WCS Climate Adaptation Fund

Supporting on-the-ground projects promoting wildlife adaptation to climate change

2014 Grant Awards

Playa Lakes Joint Venture

WCS Grant Request: $147,017; Project Budget: $355,693

Preserving moisture to help critical wetlands function

Playas are the dominant wetland type in the western Great Plains. They are both centers of biodiversity and the primary recharge mechanism for the Ogallala Aquifer, the water source for most of the region's agricultural production. In a drying climate, fewer playas will be wet, making playa restoration an urgently needed response to climate change for migratory birds. This project will restore the hydrological function of a network of playas across four states (Colorado, New Mexico, Oklahoma, and Texas).

World Wildlife Fund, Chihuahuan Desert Program

WCS Grant Request: $248,594; Project Budget: $545,021

Improving tributary health to counteract the effects of drought

Human and climate impacts along the Rio Grande/Bravo Rivers and local tributaries in the Big Bend region of Texas have altered the conveyance of water and sediment, resulting in reduced water availability and deteriorated aquatic and riparian habitat. Forecasts for this region describe a warmer climate characterized by droughts of greater frequency, intensity, and duration. Dramatic reduction in stream corridor water availability, with consummate loss of many native riparian and aquatic species, is likely. This project will work along small tributaries to reestablish dense stands of coyote willow that will slow flow velocities, promote sediment accumulation, and increase local recharge of riparian water tables.

The Nature Conservancy, North Carolina

WCS Grant Request: $130,900; Project Budget: $280,837

Using man-made water control structures to mitigate impacts from wildfire and conserve soil

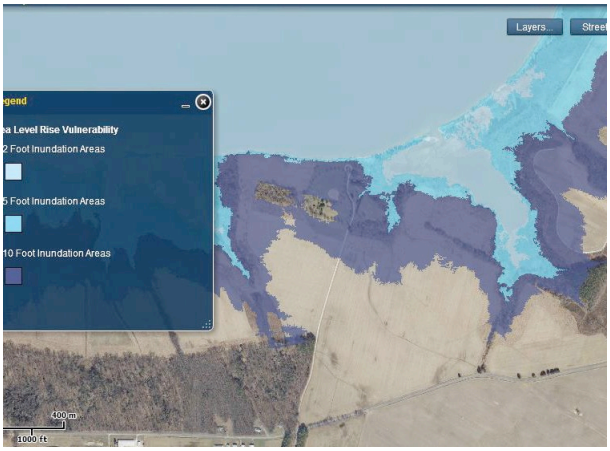
This project will focus on the restoration of 1,325 acres of southeastern shrub bog wetlands (known as "pocosins"). Historic methods of ditching and drainage have exacerbated periods of low rainfall, resulting in the loss of organic pocosin soil to oxidation and catastrophic wildfire. Given that drought conditions are expected to be more frequent as the climate changes, The Nature Conservancy and the U.S. Fish and Wildlife Service will install adjustable water control structures that will create wetter conditions to help reverse the pattern of subsidence and increase soil accumulation.

2014 Climate Adaptation Fund Grants

National Wildlife Federation

WCS Grant Request: $241,002; Project Budget: $484,657

Installing "living shorelines" to slow erosion from sea level rise



This project will restore 1,350 linear feet of eroding shoreline in Maryland to maintain ecological processes, reduce erosion, and restore lost marsh and shoreline habitats impacted by current and projected sea-level rise and coastal flooding. The project will illustrate how the use of native plantings and natural beach stabilization techniques can serve as an alternative to building hardened coastal defenses.

The Nature Conservancy, Montana

WCS Grant Request: $222,920; Project Budget: $448,100

Restoring headwaters most resilient to climate change

In this project, The Nature Conservancy will prioritize stream systems to restore based on which watersheds are likely to continue to have healthy stream flows and cool water temperatures as climate becomes warmer and drier. Identification of those watersheds will be made through a novel approach, inspired in significant part by the resilience science being developed at The Nature Conservancy. By implementing a suite of restoration approaches, this project will measurably enhance hydrologic and ecological function of streams, rivers, riparian areas, and wetlands.

Huron River Watershed Council

WCS Grant Request: $178,158; Project Budget: $356,315

Using flow management and habitat restoration to buffer against the impacts of climate change

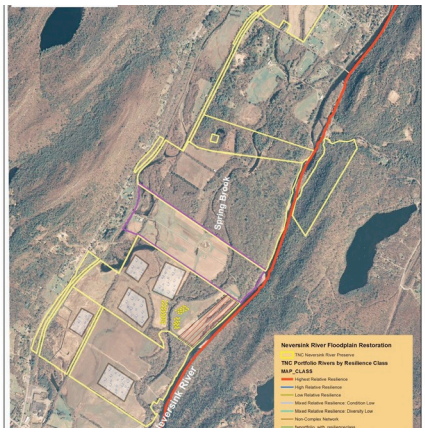
The Huron River in Michigan is home to native species assemblages that help maintain a functioning ecosystem. Many of these species have tolerances that will help them persist as climate changes if actions are taken now to buffer against the impacts of climate change and maximize the health of the system. The Huron River Watershed Council will implement strategies that will result in improved flow management at dams, reduced fishing pressure, restored instream habitat, and protected riparian vegetation that will created conditions to allow species to adapt to more extreme storms, increasing temperatures, and more frequent drought.

2014 Climate Adaptation Fund Grants

The Nature Conservancy, Eastern New York

WCS Grant Request: $136,061; Project Budget: $272,529

Planting trees and adding microtopography to increase the resilience of floodplains



This project will plant approximately 11,000 native trees that have been identified for their expected climate resilience on over 40 acres of floodplains degraded from past agricultural activities. In addition, restoration activities will include making changes to the topography of the land to mimic conditions that would normally be found in a more mature forest that provide a variety of microclimates that species can use and reconnecting flood plain to rivers.

Methow Salmon Foundation

WCS Grant Request: $237,160; Project Budget: $690,760

Using beaver to mitigate the loss of future snowpack

As an early sign of climate change, wildfires are impacting north central Washington's watersheds at an unprecedented scale. As climate change continues, hydrologists also predict more rain, less snow, and steady snowpack loss in the mountains of the Northwest. However, stand-replacing fires are also opening areas for beaver re-colonization. Willows and aspens re-sprout vigorously, and dead trees no longer demand water for growth. This project will re-introduce beavers into fire-impacted areas creating wetlands that store precipitation in these watersheds.

Sky Island Alliance

WCS Grant Request: $240,865; Project Budget: $492,517

Increasing resilience to catastrophic fire through erosion control and spring rehabilitation

Severe fires followed by intense monsoon precipitation alter streams, springs, and entire watersheds in rapid and sometimes catastrophic ways throughout the Sky Island Region of southern Arizona. Through installation of erosion-control structures at the tops of fire-prone watersheds, Sky Island Alliance will rehabilitate high-priority springs and riparian wildlife habitat degraded by post-fire erosion.

2014 Climate Adaptation Fund Grants

The Nature Conservancy, Texas

WCS Grant Request: $250,000; Project Budget: $500,000

Enhancing the resilience of climate change refugia

After decades of fire exclusion, the sky islands in Texas, and throughout the Southwest, have very dense forests. These forests are already suffering from climate-induced stresses such as drought, insect outbreaks, and severe wildfires, all of which could intensify in a hotter and drier climate. Mesic canyons are the coolest and wettest parts of the sky islands. These canyons are expected to harbor the largest number of species in the future because their sheltered topography moderates climate extremes. This project will focus forest thinning efforts in and around mesic canyons, thereby enhancing the resilience of these natural refugia to climate change.

Lomakatsi Restoration Project

WCS Grant Request: $218,347; Project Budget: $438,394

Helping native oak systems adapt to climate change through thinning and prescribed burns

Oak ecosystems in the Pacific Northwest exist in only a small percentage of their historic distribution, putting the plant and animal species associated with this habitat at risk. Protecting existing oak woodlands and restoring threatened areas is critical to reversing the declines of those species. This project will implement mitigation practices on approximately 400 acres of oak habitat in southern Oregon that are threatened by increasing summer drought and a high likelihood of severe fire. Proposed treatments will include selective tree thinning, prescribed fire, invasive species removal, and herbaceous understory restoration.

Sustainable Resources Institute, Inc

WCS Grant Request: $140,000; Project Budget: $280,000

Increasing drought tolerance of forests through innovative soil amendments

Scrub oak forests in Florence County, Wisconsin, have experienced 90% mortality due to a combination of drought and other stressors, which are expected to intensify as the climate changes. Adaptation strategies to prepare for these impacts include adding soil amendments with wood ash and biochar to improve the ability of the forest to tolerate increased drought stress, particularly in sandy soils with low water-holding capacity. Sustainable Resources Institute will restore nearly 400 acres of former scrub oak forest using this new restoration technique.

The Wilderness Society, Crown Roundtable and Blackfoot Challenge

WCS Grant Request: $104,445; Project Budget: $301,890

Working with public and private landowners to restore stream connectivity and reduce water consumption in times of drought

Climate-induced hydrology changes that have led to reduced snowpack and earlier spring flood events are of particular concern in Western Montana's Crown of the Continent ecosystem. In response to these impacts, this project will work to expand voluntary drought response measures and irrigation efficiency among private water rights owners and communicate the value of these programs to resource managers across the landscape. Improved water management will help to maintain critical flows in rivers and tributaries of the Blackfoot and Upper Clark Fork rivers, improve water quality and stream functionality, and retain significantly more water for vulnerable aquatic species during periods of drought.