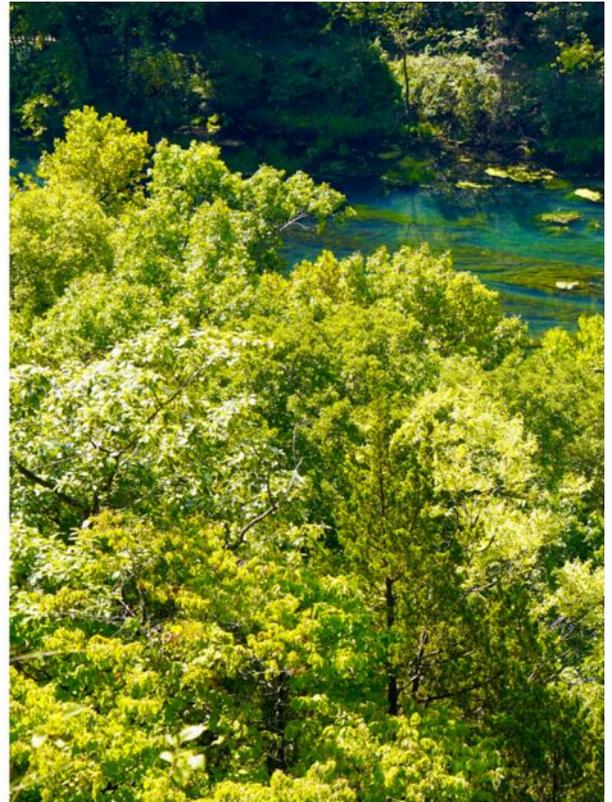




Gulf Coastal Plains & Ozarks  
Landscape Conservation Cooperative



LANDSCAPE CONSERVATION  
COOPERATIVES



# 2017 Annual Report

# From our Steering Committee Chairmen

## 2017: GCPO LCC Year of Transition



From top: Kenny Ribbeck, Louisiana Dept. of Wildlife & Fisheries, Brian Branciforte, Florida Fish & Wildlife Conservation Commission, and Jeff Fleming, U.S. Fish & Wildlife Service

In 2017, the Gulf Coastal Plains and Ozarks Landscape Conservation Cooperative (GCPO LCC) began a new phase in its landscape conservation work. Todd Jones-Farrand held a series of meetings with US Fish and Wildlife Service (USFWS) Ecological Services offices to brief them on the datasets that back up Blueprint 1.0, and to explore possibilities for developing “use cases” where these datasets could be applied. For example, the Arkansas office suggested development of a “red light-green light” decision support tool to inform new energy development decision makers (particularly wind energy). The LCC began planning an update to the Blueprint, with a number of projects designed to provide needed data for Blueprint 2.0. Ultimately, we were working toward Adaptation Strategies that could guide our partners as they incorporate projected future conditions into their decision-making processes.

Then the President’s budget request was released in May, revealing zeroed out federal funding for the entire LCC Network program. Leadership at the Department of Interior put a hold on all official steering committee meetings scheduled to be conducted by USFWS staff, at the same time encouraging partners to step up to lead the way. The ensuing months have been a study in uncertainty and confusion, marked by staff attrition. No one can say for certain, at this point in time, but it may very well be that 2017 will be remembered as the year that marked the end of the Landscape Conservation Cooperatives as we have only begun to appreciate them.

However, by and large the conservation community recognizes the ongoing need for conservation planning and assessments at the landscape level. We still face the same daunting challenges of increasing urbanization and a warming climate, which will shape the future conservation landscape in the GCPO for the rest of this century. The question becomes then, as it always has been, how does the conservation community plan to deal with these challenges? States do not have the resources to focus on and manage each individual species; the approach to conservation must focus on landscapes and the connectivity of fragments resulting from land use change. If the LCC structure is not the best way to take on these questions, then what other model of collaborative landscape conservation shall we support? This is still the compelling question of our time.

In the meantime, habitat conversion and other conservation threats proceed apace. We have to utilize what we know--all the tools at our disposal, including those the LCCs have already developed--to curtail the accumulating threats to our natural and cultural heritage. Will we silently watch the last covey rise, or actively partake in sustaining that explosion of beauty, along with other treasured outdoor experiences for future generations to come? ... Time to decide!

*For Sustaining Relations and Best Regards,  
Kenny Ribbeck, Louisiana Dept. of Wildlife & Fisheries  
Brian Branciforte, Florida Fish and Wildlife Conservation Commission  
Jeff Fleming, U.S. Fish and Wildlife Service, Region 4*



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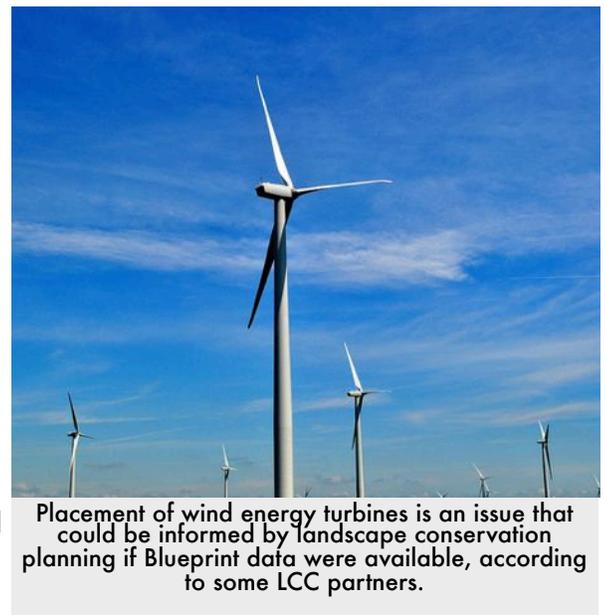
GCPO LCC. 2017. Gulf Coastal Plains and Ozarks Landscape Conservation Cooperative 2017 Annual Report. 8 pages.

# Biological Planning, Conservation Design, and Application of LCC Research & Tools

## GCPO LCC Conservation Blueprint 1.0: Use case development in 2017

The Steering Committee recognized the value of the GCPO LCC's Conservation Blueprint unveiled in fall 2016, but also the inherent challenge in communicating its value to their staffs. Thus, they directed GCPO staff to develop examples of how the Blueprint could be used to address a variety of planning and management decisions. During the winter and spring of 2016-2017, GCPO LCC Science Coordinator Todd Jones-Farrand visited with 5 USFWS Ecological Services Field Offices (AL, MO, AR, LA, MS), 7 State Agencies (ALDCNR, MDC, ODWC, AGFC, TPWD, MS Museum, LDWF), and 2 Joint Venture Offices (LMV, CH), as well as calls to these and other partners (EPA, FWC, PARC). The purpose of these meetings was two-fold. First and foremost, the meetings were intended to develop relationships with partner staff, understand their decision support needs, communicate how the LCC Blueprint effort could help address those efforts, and understand how the Blueprint could be made more useful. Second, the meetings were intended to identify common needs across the partner organizations that the Blueprint could address for development of "use cases" to showcase the value of the Blueprint for facilitating or streamlining conservation decisions.

As one might expect, the list of needs discussed at these meetings was long and varied. However, several themes emerged. First, the Ecological Services (ES) Field Offices were primarily interested in drivers of landscape change and associated decisions related to permitting, listing, and mitigation. Second, the States were primarily interested in applications of the Blueprint to address decisions regarding Conservation Opportunity Areas in State Wildlife Action Plans. The COAs are intended to focus conservation action on the best places, and various States welcomed help in defining, refining, connecting, monitoring or prioritizing among COAs. Third, the partners identified areas of potential improvement for the Blueprint. For example, the Blueprint includes information on sea-level rise and urban expansion, and we are working to incorporate impacts of climate on forests and stream flows. However, the Blueprint doesn't yet explicitly address an important issue facing several Field Offices: energy development and transmission. Further, all partners wanted to see more species-specific information incorporated.



Based on these discussions, we initiated a "use case" project to develop COAs for Arkansas. The approach being used is based upon a methodology developed by Texas Parks and Wildlife Department, which identifies important landscapes by combining information on species presence with expert-based estimates of habitat suitability. Here we are adapting the process by using measures of habitat quality as indicated by the Blueprint and by including as many SWAP species as we can obtain range and presence data for. Once the technical aspects are ironed out for Arkansas, we intend to expand the methodology to other States in the GCPO partnership. The products will serve as an improvement to the species information in the Blueprint, and are expected to prove useful as a basis for other COA-related decisions (e.g. refining, prioritizing), as well as make the Blueprint more useful for supporting permitting, listing and mitigation decisions.

## A “Unified Mask” Base Layer for the GCPO LCC Conservation Blueprint

In 2017, we initiated work to develop a seamless, expanded, comprehensive “unified mask” of all nine of our Broadly Defined Habitats (BDH), which resolves the geospatial conflicts between systems featured in our Conservation Blueprint. Blueprint 1.0 was based on independent ecological assessments, which were themselves developed from multiple geospatial datasets considered the best fit for each system. When all system condition index layers were combined in the Blueprint, conflicts within mapping units resulted: areas claiming to belong to more than one existing or potential habitat class. Resolving these conflicts will facilitate development of Blueprint 2.0, expected to be complete in August 2018.

To develop the unified mask, we started with the [GAP/LANDFIRE National Terrestrial Ecosystems Land Cover Dataset](#) as the primary designation of the currently existing amount and configuration of the five terrestrial Broadly Defined Habitats. The potential habitat layer is based on the [LANDFIRE BioPhysical Settings \(BpS\)](#) layer as before, but with a revised parsing of which BpS classes belong in which BDH categories. A sixth category of Beaches and Dunes, which were not addressed in Blueprint v1.0, will also be included. Other datasets that more accurately describe landscape conditions important to particular broadly defined habitats, such as our [inventory of known prairie patches](#) (for grasslands) or our [inundation frequency mosaic](#) (for forested wetlands) will override the GAP/LANDFIRE layer in certain areas. In Texas and Oklahoma, ecological system and current vegetation map layers developed by the Missouri Resource Assessment Partnership (MoRAP) will be used. Similarly, for potential habitat more accurate data sets will override the BpS layer where available.

While developing the unified mask, we have also refined our Broadly Defined Habitats: Open Pine is now broken out into three subclasses: Longleaf Pine Flatwoods, Longleaf Pine Woodland, and Shortleaf-Loblolly Pine Woodland. Classes for Freshwater Marsh, Glades and Mixed Forest have been added, based on partner interest, in preparation for development of conservation targets for these important systems. The new unified mask will also feature a larger GCPO LCC footprint, with an expanded analysis to include watersheds one or two counties beyond our geographical boundary in order to better address needs of partners in those areas, as well as resolving map seams in the Southeast Conservation Adaptation Strategy (SECAS) products.

We believe that this unified, comprehensive map of broadly defined habitats will have applications beyond the next iteration of the GCPO LCC Conservation Blueprint. We hope that partners will find it useful as a stand-alone regional conservation planning tool and plan to make it available in early 2018.



## GCPO LCC Projects Migrate to ScienceBase

The Gulf Coastal Plains and Ozarks Landscape Conservation Cooperative has recently reorganized and significantly increased the amount of information available at the GCPO LCC Community on the [USGS ScienceBase Catalog](#). The community page now catalogues LCC projects and their associated products. External projects are organized by the fiscal year in which they were initiated. Metadata records for all projects and products have also been recently updated.

Partners can still browse and search for projects on the GCPO LCC website and for geospatial data products on the [GCPO LCC Conservation Planning Atlas](#). The enhanced content on Science Base is the result of recent efforts across all 22 Landscape Conservation Cooperatives to standardize how information assets are archived and made available to the public. Each LCC has a community presence on the [Landscape Conservation Management and Analysis Portal](#) on Science Base. For the past several months, data managers across the LCC Network have been hard at work revising all LCC project and product metadata using a system-wide

# The State of the GCPO

## State of the GCPO Report

From 2014 to 2017, the Gulf Coastal Plains and Ozarks Landscape Conservation Cooperative (GCPO LCC) conducted research, assembled experts and spatial datasets, and conducted a series of complex analyses to produce peer-reviewed written drafts of [Ecological Assessments](#) for eight of our nine priority systems (the Beaches and Dunes Assessment is in progress using recently acquired LiDAR data). By mid-2017, all but Beaches & Dunes were completed, including a substantial revision to the Upland Hardwoods Assessment. The Assessment process included generating condition index maps for each system, as well as developing those maps into a comprehensive Draft Conservation Blueprint 1.0 to guide resource allocation and support management decisions across all nine priority systems. The habitat-specific maps were integrated into a single map ranking watersheds according to aquatic and terrestrial conservation priorities across the region.

The [State of the GCPO](#) report presents an overview of the development of the Conservation Blueprint from the Ecological Assessments and includes a standardized assessment of the initial desired condition targets and data used to assess those targets, as well as some preliminary results regarding management and protection opportunities for each habitat type, measured in acres or miles.

## The State of the Gulf Coastal Plains & Ozarks 2017 Report



## Projects Completed in 2017

In 2017, 5 GCPO LCC projects were completed:

- Assessment of Water Availability and Streamflow Characteristics in the Gulf Coastal Plains and Ozarks Landscape Conservation Cooperative for Current and Future Climate and Landscape Conditions
- Economics of Coastal Resilience and Open Space
- Pearl River Basin - Data validation of subsurface habitat classifications for aquatic systems and expanded biological monitoring in support of developing species-habitat relationships and species endpoints (i.e. desired or optimal states)



## Landscape Conservation Projects Ongoing through 2019

Changes in the funding priorities of the Department of Interior have cast a great deal of uncertainty on the future of LCCs, including the GCPO. Nevertheless, work continues in a variety of areas to benefit the GCPO partnership with important datasets and planning tools that can be applied in a Strategic Conservation Framework for the GCPO region. Two ongoing projects and seven new science projects begun in 2017, are scheduled to be completed in 2018 and 2019:

- Establishing Explicit Biological Objectives to Guide Strategic Habitat Conservation for the Gulf Coast (National Landscape Conservation Cooperative Project)
- Aquatic Connectivity Assessment: extending the connectivity program of the Southeast Aquatic Resources Partnership into the Mid-South by developing data to assess and prioritize stream barriers region-wide.
- Terrestrial Species-Habitat Modeling and Aquatic Species-Habitat Modeling: supporting conservation decisions by developing models for key terrestrial and aquatic species that link population status to current and future habitat conditions.
- Mapping Future Forests of the South: improving planning by developing data on planned future protected areas that will result in retained forest and other natural features.
- At-Risk Species Modeling: generating intermediate resolution data on wildlife species distributions and responses to future landscape change to address a data gap common to many State Wildlife Action Plans (SWAPs).
- Terrestrial Connectivity: assessing the connectivity of landscapes—essential for future species adaptation and migration—within and between priority conservation areas identified in State Wildlife Action Plans.
- Middle Mississippi River Partnership Landscape Conservation Design: working with refuges and other partners to develop a comprehensive conservation framework and tools for a focused region in Illinois and Missouri.
- Clapper Rails as Indicators of Gulf Coast Tidal Marsh: developing species-habitat models to predict the effects of future environmental change.
- Blueprint 2.0: Updating the Blueprint with the unified mask (see p. 4), as well as results from funded projects such as [Open Pine DFCs](#), Aquatic Connectivity, and Terrestrial Connectivity.



# The LCC Legacy and Future Landscape Conservation Needs in the Region

## GCPO LCC 2017 Legacy Report

In anticipation of pivotal decisions concerning the future of LCCs, the GCPO LCC created a Legacy Report in fall 2017 to summarize the work of the LCC over the last 7 years. The [Legacy Report](#) provides a brief background on LCCs and a history of the partnership's development and evolution. It describes significant GCPO LCC accomplishments, highlights milestone achievements, and captures the contributions of its many partners.

## Unmet Landscape Conservation Needs

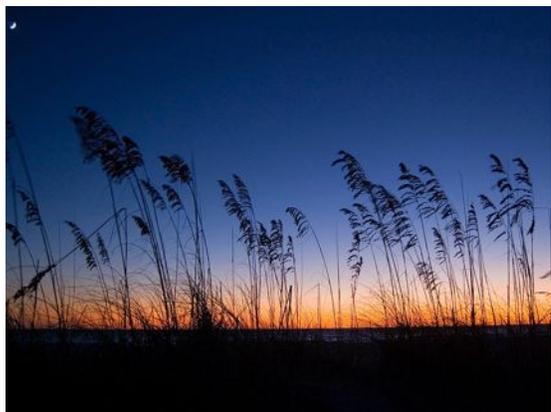
In addition to the LCC's latest projects, which will facilitate continuing refinement of the Conservation Blueprint, there are several important landscape conservation needs that remain in the Gulf Coastal Plains and Ozarks region and the Southeast:

- Continue integration of landscape conservation designs/data with State Wildlife Action Plans.
- Continue working through the Southeast Conservation Adaptation Strategy (SECAS) to address large-scale issues.
- Continue support and assistance to states and other conservation practitioners in accessing the "super highway" of conservation datasets developed by the LCCs via "on-ramps" such as the Southeast Conservation Planning Atlas.
- Continue development of a collaborative monitoring framework for assessing conservation progress and species/habitat status.



## On the Horizon

LCCs as we know them now are transitioning into something new, although we don't yet know what that new arrangement might look like. Notwithstanding the uncertainties of the future, an opportunity exists to work on a long-standing GCPO LCC goal: development of an Adaptation Strategy to sustain into the future the region's priority habitats and the fish and wildlife that depend on them. This can best be accomplished by



partners collaboratively engaging in a Strategic Conservation Framework that allows users to proactively explore the impacts of potential landscape changes. A Strategic Conservation Framework moves beyond static maps by using dynamic tools that combine habitat assessments with species models and future change data, allowing states and others to "see" natural systems in their entirety, as well as understand, assess, and weigh the future consequences of natural resource and habitat decisions through time. Within the context of a rapidly changing world, a Strategic Conservation Framework will improve the efficiency and effectiveness of conservation actions, and lead to robust Adaptation Strategies to meet the challenges of the 21st century.

# GCPO LCC Leadership, Staff, and Communications

## Dedicated & Affiliated Staff (for some or all of 2017)

Greg Wathen, Coordinator – Tennessee Wildlife Resources Agency

Dr. Todd Jones-Farrand, Science Coordinator - US Fish & Wildlife Service

Yvonne Allen, Aquatic Habitat Analyst - US Fish & Wildlife Service

Cynthia Kallo Edwards, SECAS Coordinator & Gulf Coast liaison - Wildlife Management Institute

K. Gregg Elliott, Communications & Outreach - K Gregg Consulting

Janet Ertel & Tim Fotinos, NWRS Inventory & Monitoring liaisons for the GCPO geography - US Fish & Wildlife Service

Dr. Kristine O. Evans, Assistant Professor, Mississippi State University

Toby Gray, Geomatics Coordinator - Geosystems Research Institute, Mississippi State University

Timothy Mullet, liaison to Daphne, AL Ecological Services field office - USFWS Ecological Services

Dr. Mike Osland, Research Ecologist - US Geological Survey

## Spring Steering Committee Meeting

Held May 17-19 in Panama City, FL

**THEME:** Towards a Conservation Adaptation Strategy in the GCPO

Staff and partners presented on Aquatic Habitat Conservation Planning, ecosystem services and human dimensions. A joint session with the East Gulf Coastal Plain Joint Venture focused on collaboration among regional partnerships, including Climate Science Centers.

## Fall Steering Committee Meeting

Held November 1, in Louisville, KY (SEAFWA)

**THEME:** Landscape Conservation in Uncertain Times – Forging a Path Forward

Staff and researchers presented on the State of the GCPO and the Mapping Future Forests project. Greg Wathen led a discussion on the future of the GCPO LCC.

## Communications Highlights

•In addition to regular newsletters, assistance in cataloguing LCC records, developing the State of the GCPO/Legacy reports, and migration of the website to the LCC Network platform, we held 4 webinars:

- [Mapping Ecosystem Services for the Gulf Coastal Plains & Ozarks Region](#)
- [A Survey of Landowner Attitudes and Conservation Practitioner Networks about Ecosystem Services](#)
- [Protecting open space and tidal migration corridors to increase coastal resilience in the Gulf of Mexico](#)
- [Current & Future Water Availability and Streamflow Characteristics in the GCPO Region](#)

## Steering Committee Members

Alabama Department of Conservation and Natural Resources

Arkansas Game and Fish Commission

Ducks Unlimited

Florida Fish and Wildlife Conservation Commission

Georgia Wildlife Resources Division

Gulf of Mexico Alliance

Kentucky Department of Fish and Wildlife Resources

Louisiana Department of Wildlife and Fisheries

Lower Mississippi River Conservation Committee

Mississippi Department of Wildlife, Fisheries, and Parks

Mississippi State University

Missouri Department of Conservation

National Bobwhite Conservation Initiative

National Oceanic and Atmospheric Administration

National Park Service

Oklahoma Department of Wildlife Conservation

Southeast Aquatic Resources Partnership

South Central Climate Science Center

Southeast Climate Science Center

Tennessee Wildlife Resources Agency

Texas Parks and Wildlife Department

The Nature Conservancy

US Army Corps of Engineers

U.S. Fish and Wildlife Service

US Forest Service

US Geological Survey