

At-a-Glance—Summary of the 2023 U.S. Geological Survey Cooperative Research Units Program Year-in-Review

In anticipation of the upcoming release of the 2023 U.S. Geological Survey Cooperative Research Units Program Year-in-Review Circular, this fact sheet highlights and summarizes some of the activities of the program.



Overview

Established in 1935, the U.S. Geological Survey (USGS) Cooperative Fish and Wildlife Research Units (CRU) program is a unique partnership among the USGS, State Fish and Wildlife agencies, host universities, the Wildlife Management Institute (WMI), and the U.S. Fish and Wildlife Service (FWS). As of 2023, there are 43 CRUs in 41 states that fall under three supervisory regions and a National Program Office located at USGS in Reston, Virginia (fig. 1).

Regional Supervisors

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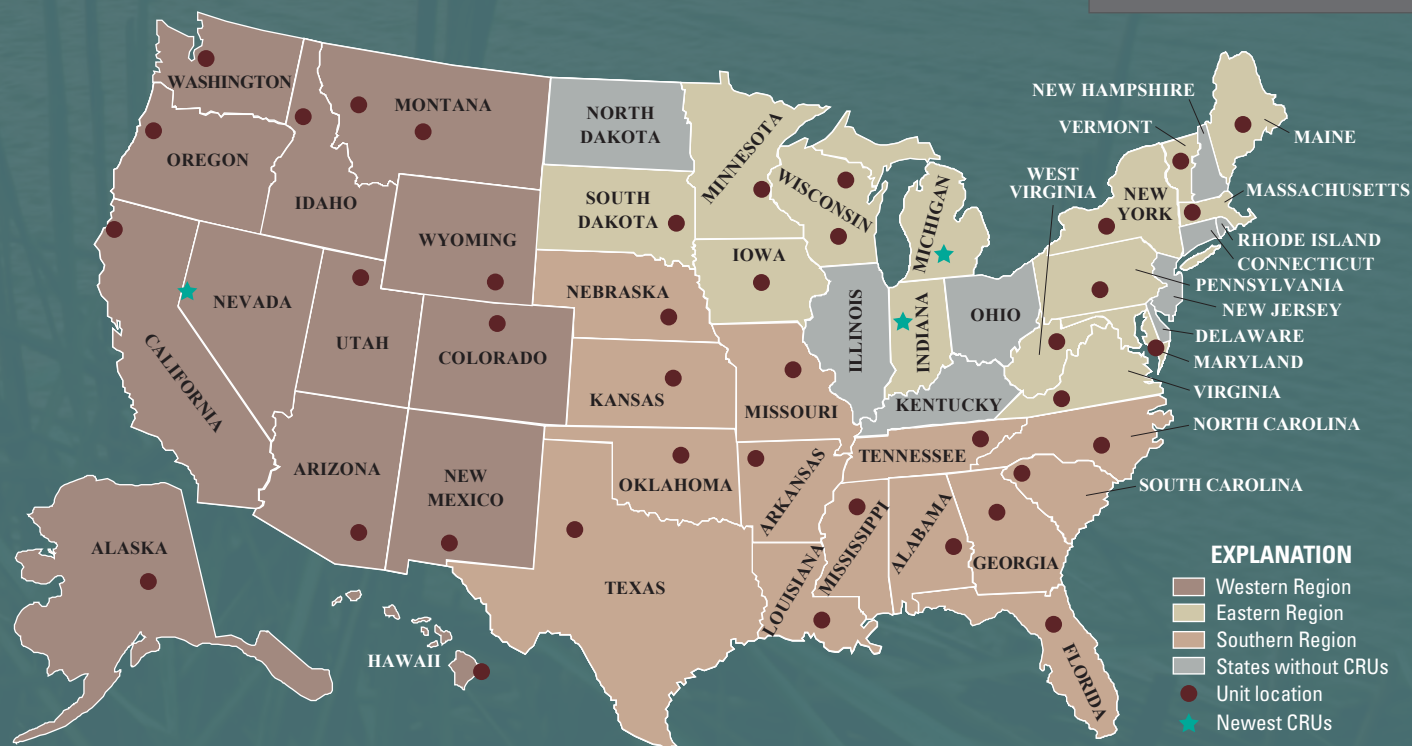
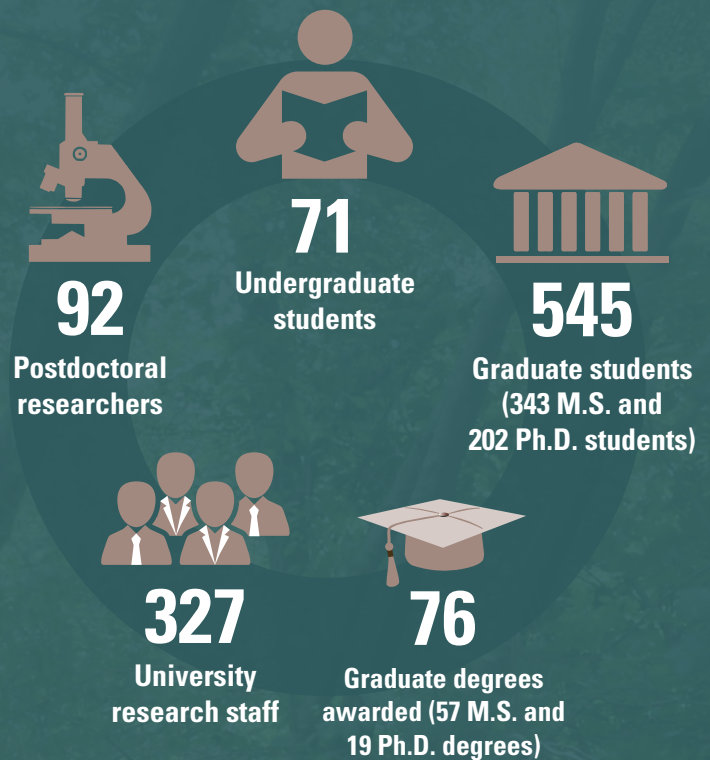


Figure 1. Map of all 50 States showing Cooperative Fish and Wildlife Research Units (CRU) locations in 41 States, at 44 host universities. Newest CRUs are indicated by a star: Nevada (Western Region) CRU, established in 2021; Michigan (Eastern Region) CRU, established in 2022; and Indiana (Eastern Region) CRU, established in 2023.

The mission of the CRU program is to

- Conduct research to deliver actionable science to cooperating agencies and organizations
- Develop the natural resource conservation workforce of the future through graduate education
- Fulfill the training and technical assistance needs of cooperators

Active Participants and Graduate Degrees Awarded in 2023



By the Numbers

Federal funds allocated to the CRU program primarily go to staffing of CRU unit scientists and include some operational support. These federal funds generate a threefold return on investment. With a \$28.2 million (M) budget in fiscal year (FY) 2023 (fig. 2), the CRU program leveraged approximately \$48 M in research funds from cooperators and partners to host universities. Universities provided an additional \$22 M through facilities, in-kind support, tuition, and reduced overhead.

On average, these leveraged funding streams generate support for ten or more non-Federal positions at each host university, including graduate students, postdoctoral researchers, research technicians, and administrative personnel, creating about 1,000 additional university positions per year. In FY 2023, 19 Doctor of Philosophy (Ph.D.) and 57 Master of Science (M.S.) degrees were awarded at host universities to students in the CRU program.

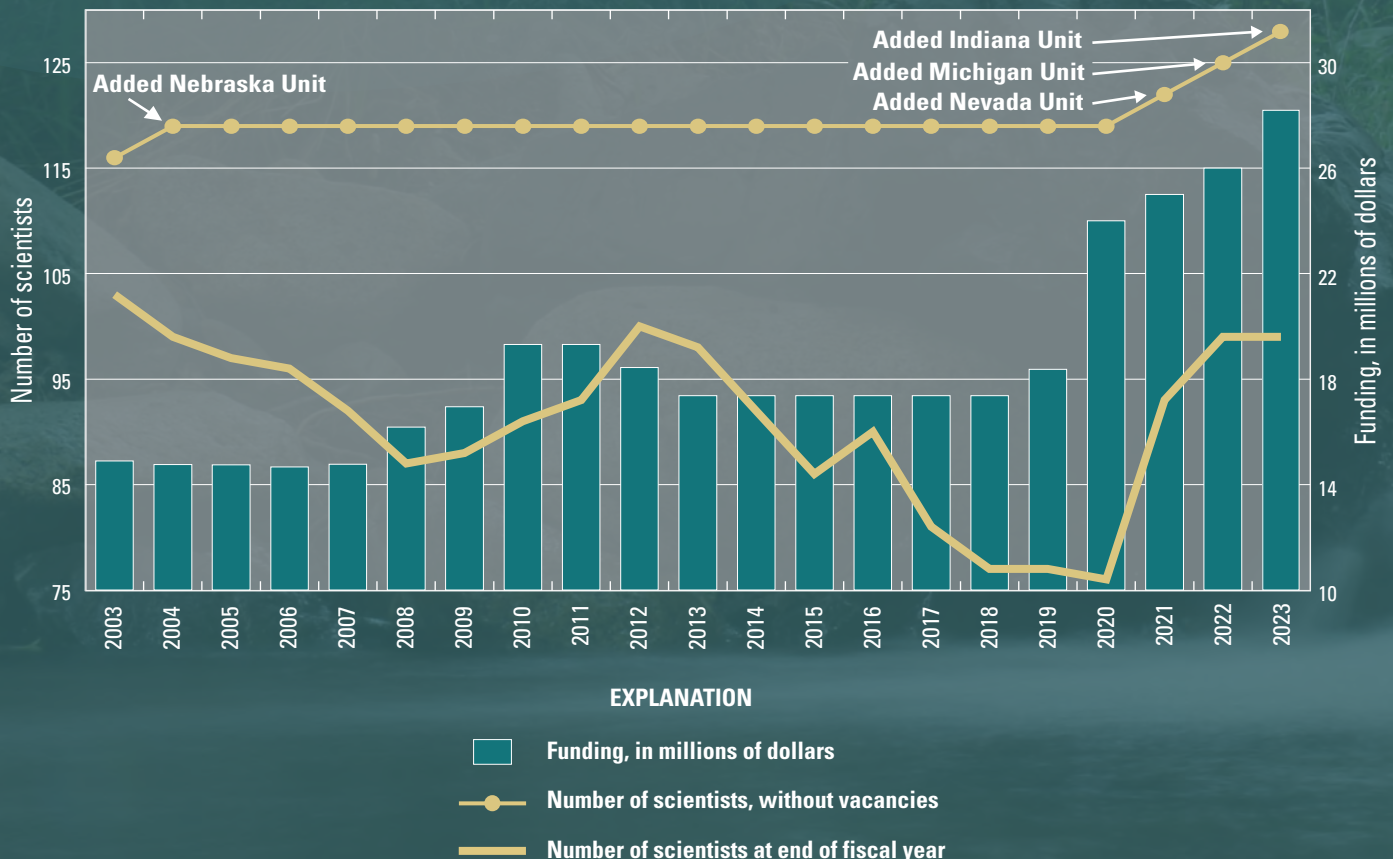


Figure 2. Graph showing funding and staffing data for the CRU program during fiscal years 2003–2023. Note that the scale of the left y-axis ranges from 75 to 125 scientists and the scale of the right y-axis ranges from 10 to 30 million dollars (\$M, dollars [in actual dollars]).

Productivity

Scientists, research staff, and students in the CRU program are highly productive, publishing 360 scientific papers in FY 2023. Papers were published in 160 peer-reviewed journals, ranging from international journals such as “Nature” to regional journals such as “Southwestern Naturalist.” Unit scientists taught 88 university courses in FY 2023. In addition, CRU scientists, staff, and students provided significant outreach to stakeholders through workshops and short courses, invited seminars, and presentations.

New in Fiscal Year 2023

Welcome to the Indiana Cooperative Fish and Wildlife Research Unit! The new Indiana Unit is hosted by Purdue University in West Lafayette, Indiana. Founding cooperators include the Indiana Department of Natural Resources, Purdue University, FWS, USGS, and WMI. Hiring for the Unit’s new scientists is ongoing.

Cross-Cutting Science

CRU scientists provide insight and guidance to managers facing conservation challenges and often directly inform decision-making at State, regional, and national levels. CRU scientists carried out about 800 research projects and provided expertise to decisionmakers through hundreds of technical assistance activities in FY 2023 alone. Science priority themes as determined by cooperators from a subset of the research projects range from population modeling to fish and wildlife disease to Tribal consultation and engagement (fig. 3).

Products Delivered in 2023

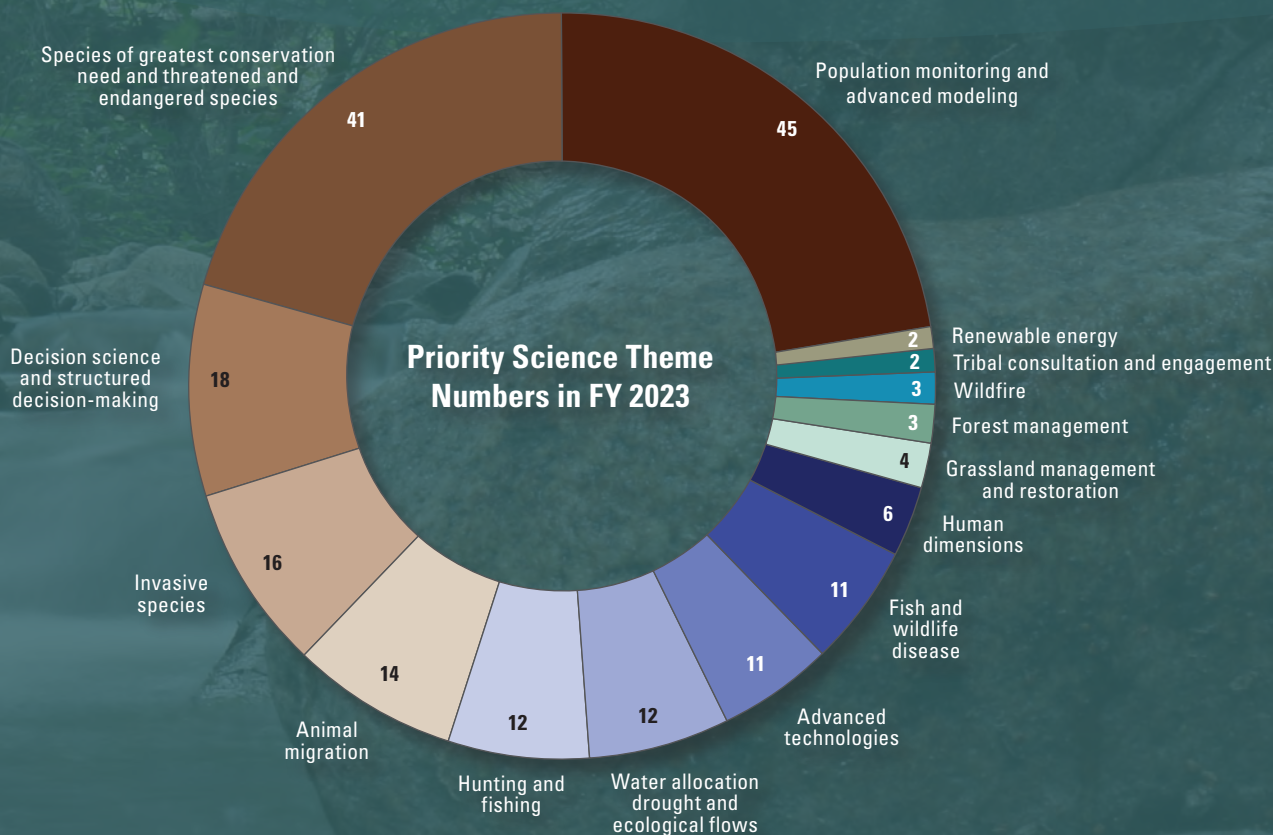


Figure 3. A modified pie chart showing the top 15 categories of science priority themes as determined by cooperators from a subset of 101 of the highest priority CRU projects. Themes for the 101 high-priority projects, a subset of more than 800 total projects in FY 2023, could be reported in multiple categories.

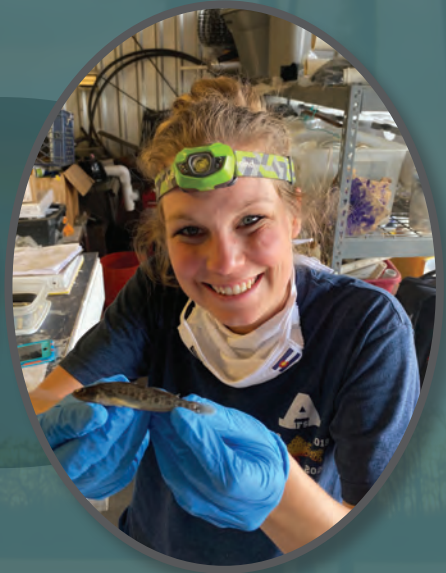
Diversity, Equity, Inclusion, and Accessibility

The CRU program is actively involved in activities related to diversity, equity, inclusion, and accessibility. Efforts to improve hiring practices are underway, and the CRU program has made a strong commitment to recruit and train graduate students from diverse backgrounds. The Doris Duke Conservation Scholars Program Collaborative is a two-year field program designed to provide undergraduate students from underrepresented groups with an experiential introduction to a career in natural resources. The Arizona, Florida, Idaho, Massachusetts, and North Carolina CRUs are members of this collaborative effort. The students attend leadership training, work with scientists and graduate students on research projects, and are mentored by CRU program graduate students and scientists. The Doris Duke Conservation Scholars participate in paid summer internships with local, State, Federal, and Tribal agencies, as well as nongovernmental organizations.



Andrew Gordon, University of Massachusetts, holds an Eastern box turtle (*Terrapene carolina carolina*) Photograph by Andrew Gordon.

Doris Duke Conservation
Scholars Program
Collaborative



Carli Baum, Colorado State University, holds a Johnny darter (*Etheostoma nigrum*) Photograph by Dana Winkelman, USGS.

Communications Products

CRU scientists work to relay scientific findings to a broad cross section of decision-makers and the public. Check out two of our recent communications products!



Pollinator Conservation
and Climate Science
at the U.S. Geological
Survey (Irwin and
Mawdsley, 2023)



Ungulate Migration
of the Western
United States,
Volume 3 (Kauffman
and others, 2022)

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Cover photographs courtesy of U.S. Fish and Wildlife Service: Ryan Hagerty, Candy darter (*Etheostoma osburni*), Rocky Mountain bighorn sheep (*Ovis canadensis canadensis*) Tom Koerner, Trumpeter swans (*Cygnus buccinator*) and Northern river otter (*Lontra canadensis*) Alberto Puente, Rock frog (*Eleutherodactylus cooki*)

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