, we're going to talk about planning and investing resources and zoning — then, OK, now people are going to see a life more evidence, hard evidence, that this is worth the city doing this."

Patricia O'Connell

"Wild mile' in the works on river  
River, Page 1  
"We can bring the river











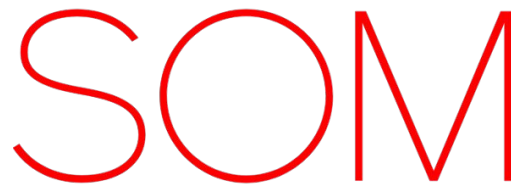








CHICAGO DEPARTMENT OF  
PLANNING & DEVELOPMENT





















Chicago's Next Big Vision...

# THE WILD MILE

PHASE 1 | 2017

PHASE 2 | 2018

PHASE 3 | 2020





Thank You



**U R B A N**  
**R I V E R S**

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