

Project Summaries

Competitive State Wildlife Grant (SWG) Program, Fiscal Year 2016

Region 1

Commonwealth of the Northern Mariana Islands Department of Lands and Natural Resources

Title: Preventing Island Extirpations of Partulid Tree Snails Through Direct Management

State(s): Commonwealth of the Northern Mariana Islands (CNMI)

Goals and Objectives: The Service listed three recognized partulid tree snail species in CNMI as endangered in 2015 under the Endangered Species Act (ESA). Climate change projections suggest snail populations on Commonwealth islands may be negatively impacted by changes in precipitation patterns or likely increases in tropical storm frequency or intensity. To maintain and potentially increase the current distribution of the snails, the agency will develop a habitat model to improve management effectiveness, while locating new and managing existing tree snail colonies. This work will lay the foundation for a regional, collaborative conservation strategy for partulid tree snails in CNMI.

Federal Funds Requested: \$238,413; **Non-Federal Match:** \$1,800

Hawai'i Department of Land and Natural Resources

Title: Integration of *Ex Situ* Captive Rearing with *In Situ* Predator Exclusion to Secure and Recover Endangered Hawaii Tree Snail Populations

State(s): Hawai'i

Goals and Objectives: The Department of Land and Natural Resources will implement a multi-faceted effort to protect and augment populations of endemic tree snails currently listed as endangered by the Service. Results of climate change modeling conducted by state, university and Service partners has demonstrated that these and other island tree snails are highly vulnerable to climate and habitat changes related to climate change. The agency will pursue a captive rearing strategy that includes production of snails for reestablishment or augmentation of wild populations. Existing and augmented populations will be protected using predator-proof enclosures that have proven to be effective. Also proposed are predator detection surveys and population monitoring.

Federal Funds Requested: \$216,976; **Non-Federal Match:** \$76,018

Hawai'i Department of Land and Natural Resources

Title: Recovering Populations of Hawaiian Yellow-Faced Bees

State(s): Hawai'i

Goals and Objectives: The Hawai'i Department of Land and Natural Resources proposes to help recover seven imperiled native Hawaiian yellow-faced bee species that have been listed as candidates for ESA protection since 2011. The agency and partners will identify suitable habitat for augmentation and translocation activities. High-priority sites will receive artificial nest habitats. Occupied artificial nests will be relocated to suitable habitats where the species are not currently observed. Species of non-native bees and wasps that are known competitors will be collected and removed. Effectiveness of management actions will be assessed using a variety of species- and habitat-based indicators and shared with partners, including the Service.

Federal Funds requested: \$249,272; **Non-Federal Match:** \$88,492

Hawai'i Department of Land and Natural Resources

Title: Using High-Resolution Imagery to Conserve and Manage Habitat for Kauai's Endangered Birds

State(s): Hawai'i

Goals and Objectives: The Hawai'i Department of Land and Natural Resources proposes to process newly acquired high-resolution Light Detection and Ranging (LiDAR) imagery for high-elevation areas of the Island of Kauai, Hawaii. This data will aid in development of habitat and population distribution models to determine habitat suitability for these species. The agency will also conduct egg collection in high density populations to increase the size and genetic diversity of captive populations. The project targets three of Kauai's endemic birds—Akikiki, Akekee, and Puaiohi—that are currently listed as endangered by the Service. Additionally, project efforts may benefit the Iiwi, a petitioned species known to pollinate native flowering plants.

Federal Funds requested: \$127,042 (partial funding); **Non-Federal Match:** \$30,000

Region 2

Texas Department of Parks and Wildlife

Title: Southern Plains Pollinator Conservation Implementation Program

State(s): Texas, Oklahoma

Goals and Objectives: Texas Department of Parks and Wildlife, in partnership with Oklahoma Department of Wildlife Conservation, the Gulf Coast Landscape Conservation Cooperative,

Oklahoma tribes, and state universities, proposes to create and enhance habitat for a variety of ESA Candidate and petitioned pollinator species including monarch butterfly, regal fritillary, and rattlesnake master borer. Using ecological niche modeling, the partners will examine potential impacts of climate change on targeted species, which will inform management activities. Outcomes of prescribed fire and seeding activities will be measured, with an anticipated increase of up to 15% in targeted pollinator species occurrence within the project areas.

Federal Funds Requested: \$500,000; **Non-Federal Match:** \$403,607

Region 3

Iowa Department of Natural Resources

Title: Restoring Royalty to the Prairie: Habitat Improvement for the Regal Fritillary and Monarch Butterfly

State(s): Iowa, Nebraska

Goals and Objectives: As prairie habitat quantity, quality, and connectivity has decreased since the mid-1800s, declines have been documented in populations of regal fritillary and monarch butterflies, as well as other prairie-associated butterflies, moths, and other species. Iowa Department of Natural Resources, Nebraska Game and Parks Department and their partners will evaluate effectiveness of proposed conservation actions by measuring impacts on regal fritillary and monarch butterfly populations at restoration sites. Requested funds will help restore and reconstruct prairies near existing prairie remnants that have a high potential for hosting the two target butterflies and other species of conservation need. Both regal fritillary and monarch butterflies are petitioned for listing under the ESA.

Federal Funds requested: \$499,933; **Non-Federal Match:** \$234,474

Michigan Department of Natural Resources

Title: Pollinator Conservation Through Enhancement of Michigan's and Wisconsin's Grassland, Prairie and Savanna Habitats

State(s): Michigan, Wisconsin

Goals and Objectives: The partnering state agencies propose to restore and enhance grassland, prairie and savanna habitats in Michigan and Wisconsin to benefit two petitioned bumble bee species, the petitioned monarch butterfly, the Endangered Karner blue butterfly, and other species of concern. Management activities include prescribed fire, mechanical treatment, invasive plant control, and seeding to increase known host plants of the targeted species. At least 850 acres of priority public and private lands will be restored and enhanced. Relative outcomes of different management actions will be evaluated to determine the most effective methods for pollinator conservation in each State.

Federal Funds Requested: \$500,000; **Non-Federal Match:** \$175,676

Wisconsin Department of Natural Resources

Title: Upper Midwest Turtle Conservation

State(s): Wisconsin, Minnesota, Iowa

Goals and Objectives: Wisconsin Department of Natural Resources, in partnership with Minnesota and Iowa Departments of Natural Resources, proposes a climate-smart conservation effort targeting the petitioned wood turtle, the ornate box turtle, and associated habitats. The partners will identify flood-safe zones as part of an adaptive management strategy to address increased flood severity and frequency in targeted areas. Previous actions supported by the SWG Program have shown success, with significantly decreased mortality at protected nest sites and new nesting documented at 50 percent of restored sites. The partners will continue management of existing nest areas, identify and protect new nest areas, and monitor and share results of active management activities.

Federal Funds requested: \$462,407; **Non-Federal Match:** \$210,688

Region 4

Georgia Department of Natural Resources

Title: Increasing the Probability of Persistence of Robust Redhorse Through Improved Management and Monitoring

State(s): Georgia, North Carolina, South Carolina

Goals and Objectives: Georgia Department of Natural Resources proposes to partner with the South and North Carolina Departments of Natural Resources to implement elements of an existing range-wide, landscape-scale conservation strategy for the robust redhorse, a petitioned fish species. The project involves a mix of visual, genetic and acoustic monitoring, identification of new spawning sites, active stocking to augment existing populations, and improved data management to aid in adaptive management of the species. By identifying relationships between management actions and population outcomes, the team will demonstrate effectiveness of selected management activities. Documentation of the status of the robust redhorse will assist the Service in determining whether listing is warranted under the ESA.

Federal Funds requested: \$492,723; **Non-Federal Match:** \$359,739

Kentucky Department of Fish and Wildlife Resources

Title: Illinois and Kentucky Stewardship and Fire Strike Teams: Restoring Species of Greatest Conservation Need Across Focal Landscapes

State(s): Kentucky, Illinois

Goals and Objectives: Kentucky Department of Fish and Wildlife Resources proposes a two-state effort focusing on the rattlesnake-master borer, a rare moth that is a Service candidate species. The partners will manage and restore high-priority prairies, glades, and barrens/woodlands complexes identified in the Kentucky and Illinois Wildlife Action Plans. The revised Illinois Plan, currently under review, includes a climate change vulnerability assessment that has been used to help identify high priority conservation areas in that state. Kentucky's revised plan also includes updates to address threats related to climate change, including a recommendation to protect key climatic refugia. The agencies propose to increase relative abundance of the rattlesnake-master borer moth by 20% from baseline levels.

Federal Funds requested: \$310,317; **Non-Federal Match:** \$257,147

Southeast Association of Fish and Wildlife Agencies (SEAFWA)

Title: A Multi-State Effort to Conserve and Manage Eastern Hellbenders

State(s): Alabama, Georgia, Tennessee, Virginia, West Virginia

Goals and Objectives: SEAFWA proposes a climate-smart initiative to benefit the eastern hellbender, a rare giant salamander that was among numerous other species named in a 2013 settlement agreement stipulating a binding deadline for a Service protection decision under the ESA. Partnering states and universities will determine relative vulnerability of eastern hellbender populations to projected climate change. Most of the partnering state agencies will evaluate effectiveness of nest boxes for providing refuge, breeding and larval habitat. New methods for detecting occurrence of eastern hellbenders using environmental DNA analysis, developed in part with previous SWG funding in Tennessee, will be employed to document new and historical populations.

Federal Funds requested: \$500,000; **Non-Federal Match:** \$335,963

Region 5

Massachusetts Division of Fisheries and Wildlife

Title: Brook Floater Range-Wide Conservation and Restoration Initiative

State(s): Massachusetts, Maine, New Hampshire, New York, Virginia, North Carolina

Goals and Objectives: States in the Northeast pool a percentage of annually apportioned formula SWG funds to support conservation of species that range across State borders. A recent product of this inter-State cooperation is a range-wide status assessment for brook floater, a petitioned freshwater mussel that has declined significantly across its range. Building upon this previous work, the partnering States will further define the occurrence, distribution and other population parameters of the species and assess environmental influences on these factors. This information will be used to

develop occupancy models that will contribute to conservation decisions at larger scales. The partners will coordinate with the Department of the Interior's Northeast Climate Science Center.

Federal Funds requested: \$500,000; **Non-Federal Match:** \$217,124

New Hampshire Fish and Game Department

Title: Adaptive Implementation of the Regional Conservation Plan for Blanding's Turtle and Associated Wetland SGCN in the Northeast

State(s): New Hampshire, Massachusetts, Maine, New York, Pennsylvania

Goals and Objectives: New Hampshire Department of Fish and Game and partners propose to implement a recently-completed Competitive SWG funded regional conservation plan for Blanding's turtle and other species of greatest conservation need. This project will increase survival of young turtles at high priority sites throughout the region by protecting 50 nests at high priority sites, with a goal of producing an additional 400 hatchlings annually. In addition, several hundred hatchlings will be raised in a controlled predator-free environment by schools, nature centers, and other partners for 9 months, growing them to a larger size before releasing them into other high priority areas. These activities, in conjunction with creating and enhancing nesting habitat, are expected to increase turtle populations in the Northeast region.

Federal Funds requested: \$499,689; **Non-Federal Match:** \$271,336

Region 6

Nebraska Game and Parks Commission

Title: Restoring Native Mussels to the Plains

State(s): Nebraska, Iowa

Goals and Objectives: Nebraska Game and Parks Commission, in partnership with the Iowa Department of Natural Resources and university researchers, proposes to restore native mussels to watersheds in both states. The partners will target plain pocketbook and fatmucket mussels, although project activities are likely to benefit a variety of other species. Objectives include production of habitat suitability models, restoration of 50 acres of stream bank and upland habitat in Iowa, captive rearing and release of 25,000 mussel individuals in Nebraska, and construction of a dedicated mussel propagation facility. Although the ultimate goal of the mussel reintroduction is to support natural recruitment of the native mussels at restoration sites, survival at these sites will serve as a measure of effectiveness during the project performance period.

Federal Funds requested: \$500,000; **Non-Federal Match:** \$197,781