USGS
science for a changing world

Great Lakes Science Center

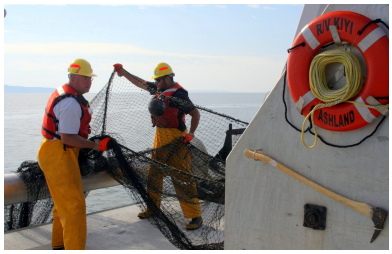
The R/V *Kiyi* - Lake Superior

The USGS Great Lakes Science Center is dedicated to providing scientific information for restoring, enhancing, managing, and protecting living resources and their habitats in the Great Lakes region. The USGS Great Lakes Science Center is headquartered in Ann Arbor, Michigan, and has biological stations and research vessels located across the Great Lakes Basin.

K I Y I

Specifications

Length: 107 ft.
Beam: 28 ft.
Draft: 10 ft.
Cruising speed: 11 kts.



The Fleet

The Great Lakes Science Center (GLSC) operates five large research vessels, ranging in length from 70 to 107 ft, with one vessel stationed on each of the Great Lakes. The vessels are equipped with wet laboratories, gear for fish, limnological, and contaminant sampling, hydroacoustical fish-detection systems, and GPS navigation systems. The GLSC also operates a fleet of small (18-25 ft) research vessels, outfitted with GPS navigation systems and equipment for fishery and limnological research, and has a side-scan sonar and remotely operated vehicle.

The Vessel

The R/V *Kiyi*, stationed in Ashland, WI, near the GLSC's Lake Superior Biological Station (LSBS), is the principal GLSC research vessel on Lake Superior. The *Kiyi* was built in 1999 and commissioned in 2000. The vessel provides a large modern research platform for conducting research in nearshore and offshore waters of Lake Superior and the other Great Lakes as needed. Work on Lake Superior is coordinated with Wisconsin, Michigan, and Minnesota Departments of Natural Resources, federal agencies including the U.S. Environmental Protection Agency, U.S. Fish and Wildlife Service, and National Park Service, tribal partners, and the Canadian government. The *Kiyi* routinely deploys gillnets, mid-water and bottom trawls, hydroacoustics equipment, limnological instruments, and plankton and bottom sampling equipment throughout Lake Superior.

The *Kiyi* can accommodate nine crewmembers, including a captain, mate, engineer, and six scientific personnel, for two weeks. The *Kiyi* has three heads with showers, a laundry room and full galley.

The Science

LSBS provides scientific information to support the restoration, enhancement, management, and protection of fishery resources in Lake Superior. The *Kiyi* is the cornerstone of this mission. The vessel is used to conduct annual fish stock assessments and specific research projects, which provide

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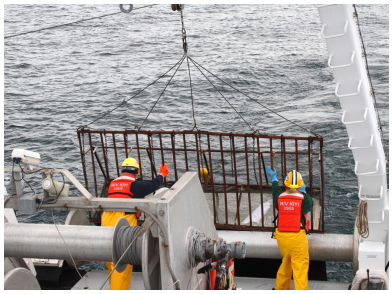
GLSC Vessels 2012-5



timely information to state, provincial, and tribal management partners. Research focuses on long-term ecosystem dynamics and sustainability of Great Lakes fisheries.

Current research projects evaluate the biology, population dynamics, and yield prediction of Lake Superior fishes with emphasis on lake trout, cisco, and forage fishes. Information gathered from research on-board the *Kiyi* is critical for understanding changes in fish population abundances, species extinctions, potential effects of invasive species, and climate change.

On-board Equipment

The *Kiyi* is equipped to support a wide range of scientific sampling activities in the Great Lakes. The vessel has a GPS navigational system, twin propellers, a bow thruster, and hydraulic anchor winch, which provide a variety of options for complex maneuvering and stationary sampling. The vessel has a gillnet lifter, stern A frame, trawl net reels, and a 9,000 pound deck crane.

The *Kiyi* has wet and dry lab facilities for on-board sample processing and data analysis, including a 700 gallon live well, balances, ice machine, freezer, and computer stations. Electronic sampling equipment includes trawl mensuration gear, hydroacoustics, and electronic overboard samplers for collecting water depth, temperature, and chemistry data. The *Kiyi* also operates a remote submersible vehicle. Safety equipment includes a 14 ft inflatable Zodiac boat, two ten-person life rafts, and a fixed CO_2 engine room fire suppression system.

The R/V Kiyi *on Lake Superior.*

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