



# GREAT PLAINS

LANDSCAPE CONSERVATION COOPERATIVE

# 2016 ANNUAL REPORT



# FROM OUR CHAIR

**T**oward the end of 2015, the National Academy of Sciences (NAS) released its review of Landscape Conservation Cooperatives (LCCs). In its report, the NAS pointed to many accomplishments by the LCCs but also identified areas for improvement. Specifically, the NAS recommended LCCs expand their partnerships around conservation priorities and broaden their evaluation framework to better capture successes.

In 2016, the Great Plains LCC took to heart the National Academy of Science's findings. In order to expand our partnership, we sought out and welcomed new faces. With NextEra Energy and the Southeast Aquatic Resources Partnership on board, we are better connected to key players on the landscape.

At the same time, we have looked across our own boundaries and engaged on cross-regional conservation priorities. In a short amount of time, I have seen us become more unified as an LCC network, with measurable impacts on conservation.

Since this LCC was formed in 2010, I believe we are the most focused we have ever been. Our partnerships are stronger and our successes are more tangible. I'm proud of the work we are doing.

As we head into 2017, the Great Plains LCC will welcome new coordinators, and with them, new expertise and perspective on how to meet our mission. We also have an exciting new website online – a tool that will help us better communicate with partners, stakeholders and the public.

These fresh starts will help us continue our momentum into 2017 and beyond. Together we will continue to demonstrate the value of collaborative conservation in the 21st century.

**Brian Trusty**  
*2015-2017 Steering Committee Chair*  
Great Plains LCC





**“Since this LCC was formed in 2010, I believe we are the most focused we have ever been. Our partnerships are stronger and our successes are more tangible.”**

# 2016

# ACCOMPLISHMENTS



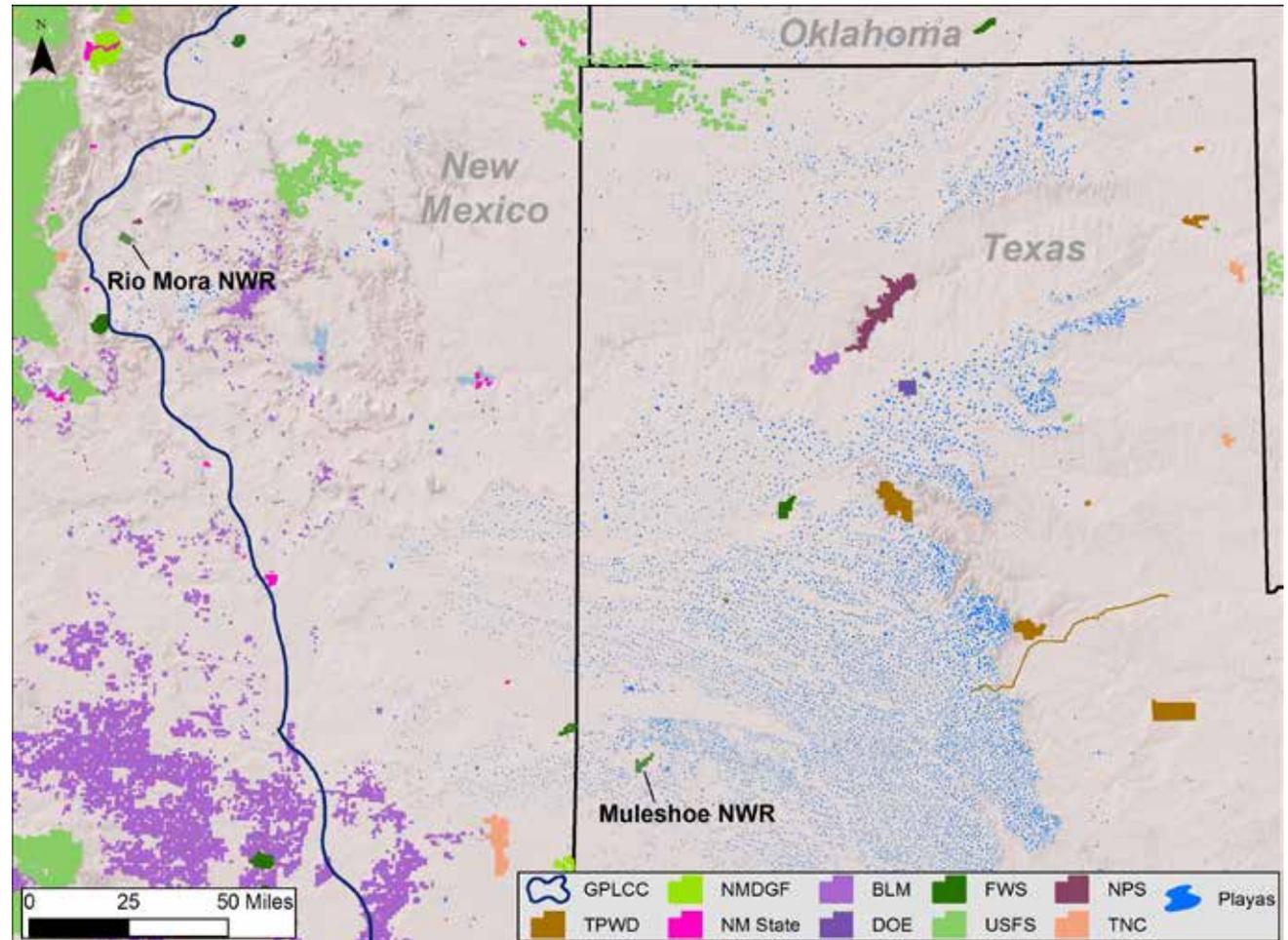
*Sunrise over the Salt Plains, Flickr photo by Danny Barron*

# LANDSCAPE CONSERVATION DESIGN

Starting as a collaborative pilot between the Great Plains Landscape Conservation Cooperative and Playa Lakes Joint Venture, the Southern Great Plains Landscape Conservation Design team has developed practical and applied tools that help identify strategic opportunities for habitat conservation.

While focusing on goals common to the partnership, the LCD team is taking the material developed during the pilot phase and scaling it down to better inform local-scale conservation actions. Two of these local efforts center around Muleshoe and Rio Mora National Wildlife Refuges (NWR).

These refuges are two elements in the mosaic of public and private lands that make up the larger landscape of the southern Great Plains. The conservation goals of these refuges (grassland habitat for migratory birds, habitat for threatened and endangered species, and waterfowl habitat) are common to the Great Plains LCC partnership. Moreover, the drivers that affect these areas similarly affect all other conservation projects in the region. Informing local-scale conservation actions such as these through the lens of Landscape Conservation Design allows us to plan strategically and effectively at the local and landscape scales. In 2017, we'll be inviting more partners to share a voice in these projects so we can better serve the partnership in applying the tools of Landscape Conservation Design across the region.



*Map showing important conservation lands in the Southern High Plains*

# WATERSHED CONSERVATION PLANNING

In 2014, a Great Plains LCC-supported assessment helped identify conservation actions that would benefit 28 priority fish species in rivers and streams of the Great Plains. The assessment also identified eight watersheds critical to the preservation of regional, native fish diversity.

Using this assessment as a starting point, the Great Plains LCC and the Southeast Aquatic Resource Partnership launched an ambitious project in 2015 to develop multi-species, watershed-based conservation assessments and science strategies throughout the Great Plains. In 2016, the Great Plains LCC and Texas Parks & Wildlife Department held a series of watershed-based workshops with regional managers to gather feedback on priorities for native fish communities and identify science needs to help guide potential conservation actions.

The feedback from these meetings was incorporated into a Request for Proposals focused on understanding the water use and water rights landscape of the Southern Plains in order to identify cost-effective, practical conservation opportunities. Two projects were selected from the submissions:

1. A project to develop a publicly available web-based geospatial platform, the Environmental Flow Information Toolkit (EFIT), to identify priority flow protection and restoration opportunity areas within the Brazos, Canadian, Colorado and Red River Native Fish Conservation Areas (NFCAs).
2. A project to develop a cost-benefit optimization model to identify the locations for water conservation actions, based off analysis of water rights and usage patterns, that would deliver the highest return-on-investment in the Red River basin.



*Redbelly dace, Flickr photo by Scott Wilson*

These watershed-based partnerships will continue to implement landscape-scale conservation actions to restore river systems to a level that will allow native fish to thrive, while also providing clean water, outstanding outdoor recreation, and a stable economic base for present and future citizens of the watershed.

# GRASSLAND MODELING

Projections of potential future landscape change are required by wildlife conservationists and resource managers for decision support and planning. To better meet these needs, the Great Plains LCC convened several meetings in 2016 to hear from partners on what climate and land use change models would be most useful in their conservation efforts. A project meeting of all partners was held in February 2016, where partners agreed on what direction to move forward in, followed by another meeting in April, where further input was solicited.

USGS-EROS and USGS-FORT are collaborating to produce a unique suite of climate-sensitive landscape projections for the Great Plains. USGS-EROS is producing land-use projections at high spatial and thematic resolutions, using agricultural parcels to mimic local landowner decisions. USGS-FORT is modeling the impacts of climate change on productivity and species composition of grasslands.

Rather than providing climate information alone, these scenarios will also offer information about how species and habitats might be affected by a variable climate. These scenarios can be used by managers and decision-makers to visualize potential changes in the dynamics of the systems they manage and set conservation priorities accordingly.

An initial report is expected early in 2017.



*Flowering prairie, Tammy James*

# ECOLOGICAL SYSTEMS MAPPING



*David Diamond working on edgematching OK/TX, USFWS*

In 2016, the Great Plains LCC and Gulf Coast Prairie LCC teamed up to fund the completion of the Oklahoma Ecological Systems Classification and Mapping Project. Additional funding from the two LCCs went toward improving and updating the boundary areas along the Texas and Oklahoma borders. Based off the success of the Texas and Oklahoma ecological mapping efforts, the Great Plains LCC Steering Committee is exploring ways to move forward with mapping efforts in Nebraska and Kansas. Supporting efforts in these states will ensure consistency across state boundaries and would result in more than 80% mapping of the area of the Great Plains LCC. Once complete, these mapping efforts will facilitate conservation planning and management for decades.

# COORDINATED BIRD MONITORING

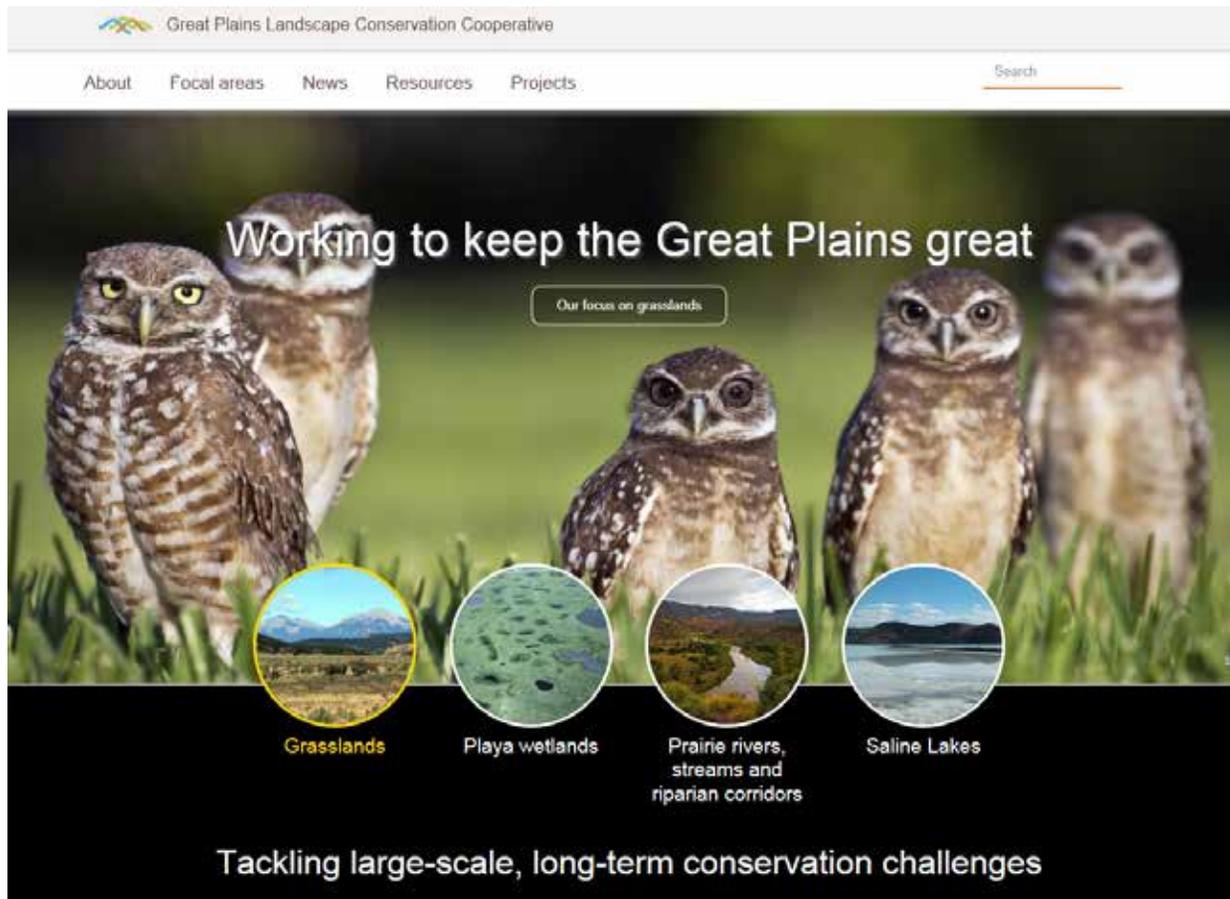
For the second year in a row the Great Plains LCC is providing support for a multi-partner coordinated bird monitoring effort in the Great Plains. The Integrated Monitoring in Bird Conservation Regions (IMBCR) program provides information vital to the continued management of a number of bird species recognized as conservation priorities by various local, state, and federal wildlife plans.

This project addresses a long existing gap in Strategic Habitat Conservation of at risk bird species, namely the monitoring of local and regional changes in bird populations over time. The resulting bird data will be used to guide effective and efficient management of bird populations in a way that could avoid the need for listing these species in the future.



*Wilson's phalarope, USFWS*

# NEW WEBSITE



The Great Plains LCC is excited to announce its new website! Over the past year, staff have been hard at work developing a website that is more informative and easier to navigate. The new, completely redesigned site combines compelling content with beautiful photos and visuals to help tell our story.

Features include:

- Robust About section with information on staff, teams and steering committee members
- Information on our eight Focal Areas (Climate Adaptation, Grasslands, Gulf Hypoxia, Landscape Conservation Design, Playa Wetlands, Saline Lakes, Watershed Conservation Planning, and Prairie Rivers, Streams and Riparian Corridors)
- Comprehensive Projects database
- News and Resources pages to help users find what they are looking for

You can explore the new website at:

<https://greatplainslcc.org/>

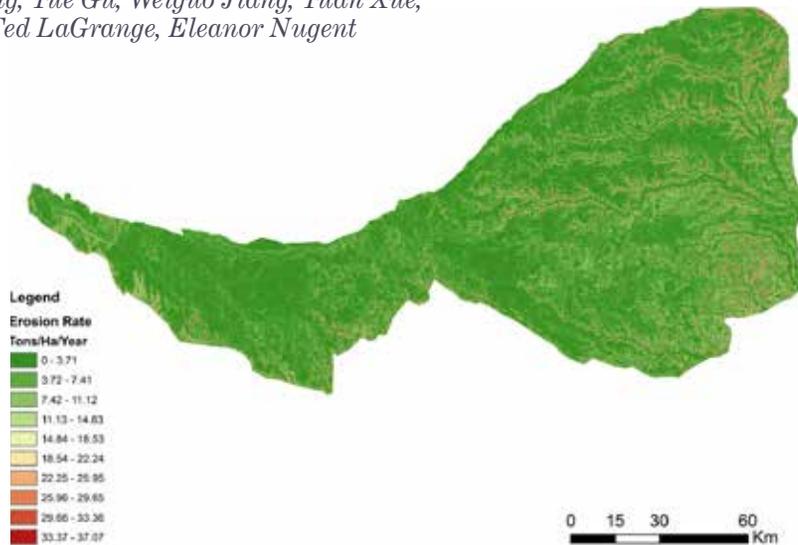
# COMPLETED PROJECTS



*Western meadowlark, USFWS*

## Use RUSLE2 model to assess the impact of soil erosion on playa inundation and hydrophyte conditions in the Rainwater Basin, NE

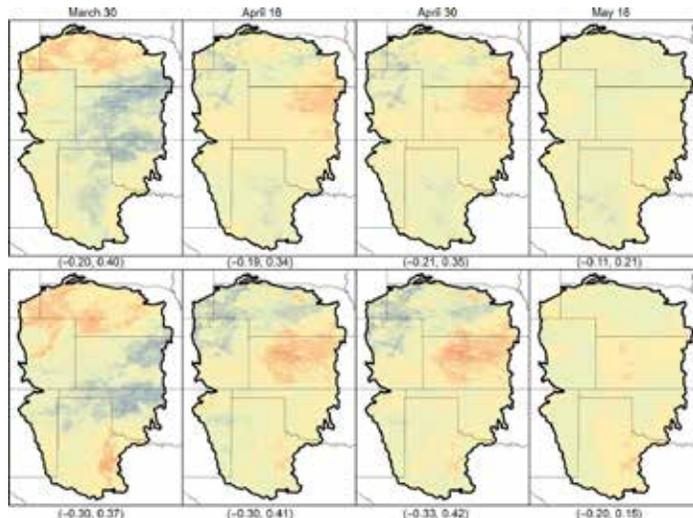
Zhengkong Tang, Yue Gu, Weiguo Jiang, Yuan Xue, Andy Bishop, Ted LaGrange, Eleanor Nugent



Soil erosion rate map for the Rainwater Basin

## Modeling nonbreeding distributions of shorebirds and waterfowl in response to climate change

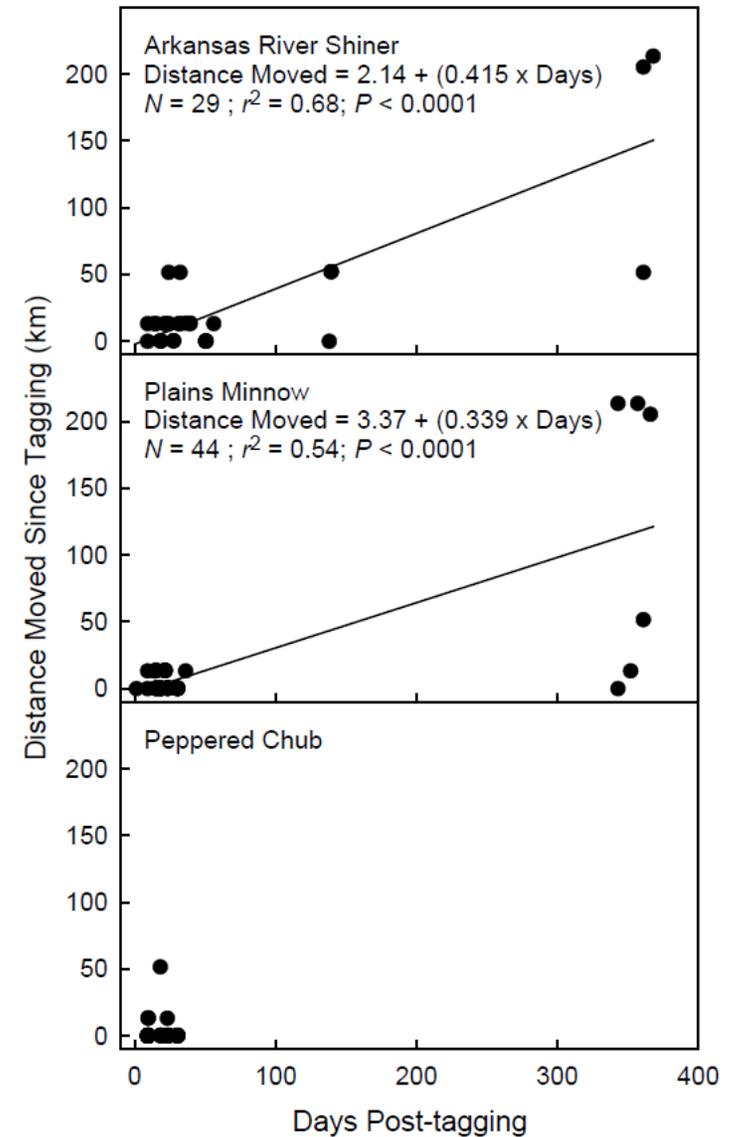
Gordon C. Reese and Susan K. Skagen



Projected changes in probabilities of occurrence of Baird's Sandpiper based on two general circulation models

## Migration of Arkansas River Shiner and other Broadcast Spawning Fishes

Gene R. Wilde



Distance moved by tagged Arkansas River Shiner, Plains Minnow, and Peppered Chub between release and recapture in the Canadian River, New Mexico and Texas.

# ABOUT



*The mission of the Great Plains Landscape Conservation Cooperative is to lead the development, facilitation and integration of science and management to ensure strategic natural resource conservation on the Great Plains.*

# STEERING COMMITTEE MEMBERS

BUREAU OF INDIAN AFFAIRS  
BUREAU OF LAND MANAGEMENT  
BUREAU OF RECLAMATION  
COLORADO PARKS AND WILDLIFE  
KANSAS DEPARTMENT OF WILDLIFE, PARKS AND TOURISM  
NATIONAL AUDUBON SOCIETY  
NATIONAL PARK SERVICE  
NATURAL RESOURCES CONSERVATION SERVICE  
NEBRASKA GAME AND PARKS COMMISSION  
NEW MEXICO DEPARTMENT OF GAME AND FISH  
NEXTERA ENERGY RESOURCES, LLC

OKLAHOMA DEPARTMENT OF WILDLIFE  
CONSERVATION  
PLAYA LAKES JOINT VENTURE  
RAINWATER BASIN JOINT VENTURE  
SOUTHEAST AQUATIC RESOURCE PARTNERSHIP  
TEXAS PARKS & WILDLIFE DEPARTMENT  
THE NATURE CONSERVANCY  
U.S. FISH AND WILDLIFE SERVICE  
U.S. FOREST SERVICE  
U.S. GEOLOGICAL SURVEY

[www.GreatPlainsLCC.org](http://www.GreatPlainsLCC.org)



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