

NOT FOR NAVIGATION

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

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FEATURE SYMBOLS

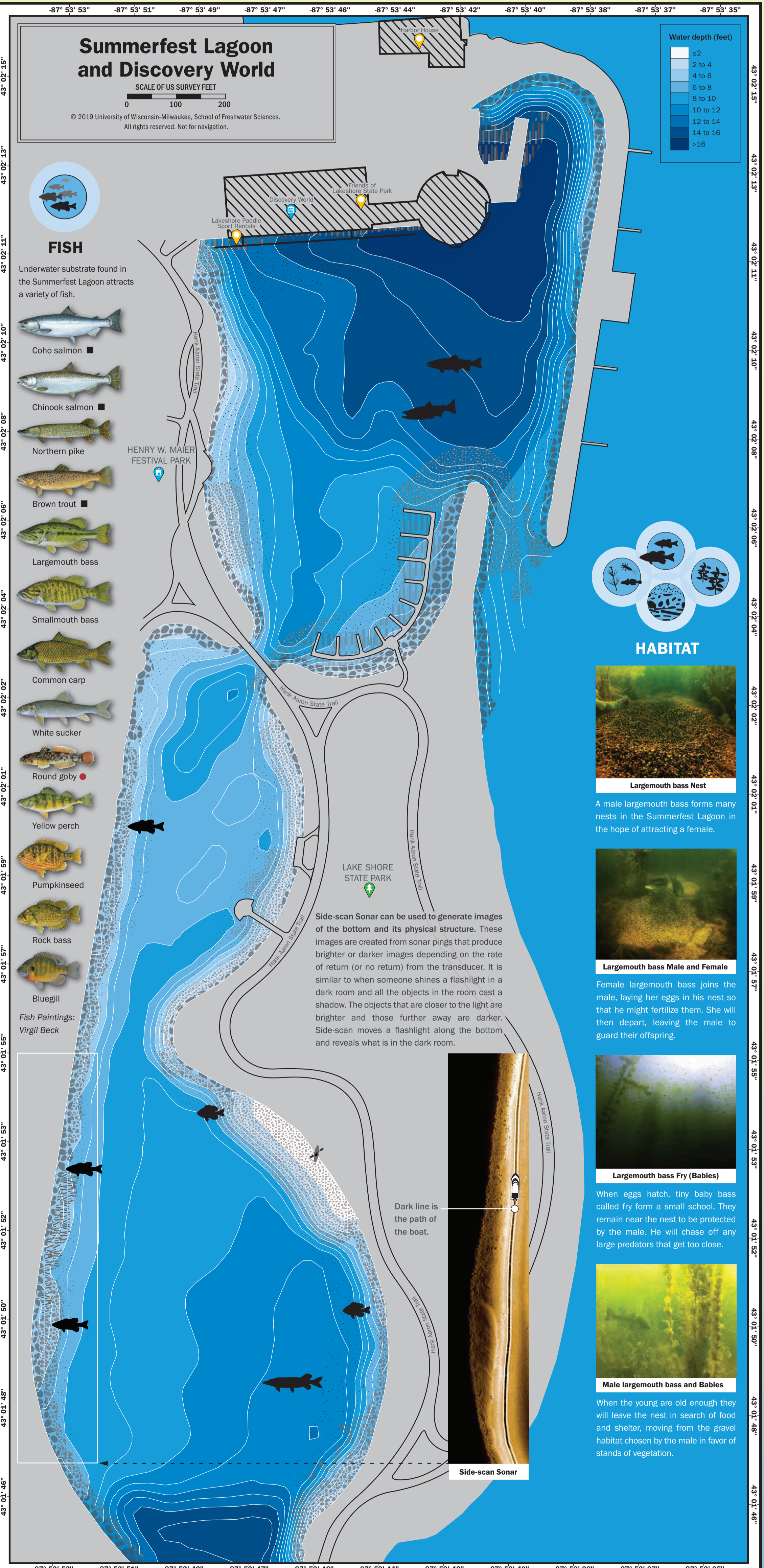
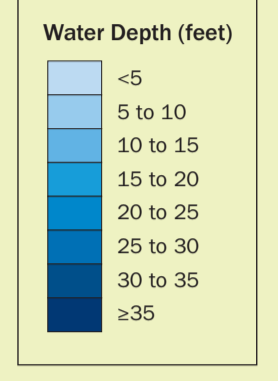
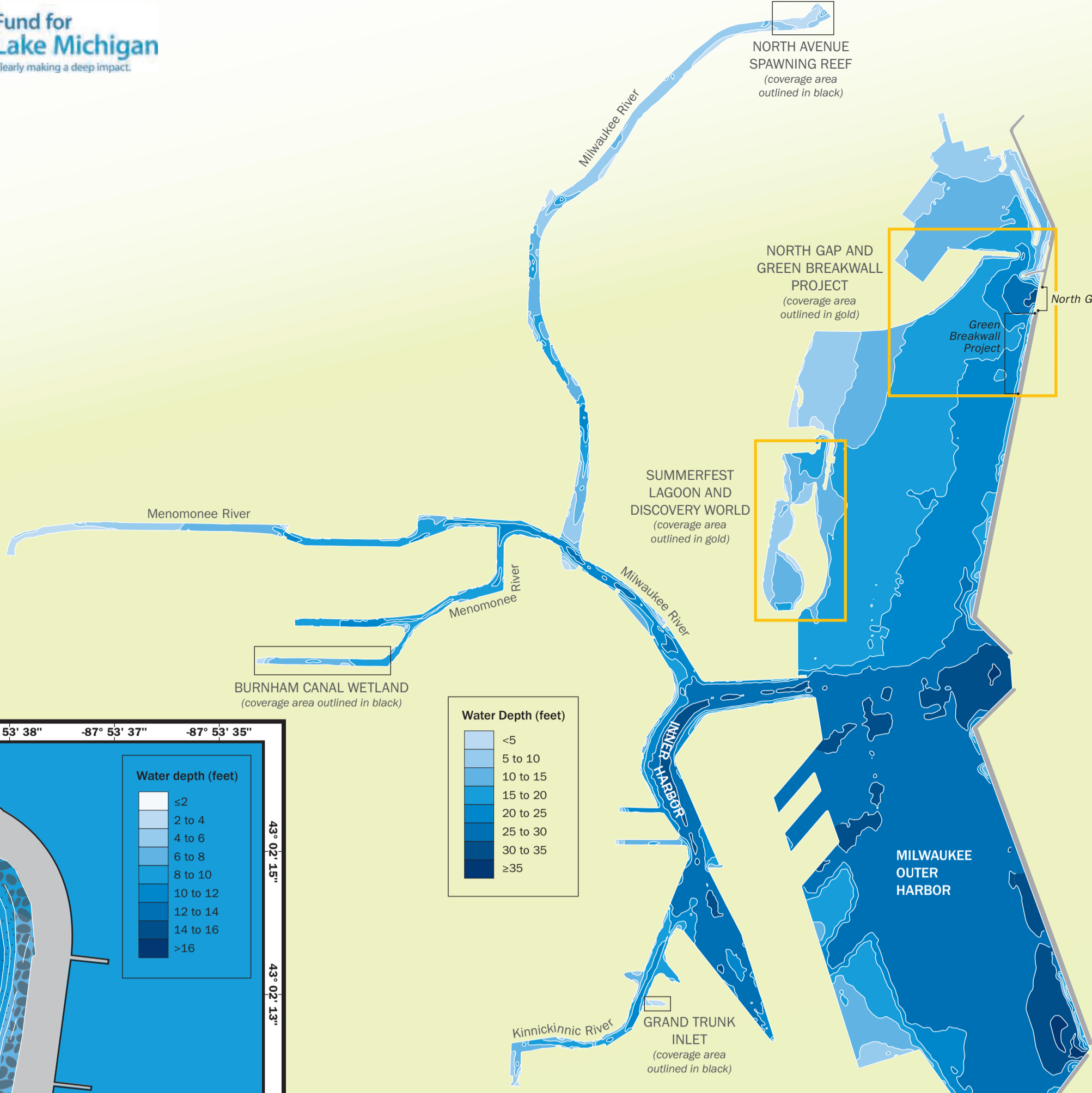
- Boat Landing (Hand-carry)
- Festival Grounds
- Museum
- Marker
- Park
- Marina
- Clay, Mud, Sand
- Rocks
- Mixed Rocky
- Boulders
- Small, Large Wood
- Wood, Steel Piling
- Nuisance Species
- Non-native Species
- Panfish
- Salmon
- Trout
- Sturgeon
- Northern pike
- Bass
- Fish
- Vegetation
- Substrate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

Seasonality of Resident Fishes Found at Summerfest Lagoon

● Abundant ● Common ○ Uncommon ☐ Spawning

TIME OF YEAR
Dependent on many environmental variables, most important being water temperature.

RESIDENT FISH	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV
Rock bass	○	○	○	○	○	○	○	○	○	○	○	○
Largemouth bass	○	○	○	○	○	○	○	○	○	○	○	○
Smallmouth bass	○	○	○	○	○	○	○	○	○	○	○	○
Bluegill	○	○	○	○	○	○	○	○	○	○	○	○
Alewife	○	○	○	○	○	○	○	○	○	○	○	○
Lake trout	○	○	○	○	○	○	○	○	○	○	○	○
Brown trout	○	○	○	○	○	○	○	○	○	○	○	○



HABITAT HOTSPOTS
North Gap and Green Breakwall Project

The outer Harbor edge is defined by a series of breakwalls. These protect the Harbor and the Milwaukee shoreline from the often-powerful waves of Lake Michigan. Openings, or gaps, in these breakwalls allow for the passage of ships in and out of the Harbor. They are also the means by which open-water and coastal transient fish species can gain access.

Most of the breakwall is literally that—a wall. It doesn't provide much in the way of habitat. The U.S. Army Corps of Engineers will reinforce the wall with large boulders called armor stone. But at the North Gap something more innovative was put in place: A Green Breakwall.

The Green Breakwall was a collaborative project between UWM School of Freshwater Sciences and U.S. Army Corps of Engineers. Smaller stones were placed in and among the armor stone, creating a 500-foot section of novel fish habitat. It was an experiment that proved successful. Young bass, rock bass, yellow perch, coho and chinook salmon, alewives, brown trout and many other species can be found at the Green Breakwall. At varying life stages, most of these species are sustained by an invasive, swarming crustacean, called the bloody red shrimp, which is proving to be an important forage species.

Connectivity and Foraging
The Green Breakwall is designed to increase spaces for forage species. Round gobies and invasive bloody red shrimp can be found close to the rocky substrate where the cracks and voids provide ample forage. Alewife and smelt, typically open water species, come into the harbor during cold water upwelling events to take advantage of the ample forage as well. Cold tolerant species, such as smallmouth bass and rock bass, feed on all of the above and utilize the Green Breakwall for feeding year-round.

