HABITAT HOTSPOTS

South Menomonee Canal and Burnham Canal Wetland

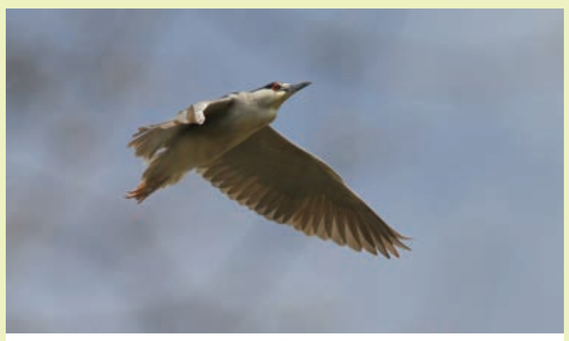
Sometimes habitat can be found in the most unlikely of places. The South Menomonee and Burnham Canals were built to support Milwaukee's thriving shipping industry. Today they are mostly degraded urban industrial sites with deteriorating, underwater structures. Resting at the surface are turtles and waterfowl such as geese, ducks, heron and gulls. And yet even the scientists at the UWM School of Freshwater Sciences were surprised when they found panfish and bass reproduction underway at the back end of Burnham Canal.

City leaders are planning a major revitalization of the Burnham Canal, and human intervention can have profound positive effects when done well. But the idea of "novel" habitat—human-made structures never intended as habitat but nevertheless adopted by nature as such—is a crucial one in urban areas such as the Milwaukee Harbor. A surprising number of native and non-native species find all sorts of ways to live in or among structures cast off or even still being used by humans.

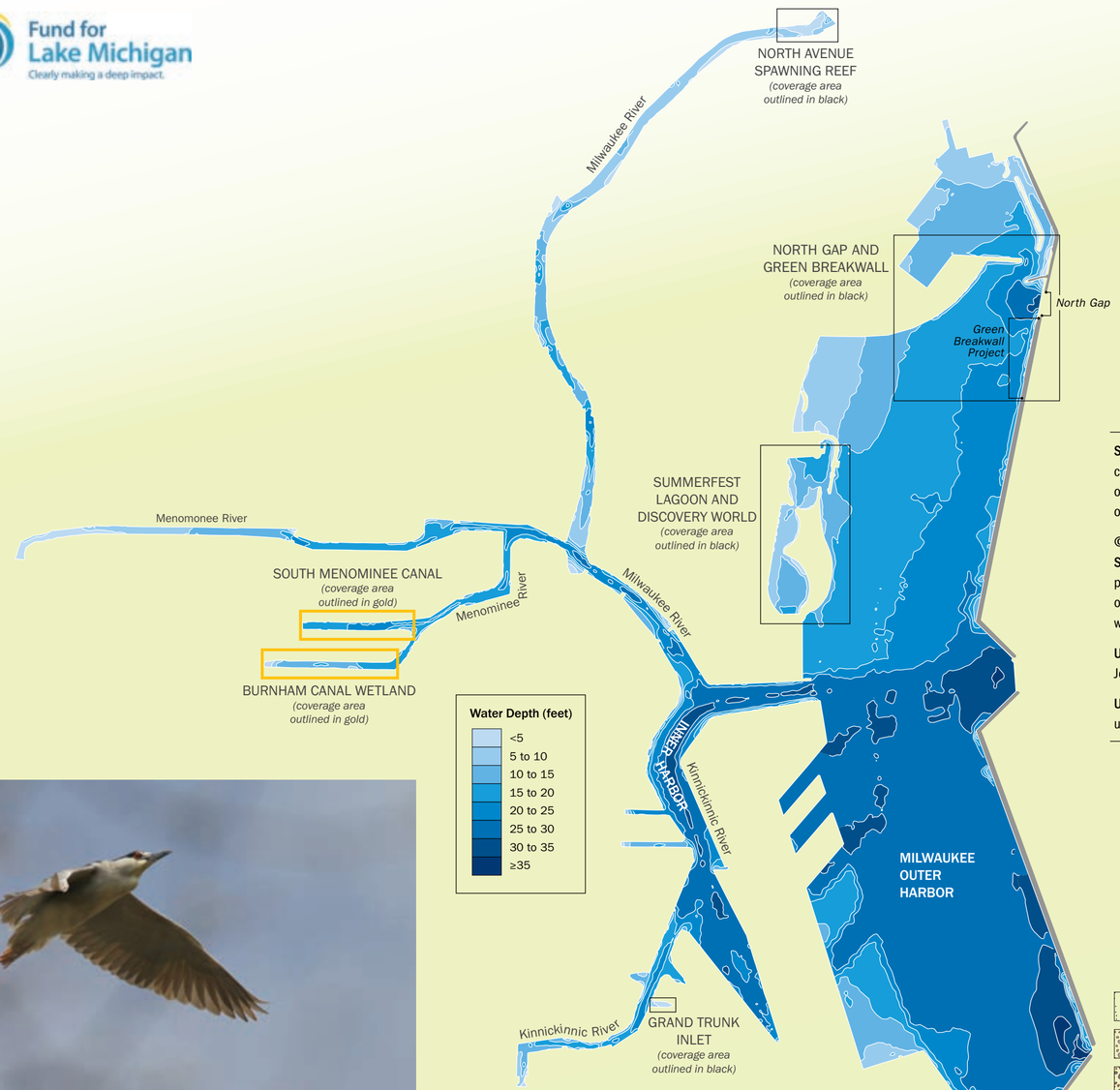
Black-crowned Night-Heron

The Black-crowned Night-Heron makes the Milwaukee Estuary its home. Breeding birds can be found nesting in trees along the Burnham Canal and Menomonee River, a welcome sign that environmental regulations have worked. The black-crowned night heron experienced population collapse due to the pesticide DDT polluting waters in which it feeds. Since regulating DDT in 1972 the birds have recovered. Now juvenile birds can be found foraging along the shores of the Burnham Canal and Menomonee River valley. This opportunistic heron feeds on a wide variety of foods including aquatic and terrestrial insects, earthworms, leeches, crayfish, mussels, fish, amphibians, reptiles, rodents, birds, eggs and plant material. If listening with a keen ear, the best-known Black-crowned Night-Heron vocalization is its loud barking *quawk* call, most often given at night while in flight or from a perch. A hissing *plup* call is used by males to attract females. The threat call is described as *rok-rok* and disturbance call as a raspy *wok-a-wok*.

Photographs: Jim Edlhuber | http://www.windowtowildlife.com



In flight



Milwaukee Harbor

(577 ft above sea level)

SCALE OF US SURVEY MILES

0 1

N NW NE W E SW SE S

NOT FOR NAVIGATION

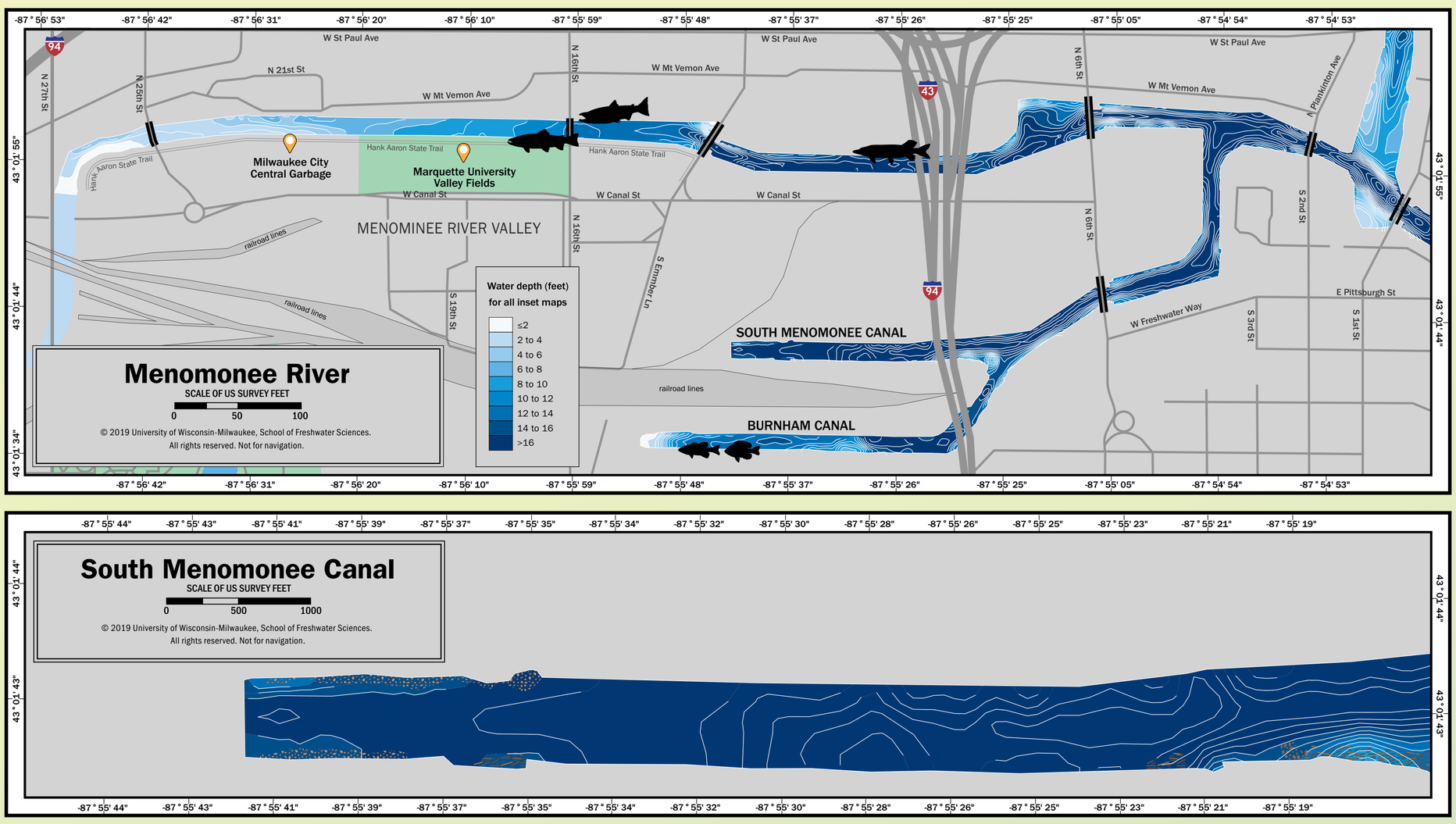
SAFETY NOTICE: This map is not intended for use as a navigational chart. Although various structures under the the water are shown other hazardous areas are not. The publisher is not responsible for omissions or location changes of these navigational aids.

UWM SFS Milwaukee Harbor Habitat Map Team: Elizabeth Sutton, Jeff Houghton, Kim Beckmann, Brennan Dow, Eric Leaf, John Janssen

UW-Milwaukee Harbor Habitat Maps Research Project
uwm.edu/harbormaps

FEATURE SYMBOLS

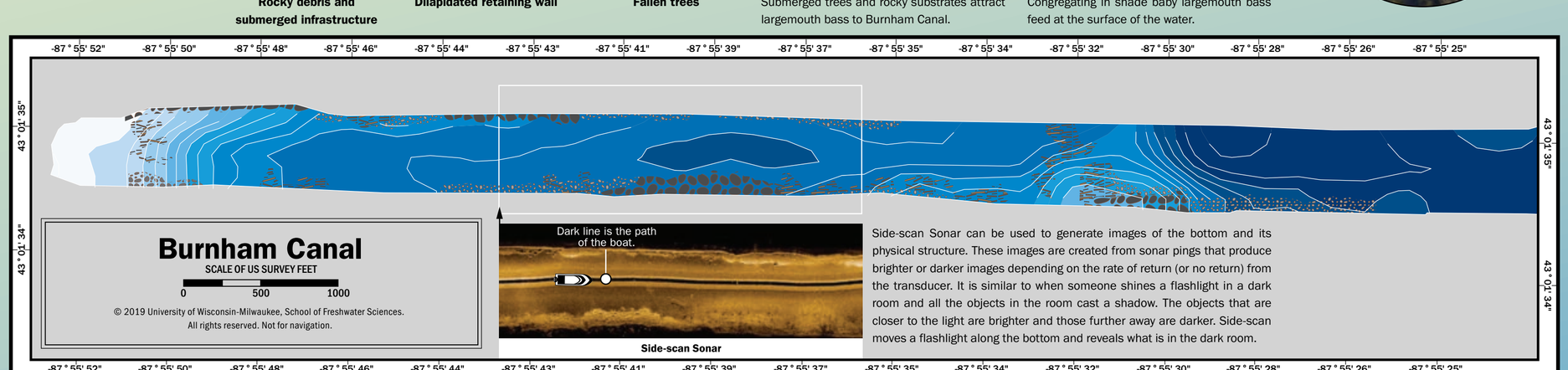
- Boat Landing (Hand-carry)
- Festival Grounds
- Museum
- Marker
- Park
- Marina
- Clay, Mud, Sand
- Rocks
- Mixed Rocky
- Boulders
- Small, Large Wood
- Wood, Steel Pilings
- Nuisance Species
- Panfish
- Salmon
- Trout
- Northern pike
- Bass
- Fish
- Vegetation
- Substrate
- Forage



Menomonee River

SCALE OF US SURVEY FEET

0 50 100



South Menomonee Canal

SCALE OF US SURVEY FEET

0 500 1000

Burnham Canal

SCALE OF US SURVEY FEET

0 500 1000

Side-scan Sonar

Side-scan Sonar can be used to generate images of the bottom and its physical structure. These images are created from sonar pings that produce brighter or darker images depending on the rate of return (or no return) from the transducer. It is similar to when someone shines a flashlight in a dark room and all the objects in the room cast a shadow. The objects that are closer to the light are brighter and those further away are darker. Side-scan moves a flashlight along the bottom and reveals what is in the dark room.

FISH

Underwater substrate found in the South Menomonee and Burnham Canals attracts a variety of fish.

Fish Paintings: Virgil Beck

Round goby ●

Largemouth bass

Common carp

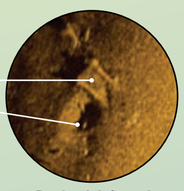
Pumpkinseed

Channel catfish

Yellow bullhead

Bluegill

Only a fish knows how to be a fish: Unexpected Habitat



Rocky debris and submerged infrastructure

Dilapidated retaining wall

Fallen trees

Burnham Canal

The Burnham Canal was originally constructed in the 1870s to serve as a shipping canal for local industry. Today, no commercial shipping occurs on the Canal. The Canal has unfortunately become a repository for contaminated sediment and an environmental liability for the Milwaukee Estuary and the Great Lakes.

Largemouth bass

Submerged trees and rocky substrates attract largemouth bass to Burnham Canal.

Largemouth bass fry

Congregating in shade baby largemouth bass feed at the surface of the water.

Burnham Canal Remediation/Ecosystem Restoration Design | Phase 1

Burnham Canal Remediation/Ecosystem Restoration Design | Phase 2

The Milwaukee Metropolitan Sewerage District is partnering with the United States Army Corps of Engineers (USACE) and several local agencies to implement the Burnham Canal Wetland Project. The project consists of filling in the Burnham Canal to cap existing contaminated sediments and installing wetland vegetation and other features to enhance the fish and wildlife habitat. When completed, the work will restore 7.5 acres of wetlands which used to dominate the Menomonee Valley. More specifically, the wetland design addresses the following objectives:

- Create fish habitat for various species including northern pike and yellow perch
- Create varied habitat to benefit other wildlife including reptiles, amphibians and birds
- Provide recreational and educational opportunities to the surrounding community

Artistic Restoration Design Renderings Phase 1 and 2: Ricardo J. Garcia-Diaz (USACE)

Milwaukee Harbor Habitat Map design: Kim Beckmann

HARBOR HABITAT

Milwaukee Wisconsin