

# Funding Crisis for USGS Cooperative Research Units Affects State, Federal, and University Fish and Wildlife Conservation Partners

The USGS Cooperative Fish and Wildlife Research Unit (CRU) Program is now at a critical point due to a significant funding shortfall:

- *Record vacancies of 36 CRU scientists (30%) due to reduced federal base funding*
- *97% of federal base funding supports salaries; uncontrollable costs rising*
- *State and university cooperators are fulfilling their obligations for support; the federal government is not*
- *Support for the CRUs is strong (see AFWA Resolution)*
- *Additional states want to establish CRUs in IN, KY, MI, and NV*

In order to achieve the needs of the existing CRUs, support existing conservation partnerships, and meet the research needs to address state and federal management responsibilities, the current CRU base funding of **\$17.3 million** needs to be increased by **\$6.6 million** to fill the current 36 CRU vacancies, address uncontrolled costs that continue to erode the CRU's cooperative capacity, and to fund longstanding, new CRU requests in IN, KY, MI and NV.



*A CRU scientist holds an eagle for banding.*

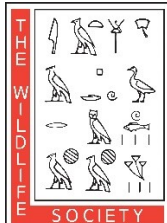
## **The Importance of the CRU Program**

- The legacy of the CRU program derives directly from the “Roosevelt Doctrine of Conservation” whereby President Theodore Roosevelt recognized science as an essential tool for state and federal governments in meeting their wildlife public trust mandates. Legendary conservation leader J.R. “Ding” Darling, a disciple of Roosevelt in the Boone and Crockett Club, created the CRU program in 1935 to ensure conservation problems could be practically and scientifically solved, and the workforce had trained practitioners on hand to solve them.
- Collaborative work conducted by CRUs provides critical science support to state and federal management agencies to help sustain the fish, wildlife and outdoor recreation needs of the public which account for \$887 billion dollars in expenditures and 7.6 million jobs in 2016.
- Collaborative work through the CRUs identifies conservation measures needed to preclude the need to list endangered or threatened species under the Endangered Species Act, recover listed species, prevent or control invasive species and wildlife disease outbreaks, and inform management decisions and proactive conservation actions for state species of greatest conservation need.
- The CRUs have a long history of natural resource applied management science and education, working in partnership with state fish and wildlife and federal natural resource agencies and universities, mandated by federal legislation through the Cooperative Units Act of 1960 (P.L. 86-686).

- Each Unit is owned collectively by its cooperators, the state fish and wildlife agency, the US Fish and Wildlife Service and other federal natural resource agencies, and the university. Resource agencies partner with the CRUs for four primary reasons: (1) achieve science-based fish and wildlife research and answer management questions; (2) provide highly cost-effective and highly productive applied science and research; (3) support and maintain highly reputable scientists; and (4) professionally train the next generation of fish and wildlife biologists who support and understand state and federal agencies' natural resource management needs, goals and objectives.

### **How CRUs Work for State and Federal Fish and Wildlife Managers**

- Each Unit is embedded in a university, has its research program significantly influenced by the management agencies, and effectively bridges the gap between science and management.
- Because the CRU program is contained within USGS, a science agency, as opposed to a management/regulatory agency, it serves as an honest broker whose findings and recommendations are trusted as being independent and apolitical.
- Unit scientists provide technical assistance to state and federal partners who focus on practical natural resource issues and challenges to help inform management decisions.
- CRUs are the research arm of state fish and wildlife and federal natural resource agencies, providing them with the science to support sustainable hunting, fishing and trapping seasons that drive the American system of conservation funding.
- CRUs provide valuable support to our nation's hunters and anglers, providing science-based information directly to the managers of those species of fish and wildlife that are hunted, fished, or trapped, since the very beginning of the CRU program in 1935. CRUs provide critical information to state and federal fish and wildlife management agencies and help ensure abundant, healthy populations of our fish and game species.
- In 2016-2017, CRU scientists conducted 149 research projects targeting our nation's most important and iconic species such as elk, white-tailed deer, mule deer, pronghorn, moose, black bear, mountain lion, turkey, Canada goose, ring-necked pheasant, northern bobwhite, rainbow trout, Chinook salmon, and largemouth bass.
- CRUs provide critical scientific and technical support to meet the needs of the full range of federal land management agencies. Partners in CRU projects in 2016-2017 include the Bureau of Land Management, Bureau of Reclamation, Department of Defense, NASA, National Park Service, U.S. Army Corps of Engineers, U.S. Fish and Wildlife Service, and the U.S. Forest Service.
- CRUs uniquely address the applied science needs of management agencies while training students to be the next generation of natural resource agency professionals. These students graduate with real world management experience by virtue of working directly with state and federal managers as part of their education. The majority of CRU graduates go to work directly for state and federal natural resource management agencies.



### **FOR MORE INFORMATION, PLEASE CONTACT:**

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# USGS Cooperative Fish and Wildlife Research Units

## Solve Real World Problems

The USGS Cooperative Fish and Wildlife Research Unit (CRU) mission is focused on working with public agencies to help them solve their conservation problems. The following are examples of projects that highlight how CRU scientists are helping Federal and State partners make science-based management decisions.

### Energy

CRU scientists are working across the country in collaboration with industry and Federal and State natural resource agencies to identify areas where energy and mineral exploration will have minimal impact on fish and wildlife, and to provide specific management and mitigation recommendations to minimize impacts. CRU work on the Colorado Plateau has identified areas of low impact that save industry and regulatory agencies time and money in the permitting process. CRU work in Alaska is helping to guide offshore oil and gas development and onshore mining by developing a more robust information base on the impacts to shorebirds and salmon. CRU work in Kansas, New Mexico, and Texas is providing guidance on minimizing and mitigating impacts of oil, gas, and wind energy development on lesser prairie-chickens and golden eagles. CRU scientists are developing a decision tool to be used by the USFWS to evaluate permit requests and help design and implement novel strategies to avoid eagle mortalities at wind energy projects in the Southern Great Plains.

### Endangered Species Pre-Listing Decision Support

CRU scientists have pioneered the incorporation of population viability models into species status assessment and listing decisions for the U.S. Fish and Wildlife Service. This approach was applied to the Sonoran desert tortoise, and the Service determined listing was not warranted based on the model's predictions. CRU recently completed this process for the lesser prairie-chicken, although the Service has not issued a decision yet. CRU is also completing work on Steller's and spectacled eiders that could lead to downlisting and de-listing decisions.

### Decision Science

CRU works with Federal and State natural resource management agencies to provide decision science support to management issues. CRU is working with the U.S. Fish and Wildlife Service to develop a stream salmonid simulator model for predicting the effects of water management alternatives on production of juvenile Chinook salmon in the Klamath River Basin. CRU researchers are developing a decision-support tool for the USFWS National Fish Hatchery System to identify and prioritize conservation propagation for threatened, endangered, imperiled, and declining species and work in conjunction with State partners to coordinate and balance recovery and restoration efforts related to recreational fishing opportunities. CRU scientists are developing a Structured Decision Making process for the National Park Service to help managers determine appropriate cruise ship priorities for Glacier Bay National Park that considers recreational opportunities and species management needs. CRU scientists have developed an Adaptive Management framework based on the R statistical package to help managers implement and improve hunting seasons.

### Wildlife Health and Disease

CRU scientists are employing landscape genetics to develop more effective and efficient sampling and surveillance strategies for Chronic Wasting Disease (CWD). CRU scientists are investigating the relative importance of alternative environmental sources of CWD that function as important reservoirs for infection in deer or other domestic animals that contact these reservoirs. CRU researchers are studying radio-tagged northern long-eared and endangered Indiana bats to provide information on population responses to White-Nose Syndrome.



*A CRU scientist holds a rare Brewer's sparrow.*

# USGS Cooperative Fish and Wildlife Research Units Solve Real World Problems

## Invasive Species

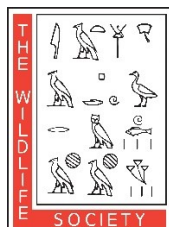
The economic, environmental, and health-related costs of invasive species exceed those of all other natural disasters combined. CRU scientists work across the Nation with federal and State management agencies to develop identification and response measures. CRU scientists are developing a decision analysis tool for control of New Zealand mudsnails that can be applied in Federal and State fish hatcheries. CRU scientists are working to suppress invasive lake trout in Yellowstone Lake and identify threats posed by invasive smallmouth bass in Yellowstone River. CRU scientists were part of the first responders when zebra mussels were discovered in two Montana reservoirs. CRU scientists are helping the National Park Service develop a control and eradication plan for invasive Asian swamp eels in the Chattahoochee River National Recreation Area. CRU scientists are assisting the Department of Defense in developing management methods to control wild burro populations at Fort Irwin.



*A CRU scientist studies rare Indiana bats*

## Impact of Elimination of the CRU Program

Eliminates the Cooperative Research Unit Program, a congressionally mandated program, authorized by the Cooperative Research Units Act of 1960, which has served the Nation since 1935. Elimination of the program would terminate 791 ongoing research projects funded with approximately \$40.5 million in reimbursable funds; terminate 139 federal employees, 545 graduate students, and 384 university positions; and close 40 Units in 38 states. This will terminate 40 cooperative agreements with 38 state governments, 40 universities, the U.S. Fish and Wildlife Service, and the Wildlife Management Institute. This will greatly reduce the science and decision support to Federal and State natural resource management agencies in addressing fish and wildlife problems important to industry and society, and result in a void of practically-minded, oriented, and prepared trained scientists to enter the state, federal, and private conservation workforce.



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