



GREAT PLAINS LCC
2014-2015
ANNUAL
REPORT

Long-billed Curlew, USFWS

Great Plains
Landscape Conservation Cooperative



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*Photos (Clockwise): Wind Turbine, USFWS
Arkansas River Shiner, USFWS
Tallgrass Prairie, USFWS
Northern Pintail, USFWS*

LETTER FROM THE CHAIR



One of my favorite mentors used to say, “You can’t drive forward while looking in the rearview mirror,” and that’s true. Knowing where you’ve been is helpful, however, when plotting your course for the future. During the past two years, the Great Plains LCC has taken the time to reflect on our successes and challenges to better understand how and

where to move forward. We have completed multiple exciting projects in coordination with our partners that have taught us how to target our collaborative conservation action and hone our delivery. Through this process, the Great Plains LCC has narrowed its focus, agreed on a vision, and set upon a clear path for the future.

We have strengthened and broadened the partnerships that serve as the foundation and guiding light of the Great Plains LCC. Their diverse expertise and collaborative spirit is responsible for our accomplishments to date and will continue to fuel our future endeavors.

It has been my pleasure to serve as the Steering Committee Chair this year and to watch the Great Plains LCC learn, grow and improve. In this Annual Report, we highlight successes from past two years (2014-15) and share our vision for 2016.

In reviewing our recent accomplishments, two key themes emerge: the co-production of science and the cultivation of robust partnerships. From collaborating with USGS FORT and the South Central Climate Science Center on developing

During the past two years, the Great Plains LCC has taken the time to reflect on our successes and challenges to better understand how and where to move forward.

innovative land cover change modeling, to working with the Southeast Aquatic Resources Partnership on identifying priority conservation actions for restoring fish diversity in the Great Plains, the LCC has been instrumental in expanding our partnerships, identifying common needs and addressing them with managers in mind.

Of course, we are always seeking ways to improve. I believe our LCC has great potential for contributing more meaningfully to science delivery and private lands conservation. We will seek opportunities to improve in these areas in the coming year.

We look forward to the continued development of our partnership along with improved communication and coordination for success in our endeavors going forward.

Sincerely,

Brian Trusty
2015-2017 Steering Committee Chair
Great Plains LCC

2014-2015 HIGHLIGHTS

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.

Strengthening Partnerships

The strength of the Great Plains LCC lies in its diverse partnerships. Over the past two years, the LCC has worked to strengthen these partnerships, building off successes and learning how to work together better to achieve our shared goals.

TEXAS PARKS & WILDLIFE DEPARTMENT (TPWD):

- ◆ On November 17, 2015, TPWD leadership and staff met with staff from their four LCCs (Great Plains, Gulf Coast Prairie, Desert and Gulf Coastal Plains and Ozarks) at their headquarters in Austin, Texas to share information and identify opportunities for further collaboration.
- ◆ TPWD worked with the Southeast Aquatics Resources Partnership (SARP) to lead a series of watershed-based planning and prioritization workshops. This project, funded and supported by the Great Plains LCC, leverages local knowledge and expertise to identify priority science needs to guide conservation delivery in priority watersheds. *(See page 6 for more on this project)*

BUREAU OF LAND MANAGEMENT (BLM)

- ◆ In 2015, the BLM and the Great Plains LCC continued their partnership with the USGS Fort Collins Science Center to expand the geographic scope of BLM's Southern Great Plains Rapid Ecological Assessment (REA) and to provide enhanced integration of the REA with the development of geospatial data and models across the partnership. *(See page 8 for more on this project)*

OKLAHOMA DEPARTMENT OF WILDLIFE CONSERVATION (ODWC)

- ◆ In 2015, ODWC completed its Oklahoma Ecological Systems Classification and Mapping Project, with support from the Great Plains and Gulf Coast Prairie LCCs. This project provided the first-available high resolution (10m and 166 vegetation classes) across the entire state of Oklahoma. *(See page 7 for more on this project)*

PLAYA LAKES JOINT VENTURE (PLJV)

- ◆ In 2015, the PLJV worked closely with Great Plains LCC partnership to complete the first phase of the Southern Great Plains Landscape Conservation Design (LCD) Pilot Project. This project was funded by the Great Plains LCC and leveraged Great Plains LCC partner input and expertise into all phases of the work. *(See page 6 for more on this project)*
- ◆ In 2015, the Great Plains LCC committed 2 years of financial support to PLJV to initiate its multi-partner



Scissor-tailed Flycatcher, Terry Sohl

supported, region-wide bird monitoring program: Integrated Monitoring in Bird Conservation Regions (IMBCR). This monitoring program will help strengthen the data sources for LCD and other efforts. *(See page 8 for more on this project)*

- ◆ With funding from the Great Plains LCC, PLJV held a Playa Recharge Summit in November 2015 with 14 scientists and researchers who study various aspects of playas—including hydrology, wildlife ecology, economics and communications—to clearly define the amount, timing and speed of recharge to the Ogallala Aquifer.

Building New Partnerships

SOUTH CENTRAL AND NORTH CENTRAL CLIMATE SCIENCE CENTERS

- ◆ The Great Plains LCC has partnered with the South Central and North Central Climate Science Centers, the USGS Earth Resources Observation and Science (EROS) Center, and the USGS Fort Collins Science Center to initiate a process for developing climate change impact scenarios for vegetative cover and land use change. This project builds upon ODWC and TPWD Ecological Systems mapping products and is designed for integration with PLJV's LCD project. *(See page 6 for more on this project)*

SOUTHEAST AQUATIC RESOURCES PARTNERSHIP (SARP) AND THE GREAT PLAINS FISH HABITAT PARTNERSHIP (GPFHP)

- ◆ The Great Plains LCC is partnering with the SARP and the GPFHP to develop multi-species, watershed-based conservation assessments and science strategies throughout the Great Plains ecoregion. *(See page 6 for more on this project)*

2016 PRIORITIES

In the coming year, the Great Plains LCC will complete a new science strategy to better align our efforts to address species and habitat needs and direct science resources. Through this strategy, we will prioritize landscape-scale conservation that brings together scientists, managers, and landowners to find practical, cost-effective, and voluntary solutions for protecting our region's unique natural heritage.

In addition, we will invest resources in:

BUILDING COMMUNICATIONS CAPACITY

In 2016, Great Plains LCC will launch several new endeavors to improve communications, both internally among partners and externally to key constituencies, including:

- ♦ Launching a new website for sharing Great Plains LCC information with key stakeholders. The new site will serve as a venue to highlight the work of the Great Plains LCC and its partners, and will include project updates, news and highlights.
- ♦ Implementing a communications plan for the Great Plains LCC. The plan will identify key Great Plains LCC audiences, communication resources, communication objectives and messages associated with each LCC goal, and specific tasks to move towards accomplishing our goals.

COORDINATING WITH THE LCC NETWORK

- ♦ Responding to recommendations by the National Academy of Sciences: In December 2015, The National Academy of Sciences (NAS) released its Review of the Landscape Conservation Cooperatives. This extensive review of LCC effectiveness concludes that a landscape approach is needed to meet the nation's conservation challenges and that the Landscape Conservation Cooperatives provide a framework for addressing that need. The NAS gave the LCC Network feedback on how to increase its capacity for supporting measurable conservation successes and strong partnerships. Great Plains LCC staff are actively participating in the network-level teams developed to address specific recommendations from the NAS.

CO-PRODUCTION OF KNOWLEDGE

- ♦ Our focus in the coming year will continue to be aligning partner needs with science initiation, development, and delivery.
- ♦ Many of the projects highlighted in this report (including the climate change landcover modeling and the watershed planning project) are in their initial stages and will continue to be the focus of our work in 2016.

**To stay informed on all of our progress, please visit our website:
www.GreatPlainsLCC.org**



Pronghorn, USFWS

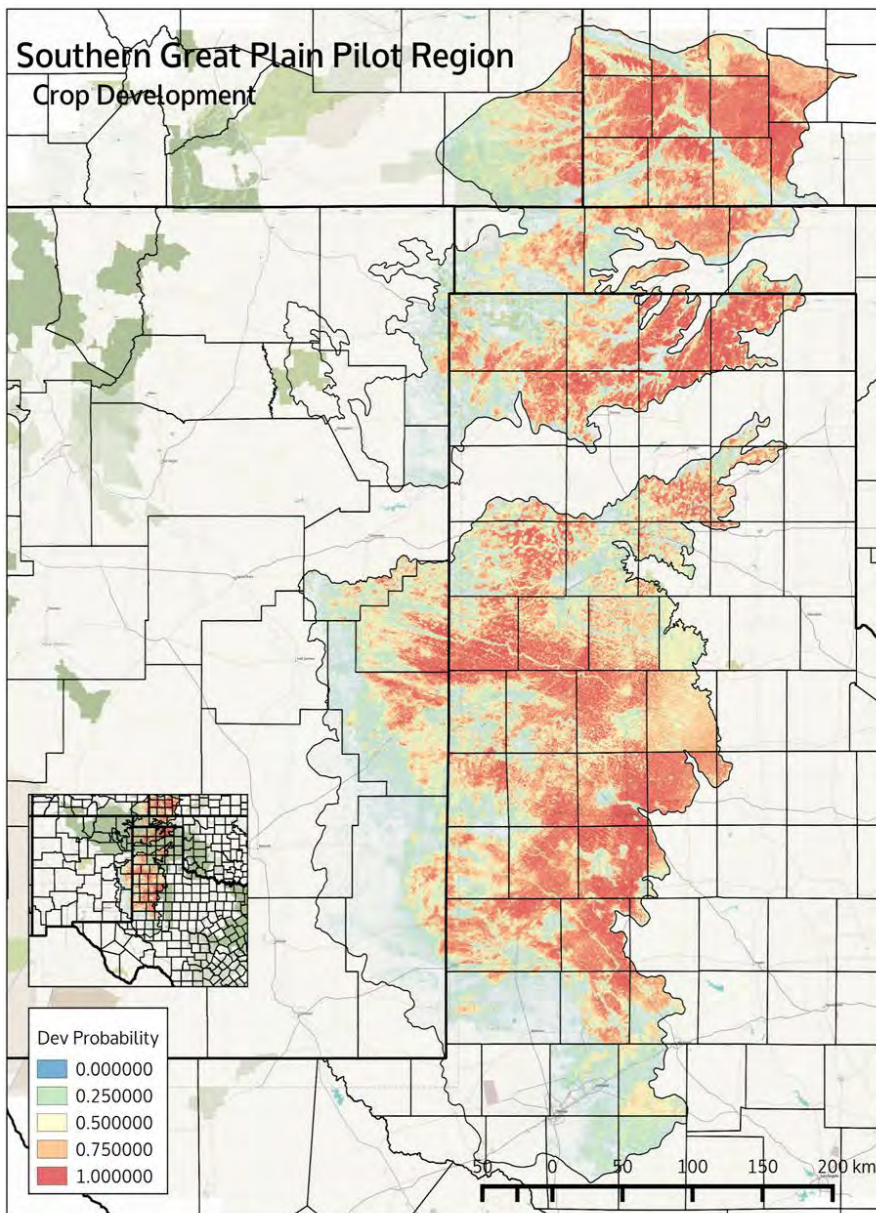
2014-2015 ACCOMPLISHMENTS

Collaborative Conservation

Designing Sustainable Landscapes in the Great Plains

The Great Plains LCC continues to support collaborative landscape design on grassland systems in a 36-million acre region in the Southern High Plains, one of the most threatened ecosystems in North America. In 2014, the Playa Lakes Joint Venture and Great Plains Landscape Conservation Cooperative began collaborating on a landscape design pilot for this priority area. Landscape design can directly inform on the ground conservation by providing a roadmap for achieving specific conservation goals. For this project, the conservation goal is to increase the size and connectivity of intact grassland fragments.

In 2015, the Great Plains LCC and Playa Lakes Joint Venture completed the first phase of the Southern Great Plains Landscape Conservation Design (LCD) Pilot Project. To date, partners have identified key drivers of landscape change in the pilot region (see image below), including climate change, invasive species and, oil and gas development, while conducting a biodiversity assessment of the Southern Great Plains for seven focal species: long-billed curlew, ferruginous hawk, burrowing owl, black-tailed prairie dog, swift fox, pronghorn, and massasauga rattlesnake. An environmental risk assessment looks at how landscape stressors affect priority species, laying the groundwork for a full LCD product to inform on-the-ground conservation of intact grasslands in the Great Plains. Successful landscape conservation design in the region will help focus conservation efforts and ensure effective and efficient use of resources.



Advancing Watershed-Scale Restoration in the Great Plains

The quality and quantity of freshwater resources in the Great Plains play a vital role in the well-being of wildlife and human communities who depend on them for water, food production, health, jobs and recreation. Yet, these resources have been dramatically altered over the past century, resulting in dramatic losses of native fish and other freshwater species.

In 2014, a Great Plains LCC-supported assessment helped identify conservation actions to benefit 28 priority fishes in rivers and streams of the Great Plains. The assessment also identified eight watersheds uniquely valued in 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 an entire ecosystem (the Great Plains).

The Great Plains LCC and Texas Parks & Wildlife Department have begun holding a series of watershed-based workshops to review and provide feedback on priorities for native fish communities and identify science needs to help guide and support potential conservation actions. Ultimately, the goal of these watershed-based partnerships is to implement landscape-scale conservation actions to restore river systems to the level that 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.

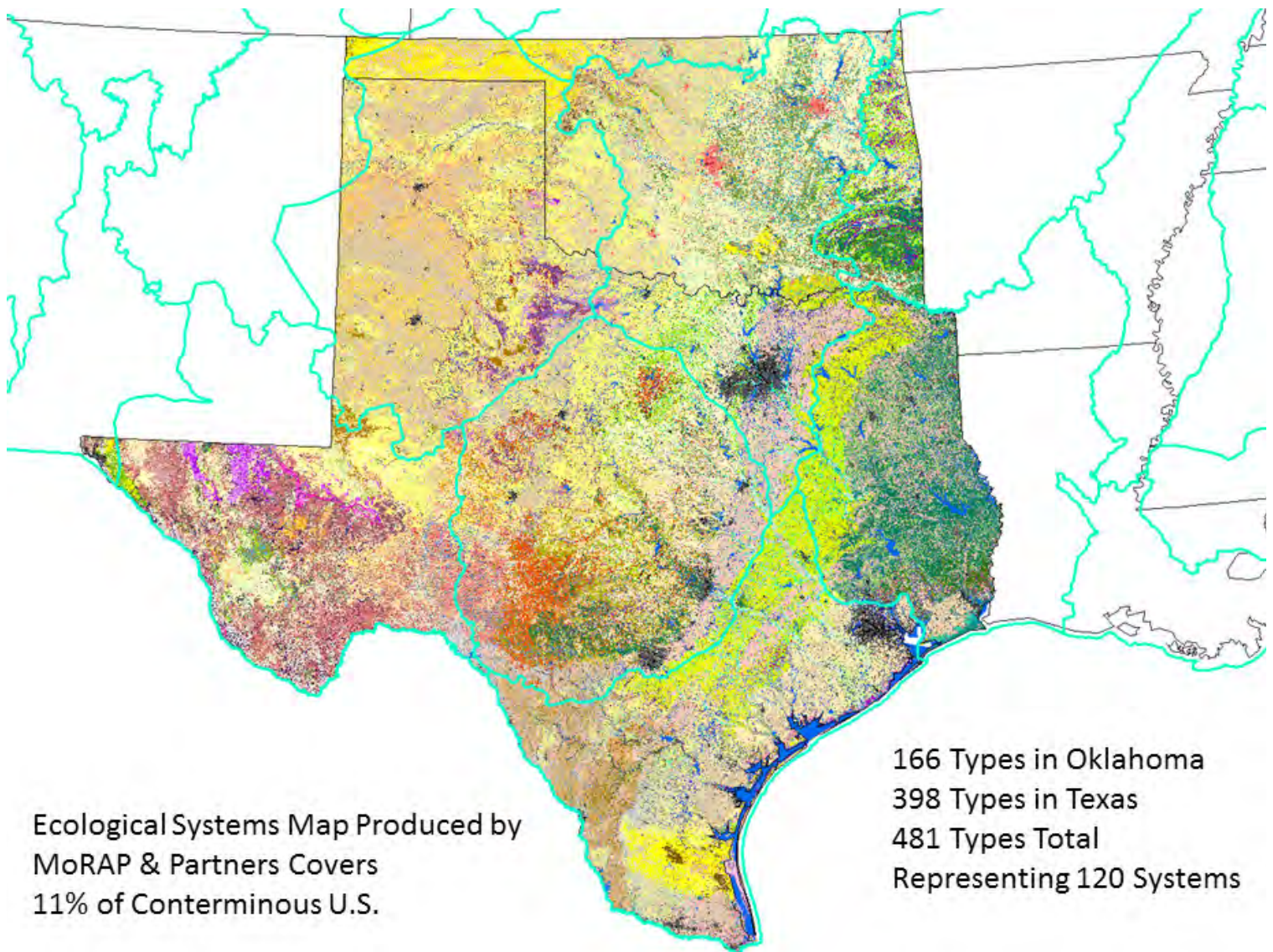
Identifying Priority Conservation Areas in Oklahoma

The Oklahoma Ecological Systems Classification and Mapping Project was launched in 2012 to develop accurate and up-to-date land cover maps for the purpose of conservation planning. The project was completed in 2015 when the Oklahoma Department of Wildlife Conservation (ODWC) released comprehensive 10-meter resolution land cover data for the state of Oklahoma. The project also created a classification system for the mapped vegetation, resulting in the development of 166 vegetation classes. These classes are color-coded on the final map, allowing managers to access detailed information about habitat and vegetation types in a particular location at a glance.

These datasets empower state partners to make decisions about where and how to cooperatively deliver conservation on the ground, having the greatest impact for the least cost.

This project was truly a cooperative effort, with financing provided by ODWC, the Great Plains LCC, and the Gulf Coast Prairie LCC. The Oklahoma Biological Survey (University of Oklahoma) performed ground data collection and classification for the project. The Missouri Resource Assessment Partnership (MoRAP) at the University of Missouri provided remote sensing, mapping, and interpretive information. MoRAP was also the primary partner involved in the Texas Ecological Systems mapping project, and expertise developed during that project was applied to Oklahoma's efforts. The Natural Resource Conservation Service and the Oklahoma Geographic Information Council were also instrumental in the development of this dataset.

A raster dataset of the Ecological Systems Project and an Interpretive Booklet with detailed descriptions of the mapping methods and descriptions of all vegetative classes are publicly available on ODWC's website .



Modeling the Effects of Climate Change on Grassland Ecosystems

Climate change was identified as a critical driver of landscape change in grassland ecosystems during the development of the LCD pilot (see p. 6). However, we lack detailed projections of the impacts of climate change on the distribution and quality of our grassland systems. Developing spatial datasets that characterize the relationship between climate change and vegetative cover in the LCD pilot region would empower LCD users and other managers to make better long-term decisions about where to invest in grassland conservation.

The Great Plains LCC has partnered with the South Central Climate Science Center, the North Central Climate Science Center, USGS Earth Resources Observation and Science (EROS) Center, and the USGS Fort Collins Science Center to address this critical data need. Together with key LCC members who have expertise in the vegetation of this region and/or represent likely end-users, they have begun to develop climate change impact scenarios for vegetative cover and land use change.

When completed, this project will provide a comprehensive set of landcover change models to aid land managers in making climate-smart decisions for the future.

This project builds upon ODWC and TPWD Ecological Systems mapping products and is being developed in coordination with PLJV for integration with PLJV's LCD project. It will also incorporate the BLM's Rapid Ecological Assessment of the Southern Great Plains and downscaled climate projections developed by the Climate Science Centers and their consortia, including NOAA's Geophysical Fluid Dynamics Laboratory. By bringing together these separate but related pieces, the Great Plains LCC is creating comprehensive tools and datasets to help partners address shared conservation challenges on the landscape.

When completed, this project will provide a comprehensive set of landcover change models to aid land managers in making climate-smart decisions for the future.

Providing Support for Ecological Assessments and Bird Monitoring

The Great Plains LCC is proud to be supporting two other partner-driven efforts in the Great Plains:

- In 2015, the Great Plains LCC contributed funding to support the Playa Lakes Joint Venture's region-wide integrated bird monitoring program. The program, called Integrated Bird Monitoring for Bird Conservation Regions (IMBCR), is a large partnership-driven program that provides a framework to integrate bird monitoring efforts across bird conservation regions. In the Great Plains, having standard monitoring data is essential for developing decision support tools to target conservation actions. The Playa Lakes Joint Venture's IMBCR initiative will contribute to better monitoring information for grassland birds, guide management decisions for these species, and provide a quantitative measure of conservation success. For more information, visit www.pljv.org.



Western Meadowlark, USFWS

- In 2015, the Great Plains LCC also partnered with the Bureau of Land Management and the USGS Fort Collins Science Center to expand the project area of the Southern Great Plains Rapid Ecological Assessment. Rapid Ecological Assessments, or REAs, synthesize existing information about a particular ecoregion in response to specific management questions. REAs are tools for identifying regionally important habitats for fish and wildlife, as well as for assessing the potential for particular habitats to be impacted by various environmental change agents such as wildfire and invasive species. As a result of financial and logistical support from both the BLM and the Great Plains LCC, the geographical extent of the Southern Great Plains REA now corresponds very closely with the geography of the Great Plains LCC. Consequently, the completed assessment will be relevant to all habitats and partners within the LCC.

Communications

Consistent communication between LCC Coordinators and Steering Committee members is essential to LCC success. By gaining a deeper understanding of partner concerns, Great Plains LCC staff can better serve the interests of the partnership. To this end, the Great Plains LCC conducted a series of interviews with willing Steering Committee members in the summer of 2015. These interviews explored how partners perceived the LCC and what they hoped to gain by participating. The findings of these interviews were presented at the October 2015 Steering Committee Meeting.

Coordinators and partners confirmed they see the LCC as a vehicle for creating relevant research and decision-making tools.

In these interviews, coordinators and partners confirmed that they see the LCC as a vehicle for cost-sharing, connecting scientists with managers, developing reliable base data sets, and creating relevant research and decision-making tools. They also revealed three areas of partner concern, which to date have not been explored by the partnership as a whole: game species management, State Wildlife Action Plan implementation, and human dimensions research for private lands conservation. In 2016, the Committee and LCC staff will explore opportunities for LCC contribution to these areas.

Science Delivery

The Great Plains LCC works to ensure our science information and tools are available in the scales and formats needed by various partners and end users in the Great Plains. To this end, the Great Plains LCC showcased the following research projects in webinars:

Potential implications to fish distributions from reduced connectivity in Nebraska, Missouri River Basin, and Great Plains streams in a changing climate

Jan 2015, hosted by Mark Pegg (University of NL) and Brenda Pracheil (Oak Ridge National Laboratory)

Conservation Priorities for Great Plains Fish Communities Based on Riverscape Connectivity and Genetic Integrity of Populations

Feb 2015, hosted by Joshua Perkin (Tennessee Technological University) and Keith Gido (Kansas State University)

Conservation assessment and mapping products for GPLCC priority fish taxa

April 2015, hosted by Ben Labay (UT Austin) and Dean Hendrickson (UT Austin).

Landsat classification of surface water in multiple years to model response of playa wetlands

June 2015, hosted by Dan Manier (USGS FORT) and Jennifer Rover (USGS Earth Resources Observation and Sciences Center).

You can find more information about these projects at: www.GreatPlainsLCC.org.



COMINGS AND GOINGS

In February 2014, the Great Plains LCC hired Nicole Athearn as Coordinator.

Nicole has been a federal conservation scientist for 14 years, working with the U.S. Fish and Wildlife Service in the Klamath Basin and the southern Great Plains, and with the U.S. Geological Survey's Western Ecological Research Center in the San Francisco Bay-Delta region. Her background is in wildlife ecology, landscape ecology, GIS, systems modeling, and decision analysis. Her focus is on 1) conservation of ecosystem function at the large landscape scale; 2) effective integration of science into management decision-making; and 3) development and effective use of collaborative partnerships. Nicole graduated from Oklahoma State University in Stillwater (MS in Wildlife Ecology and GIS Certificate) and the University of California at Davis (where she earned both a BS in Wildlife, Fish, and Conservation Biology, and a PhD in Ecology focusing on Ecosystems & Landscape Ecology).

In March 2015, the Steering Committee elected a new Chair, Brian Trusty (Audubon Texas).

Brian Trusty has enjoyed a 23-year career in parks and recreation, land and habitat management, tourism, and economic development that includes executive management responsibilities in private for-profit, private non-profit, and public organizations. His successful integration of public and private resources to create a pioneering approach in his work earned him an "Innovator of the Year" award in Maryland in 2007 given by the Daily Record, Maryland's leading legal and business journal. Brian also serves as Chair of the Texas State Parks Advisory Committee, and as a member of the advisory board of University of North Texas' Advanced Environmental Research Institute. He currently works as Vice President of National Audubon's Central Flyway and Executive Director of Audubon Texas. Under his leadership, Audubon has continued to grow as a conservation practice and thought leader in Texas and the American west.

We thank our out-going Chair, Keith Sexson (Kansas Department of Wildlife), for his service and leadership in guiding the LCC during his tenure.

The Great Plains LCC also brought on Jessica Blackband as an SCA-AmeriCorps Cooperative Conservation Intern in June 2015.



Bison, USFWS



Horned Lizard, ODWC



Ferruginous Hawk, USFWS

GREAT PLAINS STEERING COMMITTEE

State Agencies

Colorado Parks & Wildlife

Kansas Department of Wildlife, Parks & Tourism

Nebraska Game & Parks Commission

Oklahoma Department of Wildlife Conservation

Texas Parks & Wildlife Department

New Mexico Department of Game and Fish

Partnerships and NGOs

National Audubon Society and Audubon Texas

Playa Lakes Joint Venture

Rainwater Basin Joint Venture

The Nature Conservancy

Federal Agencies

Bureau of Indian Affairs

Bureau of Land Management

Bureau of Reclamation

National Park Service

Natural Resources Conservation Service

U.S. Fish and Wildlife Service

U.S. Forest Service

U.S. Geological Survey

About the Great Plains LCC

The Great Plains LCC is located in parts of eight states in the central United States, and covers more than 200 million acres from South Dakota to Texas.

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.

Our Vision: To maximize stakeholder effort across the landscape and optimize data collection, use, and management to conserve habitat and priority species through the development and application of scientific data.

The Great Plains LCC is currently focused on:

- The conservation of grasslands, playa lakes, and prairie rivers and streams – unique, vital and irreplaceable resources for people and wildlife in the heartland of America.
- Assisting partners in building their own capacity to address scientific challenges associated with climate change and other large-scale stressors.
- Facilitating landscape-scale collaboration to co-produce science and develop decision support tools.
- Supporting partners through landscape conservation planning and design



Black-Tailed Prairie Dog, USFWS



Grassland, PLJV

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