

## **A. Center/Institute/Program**

### **Flathead Lake Biological Station/The University of Montana**

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Director/Chairperson: Dr. Jack A. Stanford

Representative to AERC: Dr. Jack A. Stanford

Alternate: Dr. Richard Hauer

## **B. Major objectives of the Center/Institute/Program**

1. To conduct and publish basic research in ecology with an emphasis on limnology of the Flathead River Lake ecosystem in northwestern Montana.
2. To provide quality college courses in field-oriented ecological disciplines.
3. To train graduate students in ecology.
4. To provide information to the public on ecological issues.

## **C. Major ecosystem research emphases**

1. Remote sensing and modeling of climate-mediated landscape change
2. Water quality and supply in changing landscapes
3. Limnology of Flathead and other large river-lake ecosystems
4. Systems ecology and modeling of large river ecosystems
5. Evolutionary biology of animal and plant populations
6. Influences of invasive species on food webs
7. Processes sustaining salmon and associated species in rivers of the North Pacific Rim
8. Restoration of river ecosystems
9. Valuation of ecosystem goods and services

#### **D. Staff**

Permanent scientific staff: PhD: 8, MS: 5  
Scientific support staff: 2-20  
Senior staff: 5  
Other support staff: 5  
Graduate students: PhD: 2-15, MS: 2-10  
Summer undergraduates: 40-50

#### **E. Approximate annual funding (recent year)**

Core funding: \$400,000/yr, Source: University  
Grants: \$5,000,000/yr, Major sources: NSF, NASA, Private Foundations

#### **F. Areas and facilities for ecosystem research studies**

Located 90 miles from the main campus in Missoula and on the east shore of beautiful Flathead Lake, the Biological Station is well equipped to conduct cutting-edge ecosystem research. Collaboration with scientists from other institutions is encouraged and the facilities are ideal for sabbaticals. Our long-term data bases, fully instrumented labs, close proximity to a wide variety of field sites, computer internet connections, and full-time research faculty and staff allow the Biological Station to be used very effectively as an ecological analysis center. Flathead Lake Biological Station celebrated its centennial year in 1999.

#### **G. Research staff directly involved in ecosystem research (names and specialty areas)**

Allendorf, Fred – conservation biology  
Bansak, Tom – river ecology  
Callaway, Ray – plant ecology  
Crabtree, Bob – forest ecology  
Craft, Jim – limnology  
Chilcote, Samantha – river ecology  
Duffield, John – ecological economics  
Ellis, Bonnie – limnology  
Gannon, Jim – microbial ecology  
Goodman, Daniel – statistics, ecosystem modeling  
Hauer, F. Richard - river ecology, biodiversity  
Holben, Bill – microbial ecology  
Kimball, John – landscape ecology, modeling  
Kennedy, Brian – salmonid ecology  
Luikart, Gordon – population genetics  
Lorang, Mark – physical limnology  
Muhlfeld, Clint – fish ecology  
McDonald, Kyle – spatial ecology, modeling  
McPhee, Megan – genetics, conservation ecology  
Nigon, Jeremy – cyber infrastructure management  
Poole, Geoff – river ecology and modeling  
Schenck, Don – data management  
Sexton, Erin – social systems  
Stanford, Jack – systems ecology

Tappenbeck, Tyler – fish ecology  
Wallenburn, Joann – data management  
Watson, Paul - animal behavior  
Whited, Diane – spatial ecology, remote sensing  
Wright, Meredith - biogeochemistry  
Wu, Haun – river ecosystem modeling  
Zimmerman, Chris – fish ecology

#### **H. Long-term data sets (code name, number of years of data, computer accessibility)**

1. 110 years of limnological data for Flathead Lake are compiled in a spatially explicit data base called FLATDAT – access via FLBS website.
2. A new sensor network will be installed in Flathead Lake and adjacent river sites in 2010 to stream real time limnological data, collaborative with Hancock Biological Station, Kentucky – access via FLBS website.
3. 5+ years of salmon ecological data from the Salmonid Rivers Observatory Network- access via FLBS website
4. Riverscape Analysis Project – biophysical data for 1500 rivers of the North Pacific Rim – access via FLBS website