



## GREAT RIVERS FIELD STATION

*Providing the ecological information needed to understand and manage great rivers*

Great rivers like the Tigris and Euphrates, the Nile, and the Indus were the cradles of the earliest human civilizations. Today, **people around the world are still reliant on great rivers for numerous natural resources and ecosystem services**, including drinking water, food, transportation, energy, and recreation. Despite their importance, the scientific study of great rivers lags far behind other aquatic ecosystems (e.g., oceans, lakes, small streams).

The Illinois Natural History Survey (INHS), part of the University of Illinois' Prairie Research Institute, has **committed to increasing the scientific understanding of great rivers necessary for sound management of these critical ecosystems** through the Great Rivers Field Station (GRFS) and its sister INHS field stations, the Illinois River Biological Station (IRBS) and the Forbes Biological Station.

### SCIENCE IN SUPPORT OF SOCIETY

GRFS scientists conduct critical long-term monitoring and research that inform the management of great rivers.



#### Supporting Fisheries

GRFS scientists conduct monitoring and research for the **Long-term Survey and Assessment of Large-River Fishes in Illinois project**. This project began on the Illinois River in 1957, and has recently expanded to include the Mississippi, Ohio, and Wabash Rivers.

#### Restoring Rivers

The GRFS is a partner in the Long Term Resource Monitoring Element of the Upper Mississippi River Restoration Program. Composed of five federal and five state agencies, this partnership focuses on the Upper Mississippi River System (UMRS) and is a **world leader in long-term restoration, monitoring, and research**.

#### Advising on Invasive Species

GRFS and IRBS researchers are on the forefront of scientific research on invasive species, especially the **invasion of the UMRS by zebra mussels and Asian carp**. Our access to long-term monitoring data documenting the establishment, geographic spread, and population increase of these invasive species has allowed us to undertake many additional research projects supported by agencies such as NOAA Sea Grant, IDNR, USFWS, USGS, and the USACE. Recent projects include assessments of the potential prey base for Asian carp in Lake Michigan.

## ECONOMIC IMPACT

The state of Illinois' investment in the GRFS pays **substantial dividends beyond our research and educational achievements** by:

### Creating Jobs

The state of Illinois provides support for 1 full-time position at the GRFS. This investment yields research funds, which support an **additional 5.5 full-time positions**, several seasonal positions, and graduate students.

### Bringing in Research Funds

GRFS brings in **\$785,000 in outside grant funding** each year. The majority of these funds are spent within Illinois and the local communities near the GRFS.

## COMMUNICATION

Obtaining scientific knowledge is only useful if the information is successfully disseminated to other scientists, resource managers, decision makers, and the general public. At GRFS, we share our findings by:

### Publishing Critical Research

#### Peer-Reviewed Journals:

- **Science**
- **Freshwater Biology**
- **River Research and Applications**
- **Biological Invasions**
- **Canadian Journal of Fisheries and Aquatic Sciences**

### Engaging Decision Makers

Through our long-term monitoring and research programs, we are in constant communication with management agencies, including the **USACE, USGS, USFWS, USEPA, and IDNR**. Our UMRR monitoring and research efforts are reported directly to the **U.S. Congress**.

## FUTURE LEADERS



### Participating in Outreach

GRFS staff are committed to public outreach. We take part in educational programs spanning K-12, and outreach programs with private institutions and NGOs.

### Mentoring Students

GRFS staff give lectures at universities and colleges throughout the U.S., and provide training and mentorship for University of Illinois graduate students.

GRFS scientists have recently expanded their long-term research activities to include **investigations of human-river interactions across deep time** with a new interdisciplinary NSF Research Experience for Undergraduates project. Working with archeologists at the Center for American Archeology and Southern Illinois University Edwardsville, this project focuses on **teaching STEM (Science, Technology, Engineering, Math) skills to undergraduate students from non-research universities** by immersing them in zooarcheological and ecological research projects. The students form interdisciplinary teams to formulate and test hypotheses using zooarcheological fish data and modern data from the long-term river monitoring programs.

## WHO WE ARE

The **Great Rivers Field Station** and its sister field stations—the Illinois River Biological Station, the Lake Michigan Biological Station, the Sam Parr-Kaskaskia Biological Station, and the Forbes Biological Station—are all part of the Illinois Natural History Survey, a division of the Prairie Research Institute at the University of Illinois at Urbana-Champaign ([www.inhs.illinois.edu/fieldstations](http://www.inhs.illinois.edu/fieldstations)).

### Contact Us

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