Gulf Coast Prairie

Landscape Conservation Cooperative

2014 Annual Report

Photo: Cameron Prairie National Wildlife Refuge Marsh/USFWS

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LETTER FROM CHAIR

It has been a whirlwind two years serving as Chair of the Gulf Coast Prairie Landscape Conservation Cooperative (GCP LCC) Steering Committee, but an extremely rewarding whirlwind. When Bill Bartush approached me about considering the Chair position, I was somewhat hesitant, knowing I had big shoes to fill behind Carter Smith. As the first Chair for this start-up, Carter had gotten this LCC off to a great start. I saw following in his footsteps a great challenge but also an opportunity; and I was confident that Bill Bartush would bring me up to speed quickly. During my time as Chair, we continued our momentum and together our partnership was able to learn a great deal about landscape conservation and the numerous opportunities that come from working together. We advanced our shared understanding of LCCs Strategic Habitat Conservation, and how best to integrate thoughtful and strategic processes and partnerships like State Wildlife Action Plans, Joint Ventures, Fish Habitat Partnerships, and other efforts to advance conservation on the ground. One of the things I've really loved about sitting at this table is the willingness of each to work with the other partners. The level of trust in this LCC makes it successful.

The GCP LCC has made significant achievements this past year, but I am most proud of the progress our Science Team has made. We've developed a science plan for the next three to five years, and you can learn more about the details of the Science Team on page 13 of this document. I'm also very pleased with the completion of several significant projects funded through the LCC, or jointly between the LCC and other partners. These include the Instream Flow project, led by Southeast Aquatic Resource Partnership; the Conservation Design project that focused on sea-level rise; an avian species project led by the International Crane Foundation; the Mottled Duck Decision Support Tool, done in conjunction with the Gulf Coast Joint Venture and Texas A&M – Kingsville; and the delineation of marsh habitat along the Gulf Coast. Several other projects are nearing completion, with resultant products already being used by partners to help improve their conservation decision making.

We've also had a great year getting our message out to strengthen the partnership. Working with Texas A&M University, we now have a newly designed website to provide more timely information to the partners. In January in McAllen, Texas, we initiated our engagement with our partners in Mexico as well as South Texas private land owners. This year, the GCP LCC also added new members to the partnership, including the U.S. Army Corps of Engineers. At our June Oklahoma meeting, we launched efforts to integrate human dimensions considerations into the natural science we are developing to improve its relevance for resource managers. We also expanded our knowledge of fisheries management to see what we might accomplish within our reservoir and river systems.

As we begin the process of transitioning to a new Chair, I want to acknowledge the support from the LCC Staff: Bill Bartush, Cynthia Edwards, Blair Tirpak, Nicholas Enwright, along with Todd Snelgrove and Chris Smith; and my two very qualified Vice Chairs, Mike Carloss and Matt Wagner. While I am stepping down as Chair, I won't be disappearing from this GCP LCC; I will merely resume my seat on the Steering Committee, and look forward to continuing my support of the Gulf Coast Prairie efforts. Finally, a huge thank you must go to all the members of the partnership for your support during my tenure, to your agencies for the support of the Gulf Coast Prairie LCC, and to all of you who sit on the Steering Committee and the Science Committees for your expertise, knowledge, and collaboration.

Sincerely,

Allison Shipp
Gulf Coast Prairie LCC Steering Committee Chair
U.S. Geological Survey

Gulf Coast Prairie LCC – Vision & Mission

Vision: The GCP LCC is a Collaborative Partnership of agencies, tribes, and organizations working together, realizing common goals, and having a cooperative determination to enhance cultural and natural resource conservation and sustainability across the landscape. By sharing knowledge and building a greater "collective" of resources, we can improve conservation outcomes.

Mission Statement: The GCP LCC Mission is to sustain, protect, and conserve natural and cultural resources in the Gulf Coast Prairie landscape/geography in the face of such threats and stressors as climate change, population growth, and urbanization. To meet this purpose, the GCP LCC will provide to the conservation community scientific and technical support, coordination, and communication. The GCP LCC will also foster a cooperative capacity and facilitate the refinement of that purpose through targeted monitoring, evaluation, and adaptation over time.

Gulf Coast Prairie LCC Steering Committee June 2014

EXECUTIVE SUMMARY

GCP at Turning Point – This is our 4th GCP LCC Annual Report; the GCP is now entering year five, a time of review, reflection, and planning to adjust our trajectory for the next 5 years. Unlike previous annual reports, this effort was crafted with a strategy to connect with our landscape cooperatives nationally, regionally, and with each of our member organizations – an ***Ecologically Connected Network***.

Review of GCP Goals – Our primary goals are Collaboration Science and Communication. This Annual Report ushers in a renewed effort for ***Communication***. Let's focus on making this, our 5th year, one where communication matures and becomes second nature through regular information, news, and coordinated conservation dialogue.

What you will see today and tomorrow – The format of this report and a future newsletter will drive readers to our new GCP website, the Southwest Region, and the national website as a means to bring consistency to the communication of LCC progress for all of our partners across this continent. A true ***Ecologically Connected Network.***

GCP Collaboration – Our partnership is about the people; the working relationships we have developed are indeed profound – our staff and Steering Committee, Science Team, and the many associated partners who step in as needed are witness to our ***VISION*** … ***working together, realizing common goals, and having a cooperative determination to enhance cultural and natural resource conservation*** ….

GCP Accounting and Accomplishment – This annual report is complete with a review of accomplishments, description of Science Success Stories, and discussion of our partners' comings and goings. Our success at those Goals of Collaboration and Science are substantial. As described in the ***GCP MISSION*** … ***The GCP LCC will also foster a cooperative capacity and facilitate the refinement of that purpose through targeted monitoring, evaluation, and adaptation over time***….

GCP Science – At the heart of this report are notable success stories in a complete summary of science projects. Since 2011, our overall focus has been the GCP landscape elements of Gulf Coastal Ecosystems, water quality and quantity, and the southern and coastal grassland ecosystems. The cultural component, as described in our Operations Plan, revolves around keeping the working lands that promote these important landscape elements in the GCP to ensure sustainability for future generations. Key accomplishments in the GCP and Multi-LCC science projects are well described. With our adaptive management process, using species and habitats to focus on our future landscape conservation efforts, you will see how the GCP science strategy, focal species, and associated habitats has taken time, but has become our most critical and successful step.

GCP Leadership Change – 2015 will see a transition in leadership, a GCP changing of the guard, with Matt Wagner taking on the role of Chair from Allison Shipp. Since 2012, Allison has served the partnership well, but I would be remiss if I did not emphasize how she has been a true advisor – a steady hand through many difficult issues, always considering facts, open to discussion and examination of all possible alternatives. She has calmed the water many times, and provided direction that was clear and in every case successful. Like Carter Smith before her, she will be missed in this capacity, but I have full confidence in Matt Wagner to help lead our partnership into the future.

The GCP is about FINDING VALUE – In this report you will see that in partners and staff, science projects and reports, we are a true collaborative. Each of us has a substantial conservation responsibility, and our agencies and organizations successfully meet these responsibilities. But this partnership and other LCCs are about "finding value," where the collective energy is much greater than the sum of its individual parts. It is a cooperative where we can corporately progress, when and where needed, to address new conservation challenges; to connect those conservation dots that, due to specific authorities, may need a boost to support and make that critical connection.

GCP Future for 2015 – You can anticipate this coming year to be a time to reflect and adjust. We will see if our Operations Plan is serving us well. We hope to continue the successful efforts of the last four years into 2015, building a solid foundation for our collaborative goals and emphasizing two common goals: (a) Communication and Information Exchange, and (b) Monitoring and Evaluation.

INTRODUCTION

The Gulf Coast Prairie LCC was established in 2011 and is based in Lafayette, Louisiana. It is part of a network of 22 similar partnerships that develop science for conserving and managing natural and cultural resources across the United States into Canada and Mexico.

The LCC network was launched in 2009 by the Department of the Interior, primarily through the U.S. Fish & Wildlife Service (USFWS) and U.S. Geological Survey (USGS). The work of LCCs is characterized by:

- a high level of collaboration, drawing from a variety of disciplines;
- creative leveraging of public and private sector resources;
- a focus on priorities most likely to result in self-sustaining wildlife populations indicative of healthy ecosystems;
- forecasting and planning for significant future changes to ecological conditions; and,
- the application of the best available science, particularly GIS technology and climate science.

The Gulf Coast Prairie LCC covers about 100 million acres stretching from south-central Kansas through Oklahoma to the Gulf Coast of Texas and Louisiana and south into three Mexican states (Coahuila, Nuevo Leon, and Tamaulipas).

The GCP LCC goals are to support, facilitate, promote, and build resource resilience in the face of climate change and other ecosystem stressors through:

1. Science Development and Delivery
2. Collaboration
3. Monitoring and Evaluation
4. Communication & Information Exchange

The Gulf Coast Prairie LCC Steering Committee comprises 17 organizations that guide the actions of the LCC, as well as numerous other partners and cooperators involved in science projects, technical work teams, and advancing the application of science on-the-ground.

In addition, our Science Team maintains and continually provides the best available science and information to guide the Partnership. The Science Team provided the technical expertise and assistance to develop the GCP LCC Science Strategy, adopted by the partnership this year.

This Science Strategy (http://gulfcoastprairielcc.org/science/science-strategy/) follows the Strategic Habitat Conservation (SHC) framework and focuses on the Tier 1 Focal Species and their associated habitats. The implementation of this strategy is underway with new projects being developed to meet the highest priority science needs identified by the partnership. This strategy is designed to help LCC partners align their efforts to address species and habitat needs, direct science resources, and communicate about conservation work.

In 2014, several of the science projects we initiated at our inception came to fruition, and we are building on these results as well as foundational geospatial information we've generated to develop landscape scale designs that will help partners implement conservation actions in the future. In addition, several cross-LCC efforts were launched, supporting the vision of a seamless network, with conservation successes that transcend individual LCC boundaries. Importantly, the GCP LCC also played a key role in coordinating and collaborating with RESTORE Act and Gulf Restoration activities.

Completion of the Science Strategy

The Gulf Coast Prairie LCC reached a significant milestone in its development with the completion of its Science Strategy in summer 2014. This effort was led by the GCP Science Team and began in October 2013. This Science Strategy follows the Strategic Habitat Conservation (SHC) framework and focuses on the Focal Species and their associated habitats (http://gulfcoastprairielcc.org/science/focal-species-and-associated-habitats/). The implementation of this Strategy is underway with new projects being developed to meet the highest priority science needs identified by the partnership. It is designed to help LCC partners align their efforts to address species and habitat needs, direct science resources, and communicate about conservation work.

The Gulf Coast Prairie LCC Conservation Planning Atlas is an online platform that allows the conservation community to discover, access and integrate existing spatial data layers and/or maps relevant to conservation planning. Users can perform spatial analyses with several basic spatial analysis functions or download the data for more advanced analysis with desktop mapping applications. Start exploring at http://gcplcc.databasin.org/

Completed Projects

Several projects implemented by the partnership were completed in 2014. Information can be found on the GCP LCC website and in the GCP Conservation Planning Atlas (CPA) (http://gcplcc.databasin.org/).

Garner State Park by TPWD

Managing Instream Flows and Developing Hydrologic Information for the Gulf Coast Prairie Landscape Conservation Cooperative.

This project was completed in June 2014 by a team of researchers at the Southeast Aquatic Habitat Partnership (SARP). This Project resulted in two informative reports focused on flow-ecology hypothesis and an instream flow science agenda – both of which can be used to inform decisions on flow management and the resultant conservation impacts.

The information contained in the reports coupled with the data sets available on the GCP LCC Conservation Planning Atlas (CPA) can be used by resource managers to prepare for future population growth and climate change-associated flow alterations at regional and local scales. Through highlighting more effective stream flow management strategies that minimize impacts on fish and wildlife, this work serves as a resource for state and federal agencies to focus regulatory and management efforts on habitats most vulnerable to altered flow. This project engaged a number of partners across the Southeast through regular webinars and a workshop in Oklahoma City in October 2013.
Weblink: http://gulfcoastprairielcc.org/science/science-projects/managing-changes-to-hydrologic-flow-in-the-south-central-united-states/

Whooping Cranes by USFWS/Steve Hildebrand

Employing the Conservation Design Approach on Sea-Level Rise Impacts on Coastal Avian Habitats along the Central Texas Coast.

This project was spearheaded by the International Crane Foundation and the Gulf Coast Bird Observatory with input from a host of partners and end users including the USFWS and The Nature Conservancy.

Sea level rise caused by climate change is a concern both locally and worldwide. This project examined the effects of sea level rise on coastal habitats and birds such as the endangered whooping crane and aplomado falcon. It evaluated potential scenarios for future impacts on a variety of species, including grassland birds, shorebirds, and waterfowl, to more effectively plan for and develop habitat conservation measures. The final report provides a comprehensive landscape approach to characterize the current and future habitat availability for a select suite of species of

concern within the Gulf Coast Prairies ecoregion along the Central Texas coast. It contains a Composite Habitat Type Dataset that identifies spatial location and extent of coastal habitat types, developed lands, and protected areas in the pilot project; an estimate of the amount and spatial configuration of habitat type needs for avian species; projections of the amount and spatial configuration of appropriate habitat types and evaluation of potential impacts on selected bird species numbers. The end products also include maps that depict habitat type shifts in coastal prairie and marshes under various sea-level rise scenarios and define the shifts in habitat availability and extent for the selected species.
Weblink: http://gulfcoastprairielcc.org/science/science-projects/studying-the-effects-of-sea-level-rise-in-coastal-texas/

Mottled duck brood by LDFW/Ruth Elsey

Spatially-Explicit Decision Support Tool for Guiding Habitat Conservation for Western Gulf Coast Mottled Ducks.

This project was led by Texas A&M University in Kingsville and conducted in conjunction with the Gulf Coast Joint Venture and the USFWS.

The mottled duck is one of only a few non-migratory duck species adapted to breeding in southern marshes. A major part of its population spends its entire life cycle within a relatively small coastal area in eastern Texas and western Louisiana along the Mississippi and Central Flyways, which are two of four major waterfowl migration routes in North America. In recent years, the mottled duck's coastal wetland habitat and surrounding areas have been compromised by urbanization, agricultural development, and changes to the area's hydrology. The impacts on hydrology result from sea level rise and atypically variable precipitation patterns. Survey data suggest the mottled duck population has experienced a long-term decline in Texas and is stable-to-declining across the rest of its range.

The Decision Support Tool (DST) that resulted from this project is a computer modeling tool developed by experts in Texas and Louisiana to help prioritize habitat conservation for the mottled duck. The tool can help partners target habitat areas that are most likely to boost the duck's breeding success, at the same time benefiting a dozen other grassland and wetland dependent species throughout the area. The DST will help Texas and Louisiana advance a more unified approach to mottled duck conservation. The intent is to continue this work by testing the assumptions used in development of the DST and to continually improve its usefulness.

The DST is housed on the CPA (http://gcplcc.databasin.org/galleries/8f1d437a367b48d99794ec7350949399).
Weblink: http://gulfcoastprairielcc.org/science/science-projects/conserving-the-mottled-duck-in-louisiana-and-texas/

Gulf Coast marsh by Ducks Unlimited

Delineation of Fresh, Intermediate, Brackish and Saline Marsh Types of the North-Central Gulf of Mexico Coast.

This project was led by the USGS – National Wetland Research Center in conjunction with Gulf Coast Joint Venture and Ducks Unlimited partners.

Coastal zone managers and researchers often require detailed information regarding emergent marsh vegetation types (i.e., fresh, intermediate, brackish, and saline) for modeling habitat capacities and needs of marsh dependent taxa (such as waterfowl and alligator). Detailed information on the extent and distribution of emergent marsh vegetation types throughout North-Central Gulf of Mexico coast has been historically unavailable. In response, the USGS, in cooperation with the USFWS via the Gulf Coast Joint Venture, Texas A&M University at Kingsville, the University of Louisiana at Lafayette, and Ducks Unlimited, Inc., produced a classification of emergent marsh vegetation types from the Corpus Christi Bay in Texas to the Alabama/Florida state line. The Texas portion of the study was published as a USGS Investigations Report and the classification from the Corpus Christi Bay, Texas to the Alabama/Florida state line has been made available to partners via the GCP LCC CPA. Funding for the project was provided through the South Central Climate Science Center.
Weblink: http://gulfcoastprairielcc.org/science/science-projects/delineating-marsh-habitats-along-the-north-central-gulf-of-mexico-coast/

Ongoing GCP LCC-funded Science Projects

Black-capped vireo by USFWS

A Conservation Framework for Priority Species of Grassland-Shrublands of the Southern Great Plains.

This project is being led by Texas A&M University with input from partners including the USFWS, the Oaks & Prairies Joint Venture, and the Nature Conservancy.

Grassland-shrubland prairies have been important to the livelihoods of generations of ranchers, the hunting community, and are home to wildlife species including the endangered black-capped vireo. Increasing pressures on the prairie from land use conversion, new development, and habitat fragmentation have created conflicts among various interest groups. Greater collaboration in advancing mutual interests will greatly expand and improve efforts to conserve the remaining prairie habitats of the southern Great Plains. This project involves developing Best Management Practices for land managers and private landowners in southwestern Oklahoma and central Texas to conserve grassland-shrubland prairie habitat, benefiting wildlife including vireos, painted bunting and game species such as turkey and white-tailed deer. This project will provide direction for future monitoring, research, and broader dissemination of information to land managers and owners. This project complements the work underway in the Grassland Decision Support Tool, which also focuses on species like the Northern Bobwhite.
Weblink: http://gulfcoastprairielcc.org/science/science-projects/conserving-grasslands-of-the-southern-great-plains/

Kemp's Ridley sea turtle by USFWS

Barrier Island Vulnerability: Data Integration and Assessment.

This project is being led by the Harte Research Institute with input from partners engaged in the Gulf Coast Vulnerability Assessment.

This project identifies conditions and variables affecting barrier island vulnerability across the Gulf of Mexico. It searches for gaps in data and integrates datasets and corresponding meta data required for a Gulf of Mexico-wide assessment. Fragile barrier islands are important nesting habitat for several GCP LCC focal species, such as brown pelicans, sea turtles, and black skimmers. Assessing the vulnerability of coastal ecosystems at a Gulf of Mexico-wide scale has become even more important in the wake of several destructive storms (e.g. Katrina, Rita, and Ike) and the 2010 Deepwater Horizon oil spill.
Weblink: http://gulfcoastprairielcc.org/science/science-projects/integrating-data-for-protecting-gulf-of-mexico-barrier-islands/

Oklahoma Tall Grass Prairie by Bartush/USFWS

"Common Ground" Landcover Classification: Oklahoma Ecological Systems Mapping.

This project is being led by the Oklahoma Department of Wildlife Conservation and complements an ongoing effort funded through the Great Plains LCC.

The GCP LCC partners need seamless landcover data for the south-central United States to incorporate into computer models that inform management actions for many terrestrial species. This project helps build consistency in land cover data across the region and also fills in data gaps. The resulting landcover data is expected to help managers implement strategies to achieve future desired conditions in vegetative and habitat quality, thus supporting a variety of conservation efforts in this region.
Weblink: http://gulfcoastprairielcc.org/science/science-projects/mapping-vegetation-in-oklahoma/

Gulf Coast by TPWD

Evaluation of Regional Sea Level Affecting Marshes Model (SLAMM).

This project is being led by the Warren Pinnacle Consulting Inc. as part of the Gulf Coast Vulnerability Assessment that includes the U.S. portion of the Gulf of Mexico from Brownsville, TX to the Florida Keys.

GCP LCC partners are undertaking numerous efforts to conserve and restore coastal resources, many of which are sensitive to the effects of climate change. Natural resource managers need improved computer modeling tools to effectively evaluate sea level rise scenarios along the Gulf of Mexico coast to better predict the effects on habitats and wildlife. This project, part of the Gulf Coast Vulnerability Assessment, involves evaluating results of a computer modeling tool that helps characterize the impacts of sea level rise on coastal marshes and the hundreds of species that depend on these habitats. It addresses gaps in geographic coverage of the model and provides a consistent approach across the United States portion of the Gulf of Mexico, making Gulf-wide analyses more viable. These new capabilities will have countless applications for ensuring adequate habitat for Gulf Coast fish and wildlife under these changing conditions..
Weblink: http://gulfcoastprairielcc.org/science/science-projects/evaluating-sea-level-rise-modeling-for-the-gulf-of-mexico-coast/

Williams Prairie © Michael Morton Photography

Grassland Decision Support Tool.

This project is being led by the Missouri Resource Assessment Partnership (MoRAP) in conjunction with NatureServe. This project includes input from a number of partners including Joint Ventures, State Agencies from Oklahoma, Louisiana, and Texas, and the USFWS.

Focusing on grasslands and conservation of species such as northern bobwhite and eastern meadowlark, this project develops computer models that help identify threats to grasslands through conversion and fragmentation. Its purpose is to help partners identify the best places to invest their resources to conserve and restore functional grasslands that support self-sustaining wildlife populations. Partners actively play a role in assessing the models by identifying pilot areas to test and refine these tools, and make the results more broadly applicable. Primary areas for the pilot are grasslands along the mid-coast of Texas, and priority areas in Oklahoma and north Texas associated with grassland bird habitat efforts. In the future, we will be exploring the possibility of expanding the project to include pilot areas in the Chenier plains of Texas and Louisiana, and the South Texas sand-sheet grasslands.
Weblink: http://gulfcoastprairielcc.org/science/science-projects/identifying-priority-grasslands-in-the-south-central-united-states/

Lake Texoma Reservoir, Morgan Gilbers Texas Tech University

Use of River-Reservoir Interface Habitats by Larval and Juvenile Fishes: Influence of Lateral Connectivity and Multi-Scale Environmental Conditions.

This project is being led by Texas Tech University with guidance from the Nature Conservancy, the Reservoir Fisheries Habitat Partnership, and the Southeast Aquatic Resources Partnership (SARP).

While siltation in the areas between reservoir and riverine ecosystems can damage habitat, there is emerging evidence to suggest certain water management strategies could promote high fish diversity in these areas. This project includes new information on young fish species in Lake Texoma, a reservoir in the Red River watershed along the Texas/Oklahoma border. This project will help refine the priorities of the GCP LCC relating to focal species like alligator gar and white bass. The project involves evaluating the taxonomic and functional structure of juvenile fish in the upper end of Lake Texoma in Oklahoma and Texas. It also involves assessing the hydrological connectivity and other habitat factors that influence the abundance and diversity of young fish in this area.
Weblink: http://gulfcoastprairielcc.org/science/science-projects/studying-fish-habitat-needs-in-lake-texoma-reservoir/

Green Jay at Laguna Atascosa by Rich Kostecke of the Nature Conservancy

Bird Communities of Mature and Revegetated Tracts along the Lower Rio Grande.

This project is led by the University of Texas-Pan American with guidance from the Rio Grande Joint Venture, the USFWS and The Nature Conservancy.

The Lower Rio Grande Valley in south Texas is one of the largest migratory bird stopovers in North America and a major birding hotspot. Reservoir development allowed controlled flows of the lower Rio Grande River and subsequent agricultural expansion in the river valley, resulting in rapid population growth and habitat loss that has led to significant declines in fish and wildlife populations. This project involves restoring habitats along the Lower Rio Grande Valley in south Texas. Partners are studying the responses of different bird species, such as the Altamira oriole, green jay, and olive sparrow, to farmland revegetation in the valley.

Weblink: http://gulfcoastprairielcc.org/science/science-projects/restoring-rio-grande-valley-migration-corridors/

Aerial view of marsh lands by Ducks Unlimited

Occurrence and Variation in Submersed Aquatic Vegetation along Northern Gulf of Mexico: A Hierarchical Approach to Assess Impacts of Environmental Change on Submersed Aquatic Vegetation Resources.

This project is being led by Louisiana State University with input and guidance from partners such as the Gulf Coast Joint Venture.

Submersed aquatic vegetation is a critical component of highly productive coastal ecosystems that is greatly affected by sea level rise. The project involves compiling consistent baseline data on the occurrence and abundance of submersed aquatic vegetation along the northern Gulf of Mexico. It also involves assessing and developing a conceptual model of environmental factors affecting variations in the vegetation. These data will enable predictive modeling of vegetation under different scenarios of landscape and climate change and contribute to the refinement of existing models of ecosystem change. These tools will contribute to efforts to forecast the effects of climate change on the distribution, abundance, and diversity of submersed aquatic vegetation and the fish and wildlife that depend on them.

Weblink: http://gulfcoastprairielcc.org/science/science-projects/developing-data-on-submersed-aquatic-vegetation-in-the-gulf-of-mexico/

Northern bobwhite quail by TPWD

Application of a Terrestrial Landscape Fragmentation Framework to the South-Central United States.

This project is being led by the USGS – National Wetland Research Center and will contribute to several additional ongoing projects, including the Grassland Decision Support Tool.

Habitat fragmentation is of particular significance to species that migrate or use extensive land and water areas throughout their life cycle. GCP LCC staff are evaluating methods for measuring how urban, rural, and energy-related development has affected habitat connectivity in Louisiana, Oklahoma, and Texas. A fragmentation analysis of Oklahoma has been expanded to Louisiana and Texas, creating maps that identify relatively intact areas of the landscape. These maps help partners focus on the most important areas to conserve and restore to support self-sustaining wildlife populations. Future analysis will be conducted to identify the fragmentation of specific habitat types as well as estimate future fragmentation due to urbanization. A report will be produced to evaluate this fragmentation analysis with other similar analysis conducted in the western United States.

Weblink: http://gulfcoastprairielcc.org/science/science-projects/assessing-habitat-fragmentation-in-louisiana-oklahoma-and-texas/

Multi-LCC Projects

The GCP LCC is engaged in five multi-LCC projects:

1. ***Gulf Coast Vulnerability Assessment.*** The GCP LCC continues to be a leader in the development of the Gulf Coast Vulnerability Assessment (GCVA), which is evaluating the vulnerability of mangroves, barrier islands, oyster reefs, tidal emergent marshes, and species associated with each habitat across the northern U.S. portion of the Gulf of Mexico. This effort is being led in conjunction with three other LCCs (Gulf Coastal Plains and Ozarks, South Atlantic, and Peninsular Florida) along the Gulf as well as NOAA, the USGS Climate Science Centers, the Coastal Protection and Restoration Authority, The Nature Conservancy, and the Gulf of Mexico Alliance. Vulnerability is being assessed by characterizing a species' or habitat's sensitivity to projected changes, the magnitude and rate of exposure, ecological responses, and ability of habitats and species to adapt to changes.
   Weblink: http://api.ning.com/files/RxYDN27Lud-8lQ-ts4dkA9yQprkwZJdml3tnoAQADdMcCboJRXX728gRGeHQTh3WutshZJ36gVlL*rtUlFb38S8c2R4YDpYh/GCVAfactsheet7152014.pdf

> The Gulf Coast Vulnerability Assessment is a joint effort across the U.S. portion of the Gulf of Mexico that is being spear-headed by the four Gulf LCCs. We are engaging experts to assess the vulnerability of 4 habitats and 11 species across the U.S. portion of the Gulf of Mexico from Brownsville, Texas to the Florida Keys. These experts haven used the Standardized Index of Vulnerability and Value Assessment (SIVVA) to provide their expertise. The GCVA is scheduled for completion in the first quarter of 2015 and the results will help inform investment decisions across the Gulf, including informing the USFWS Gulf Restoration Program.

2. ***Establishing Explicit Biological Objectives to Guide Strategic Habitat Conservation for the Gulf Coast.*** This is a National Landscape Conservation Cooperative effort led by the USFWS's newly-established Gulf Restoration Office. The four Gulf LCCs (GCP LCC, Gulf Coastal Plains and Ozarks LCC, Peninsular Florida LCC and South Atlantic LCC) are collaborating on a project to develop explicit population objectives for priority species within each of the focal areas of the Gulf Vision document. Through a partnership with the USGS, this team will translate these population objectives into habitat objectives that can be used to strategically guide on-the-ground restoration activities.
   Weblink: http://gcpolccapps.org/projects/ProjectPage.aspx?id=268

3. ***Incorporating Future Change into Current Conservation Planning: Evaluating Wetland Migration along the Gulf of Mexico under Alternative Sea Level Rise and Urbanization Scenarios.*** This project is a partnership of the four Gulf LCCs to develop a decision support tool that identifies where future coastal wetlands are likely to persist and where they are likely to be lost under various scenarios of both sea level rise and future urbanization. Gulf managers and planners can use the tool to minimize the future loss of tidal wetlands; assist Gulf communities in their decisions regarding restoration funding; and allow for urban growth while enhancing ecological resilience.
   Weblink: http://gcpolccapps.org/projects/ProjectPage.aspx?id=254

4. ***Standardizing and Coordinating Range-wide Monitoring of the Interior Least Tern and its Habitat in a Metapopulation Context.*** This project is being led by the Gulf Coastal Plains & Ozarks LCC and is a partnership among the GCP, Great Plains, Plains & Prairie Potholes, and Eastern Tallgrass Prairie and Big Rivers LCCs as well as the U.S. Army Corps of Engineers, USFWS, USGS and American Bird Conservancy. Standardized range-wide monitoring protocols are being developed for both the Interior Least Tern (ILT) and its habitat, which is one of three requirements for delisting. Anticipated outcomes include the ability to assess population trends of the ILT and other river-dependent species, and to monitor species responses to habitat management.
   Weblink: http://gcpolccapps.org/projects/ProjectPage.aspx?id=255

5. ***Linking Regional-scale Management to Continental-scale Conservation: Northern Pintail as a Model.*** The GCP is the lead LCC on this project, being conducted by the USGS. It is focused on the development of a decision-support framework linking regional actions to continental-level population and harvest objectives using Northern Pintail as a model species. The framework will be used to engage LCC habitat management partners within areas of importance to pintails while maximizing cross-taxa impact of the framework. This project is being done in conjunction with the Plains & Prairie Potholes, California, and Great Plains LCCs.

6. The GCP LCC is also one of seven LCCs[1] working on the Gulf Hypoxia project that is being led by the Eastern Tallgrass Prairie and Big Rivers LCC. The LCCs and other partners are working to identify key scientific uncertainties associated with design and management of a sustainable ecosystem to provide multiple benefits for agricultural productivity, water quality, and wildlife conservation—both locally and in the Gulf of Mexico watershed. This effort is designed to be complementary to the principles and goals of the Hypoxia Task Force, Mississippi River Basin Initiative, and similar existing efforts, with a common mission to reduce nutrient loading through watershed and to effectively achieve water quality benefits both locally and in the Gulf of Mexico, all with an integrated focus on habitat conservation.
   Weblink: http://www.tallgrassprairielcc.org/research-projects/mississippi-river-basingulf-hypoxia-structured-decision-making-workshop-2014/

Comings and Goings

STEERING COMMITTEE

The United States Army Corps of Engineers (USACE) joined the GCP LCC Steering Committee in 2014. USACE is represented by Marcia Hackett, SW Regional Technical Specialist for Environmental Planning and Paul Wagner (alternate) who is Senior Ecologist at the Institute for Water Resources. Mike Carloss of the Louisiana Department of Wildlife retired and was replaced on the Steering Committee by Todd Baker. Rob Ziehr of the Natural Resource Conservation Service (Texas) replaced alternate Steering member Susan Baggett.

STEERING COMMITTEE SPECIAL SESSIONS AND FIELD TRIPS:

The January Steering Committee meeting included a number of partners from Mexico (including Pronatura Noreste, Ducks Unlimited de México, and Nuevo León State University) as a first step towards strengthening the international nature of the GCP LCC. That meeting also included a private lands forum that engaged individuals from the East Wildlife Foundation who spoke about the role of private landowners in conservation efforts in south Texas.

In June, the Steering Committee focused on a fisheries session that included presentations from SARP, Reservoir Fisheries, the USACE and Oklahoma State University (http://gulfcoastprairielcc.org/media/22504/fisheries-agenda_final_june2014.pdf). That meeting also saw a great advancement in the inclusion of Human Dimensions science (http://gulfcoastprairielcc.org/media/22436/human-dimensions-of-fire_case_study_june6_2014.pdf) with a Special Session on Prescribed Fire that brought in social scientists from Oklahoma State University, Colorado State University, and Texas A&M University as well as the Oaks and Prairies Joint Venture. The session was topped off with a tour hosted by Oklahoma State University that covered some areas that had been treated with prescribed burns.

SCIENCE TEAM

There were a number of changes to the Science Team in 2014 with several original members moving on to other positions – and retirement. Thank you to Roger Zimmerman, Lenny Brennan, Sally Palmer, Greg Summers, Scott Robinson, and Kirk Feuerbacher for their dedication to the Gulf Coast Prairie LCC during the first two years of the Team. New members were added from Oklahoma Department of Wildlife Conservation (Mark Howery), the Samuel Roberts Noble Foundation (Chad Ellis), the Natural Resources Conservation Service (Scott Alford), Louisiana Department of Wildlife and Fisheries (Amity Bass), and the Southeast Aquatic Resources Partnership (Steve Magnelia). Additional advisory capacity was added through Oklahoma State University (Shannon Brewer) and the Mission-Aransas National Estuarine Research Reserve (Katie Swanson).

1 Plains & Prairie Potholes LCC, Upper Midwest & Great Lakes LCC, Eastern Tallgrass Prairie & Big Rivers LCC, Appalachian LCC, Great Plains LCC, Gulf Coast Prairie LCC, Gulf Coast Plains & Ozarks LCC.

Science Team Group 2014

Monitoring and Evaluation

The GCP LCC built a web-based monitoring system for grassland habitat called the Grassland Management Inventory Tool (G-MIT). This tool allows the user to update vegetation and management attributes by tract of land, which enables our partners to track and report conservation delivery acreages by organization, program, and funding source and inform conservation planning and resource allocation. The G-MIT is currently being used by the Oaks and Prairies Joint Venture to quantify contributions of land tracts in the Grassland Restoration Incentive Program (GRIP), in Texas, towards their habitat objectives for grassland birds. They anticipate this data will help identify the relationship between grassland management practices and available habitat type, as well as the relationship between available habitat type and bird population response. In the coming year, the GCP LCC is planning to expand the G-MIT to be utilized as ground-truthing sites for updating the Ecological Systems Mapping in Texas and Oklahoma, for use by other partners such as The Nature Conservancy and the Native Prairies Association of Texas.

Communication & Information

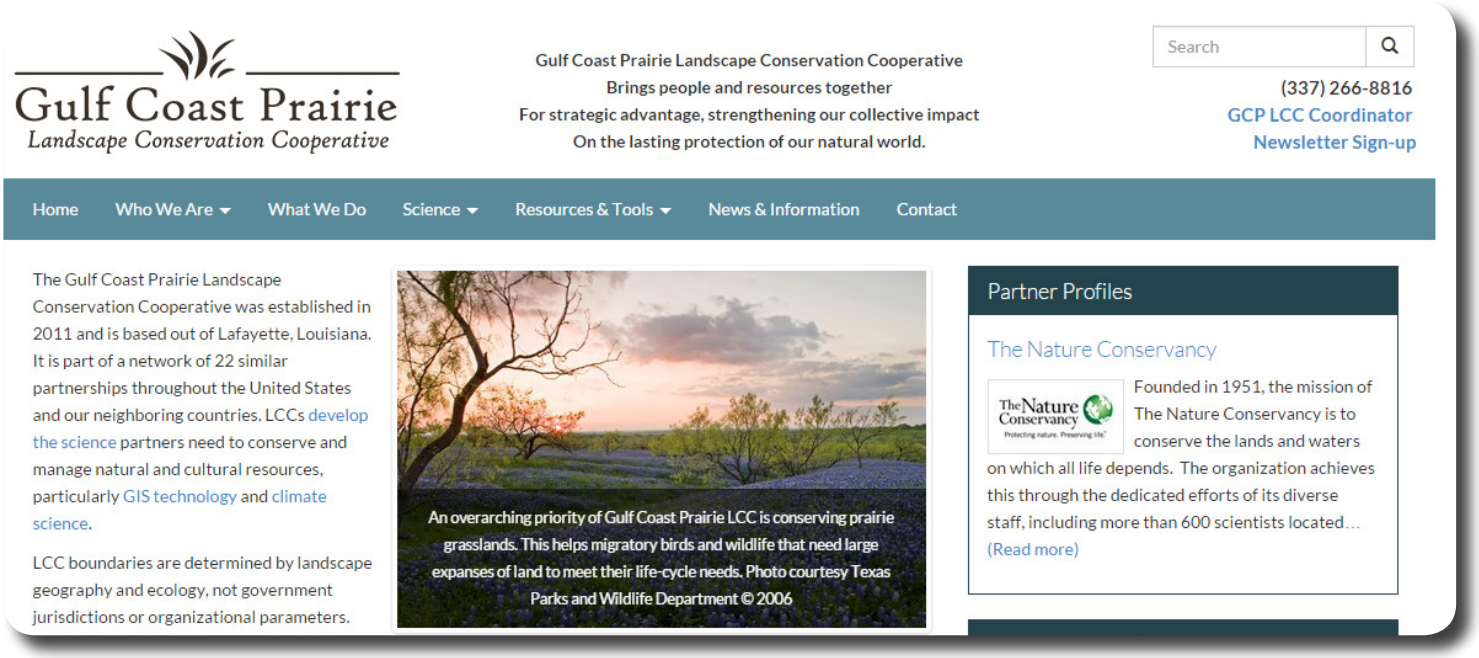
2014 saw the launch of a completely redesigned website by Texas A&M University for GCP LCC. USFWS Science Applications program developed the blueprint for the website including hierarchical descriptions of ongoing LCC projects to facilitate easily accessible information about the LCC. Many partners contributed high quality photographs and images, making it a truly cooperative effort. The new site serves as a venue to highlight the work of the GCP LCC and its partners. It includes project reports, news and highlights for the LCC and partners, links to the Conservation Planning Atlas (CPA).

In 2014, the GCP LCC introduced a monthly webinar series featuring presentations about LCC projects and other topics of interest to the partnership. Webinars are recorded and stored on the website (http://gulfcoastprairielcc.org/resources-tools/webinars/) and can also be accessed through our very own YouTube channel. (https://www.youtube.com/channel/UC-bqsiBtd4ffz93MMNWPlZw)

Austin Hattox and Ross Anderson of Texas A&M University implemented and launched the GCP LCC website redesign. The redesigned site features a 'Partners Making a Difference' section that enables us to highlight work of the partners engaged in the LCC (http://gulfcoastprairielcc.org/); a library of past webinars held (http://gulfcoastprairielcc.org/resources-tools/webinars/); and a more dynamic 'News & Events' section. (http://gulfcoastprairielcc.org/news-information) Ross and Austin also put in place a content management system to better facilitate the team's ability to add new website content. Since the inception of the new website and an increased effort to highlight the work of the GCP LCC we have seen a nearly 50% increase in page views and users are spending twice as much time on the website. Please check out the new site!

The GCP LCC CPA (http://gcplcc.databasin.org/) is an online mapping environment built upon the Conservation Biology Institutes Data Basin platform. It allows our partners to easily discover, visualize, access, and integrate existing spatial data and tools. The GCP LCC CPA provides access to all spatial data funded by or created in collaboration with the GCP LCC, other relevant spatial data in our geography, and provides a platform for collaboration with our partners. We continue to improve the CPA to meet the needs of the partners and encourage feedback to make improvements.

All final deliverables from GCP LCC created or funded projects and multi-LCC projects with GCP LCC involvement are stored on USGS ScienceBase (https://www.sciencebase.gov/catalog/). That information is then made available through the GCP LCC website projects page (http://gulfcoastprairielcc.org/science/science-projects/) and through the CPA (http://gcplcc.databasin.org/). Scientists and managers are included in every LCC Steering Committee meeting to facilitate face-to-face sharing of information in a poster session. The GCP LCC participates in the LCC Network's Data Management Working Group with Blair Tirpak as a co-chair of that working group.



Screen shot of the new Gulf Coast Prairie website

APPENDIX 1: GULF COAST PRAIRIE LCC COMMITTEES

Steering Committee

Member	Agency/Organization
Kyle Balkum	Louisiana Department of Wildlife and Fisheries
Tim Birdsong	Southeast Aquatic Resources Partnership
Jeff Boxrucker	Reservoir Fisheries Habitat Partnership
David Brown	National Oceanic and Atmospheric Administration
Jim Giocomo	Oaks and Prairies Joint Venture
Mary Gustafson	Rio Grande Joint Venture
Marcia Hackett	U.S. Army Corps of Engineers
Jerry Holden	Ducks Unlimited
Andy Jones	The Conservation Fund
Rich Kostecke	The Nature Conservancy
Jeff Pennington	Oklahoma Department of Wildlife Conservation
Salvador Salinas	USDA Natural Resources Conservation Service
Allison Shipp (Chair)	U.S. Geological Survey
Benjamin Tuggle	U.S. Fish & Wildlife Service, Southwest Region
Matt Wagner (Vice Chair)	Texas Parks and Wildlife Department
Tammy Whittington	National Park Service
Barry Wilson	Gulf Coast Joint Venture

Science Team

Member	Agency/Organization
Scott Alford	Department of Agriculture, Natural Resources Conservation Service
Kyle Balkum	Louisiana Department of Wildlife and Fisheries
Amity Bass	Louisiana Department of Wildlife and Fisheries
Mike Brasher	Ducks Unlimited & Gulf Coast Joint Venture
Jorge Brenner	The Nature Conservancy
Chad Ellis	The Samuel Roberts Noble Foundation
John Foret	National Oceanic and Atmospheric Administration
Mark Howery	Oklahoma Department of Wildlife Conservation
Cindy Loeffler	Texas Parks and Wildlife Department
Steve Magnelia	Texas Parks and Wildlife Department and Southeast Aquatic Resources Partnership
Andy Nyman	LSU Ag Center
Mark Shafer	Oklahoma Climatological Survey
Ryan Smith	The Nature Conservancy
Don Wilhelm	U.S. Fish & Wildlife Service
Jarrett Woodrow	U.S. Fish & Wildlife Service

Nesting Brown Pelicans. Credit: USFWS

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