

## Council Member Applicant and Proposal Information Summary Sheet

<b>Council Member:</b> Department of the Interior	Point of Contact: Cindy Dohner Phone: 404-679-4000 Email: cynthia_dohner@fws.gov
<b>Project Identification</b>	
Project Title: Strategic Conservation Assessment of Gulf Coast Landscapes	
State(s): AL, FL, LA, MS, TX	County/City/Region: Gulf Coast Region
General Location: <i>Projects must be located within the Gulf Coast Region as defined in RESTORE Act. (attach map or photos, if applicable)</i>	
Conservation actions will be implemented across the landscapes within the Gulf Coast Region	
<b>Project Description</b>	
<b>RESTORE Goals:</b> <i>Identify all RESTORE Act goals this project supports. Place a P for Priority Goal, and S for Secondary Goals.</i>	
<input type="checkbox"/> P Restore and Conserve Habitat	<input type="checkbox"/> S Replenish and Protect Living Coastal and Marine Resources
<input type="checkbox"/> S Restore Water Quality	<input type="checkbox"/> S Enhance Community Resilience
<input type="checkbox"/> S Restore and Revitalize the Gulf Economy	
<b>RESTORE Objectives:</b> <i>Identify all RESTORE Act objectives this project supports. Place a P for Priority Objective, and S for secondary objectives.</i>	
<input type="checkbox"/> S Restore, Enhance, and Protect Habitats	<input type="checkbox"/> S Promote Community Resilience
<input type="checkbox"/> S Restore, Improve, and Protect Water Resources	<input type="checkbox"/> S Promote Natural Resource Stewardship and Environmental Education
<input type="checkbox"/> S Protect and Restore Living Coastal & Marine Resources	<input type="checkbox"/> P Improve Science-Based Decision-Making Processes
<input type="checkbox"/> S Restore and Enhance Natural Processes and Shorelines	
<b>RESTORE Priorities:</b> <i>Identify all RESTORE Act priorities that this project supports. [full text provided in Guidelines: Section A(3)]</i>	
<input checked="" type="checkbox"/> Priority 1: Projects that are projected to make the greatest contribution ...	
<input checked="" type="checkbox"/> Priority 2: Large-scale projects and programs that are projected to substantially contribute to restoring...	
<input checked="" type="checkbox"/> Priority 3: Projects contained in existing Gulf Coast State comprehensive plans for the restoration ....	
<input checked="" type="checkbox"/> Priority 4: Projects that restore long-term resiliency of the natural resources, ecosystems, fisheries ...	
<b>RESTORE Commitments:</b> <i>Identify all RESTORE Comprehensive Plan commitments that this project supports.</i>	
<input checked="" type="checkbox"/> Commitment to Science-based Decision Making	
<input checked="" type="checkbox"/> Commitment to Regional Ecosystem-based Approach to Restoration	
<input checked="" type="checkbox"/> Commitment to Engagement, Inclusion, and Transparency	
<input checked="" type="checkbox"/> Commitment to Leverage Resources and Partnerships	
<input checked="" type="checkbox"/> Commitment to Delivering Results and Measuring Impacts	
<b>RESTORE Proposal Type and Phases:</b> <i>Please identify which type and phase best suits this proposal.</i>	
<input checked="" type="checkbox"/> Project <input checked="" type="checkbox"/> Planning <input type="checkbox"/> Technical Assistance <input type="checkbox"/> Implementation <input type="checkbox"/> Program	
<b>Project Cost and Duration</b>	
<b>Project Cost Estimate:</b> Total : <b>\$1,879,378.19</b>	<b>Project Timing Estimate:</b> Date Anticipated to Start: <u>October/2015</u> Time to Completion: <u>3</u> years Anticipated Project Lifespan: <u>5 to 20</u> years

# Strategic Conservation Assessment of Gulf Coast Landscapes

## EXECUTIVE SUMMARY

The conservation opportunity associated with RESTORE Act funding has the potential to be transformative for the Gulf Coast Region (GCR). Regardless of how significant the available funding may be, its greatest potential lies in how effectively restoration actions shape the resilience of the Gulf now and into the future. It is imperative that the portfolio of potential land conservation projects funded through monies associated with the RESTORE Act be evaluated in the context of their respective role within and across watershed(s), and all efforts are made to select and implement those projects that provide the greatest realized benefits to current and future system sustainability and resilience. The holistic approach proposed within the *Strategic Conservation Assessment of Gulf Coast Landscapes* project will result in conservation landscapes that help reduce the impacts from tropical storms and flood events, allow for mitigation and adaptation to the impacts of climate change and sea-level rise, sustain healthy populations of fish and wildlife, support robust economies, keep working lands working, and preserve the Gulf's rich cultural heritage.

Ensuring the long-term health and productivity of Gulf Coast ecosystems requires a forward-looking land conservation strategy (targeted conservation easements and acquisition) that builds upon the existing network of state, federal, and private conservation areas and working lands, expands the scale of conservation lands across administrative and political boundaries, supports management stewardship for the public or private entity best suited for meeting long-term conservation objectives, and incorporates emerging information such as the Gulf Coast Vulnerability Assessment. A well-conceived regional conservation network relies not only on sound ecological planning and conservation design, but also recognizes and integrates the cultural, social, and economic needs of the human communities in the GCR, while allowing working lands to remain working, providing coastal resilience, and conserving natural resources. Developing a strategic conservation framework that synthesizes and advances the existing and ongoing conservation planning and design efforts in the GCR is foundational to establishing a functional conservation network of lands into the future.

The *Strategic Conservation Assessment of Gulf Coast Landscapes* project will be a collaborative effort catalyzed by the Department of the Interior working through a voluntary, science and planning partnership that capitalizes on the capacity of the private, state, and federal Landscape Conservation Cooperative (LCC) partnerships in the GCR, and coordinated through a Core Working Group comprised of representatives from Restore Council member organizations and the other partnerships in which they are involved. This approach will facilitate the

synthesis of conservation planning in the GCR, providing a strong foundation for identifying conservation needs and priorities. Products from this work include a Conservation Prioritization Tool (CPT) in the first year to evaluate the benefits of individual land conservation projects, and in the second year an initial Gulf-wide Strategic Conservation Assessment (SCA) that will enable end-users to spatially prioritize the GCR to guide landscape-level conservation investments across the Gulf. Advanced analyses in Year 3 will be conducted using Marxan (Ball et al. 2009) and/or Zonation software to optimize a portfolio of land conservation projects to meet shared priorities and objectives. Engagement with stakeholders from across the GCR will leverage existing efforts, avoid duplication, and ensure the values of local communities and residents are incorporated in all aspects of this project.

Long- and short-term risks associated with land conservation investments are accounted for by incorporating scenarios for specific threats (e.g., urbanization, climate change) into the conservation strategy and by considering potential negative consequences of action (or inaction) in the spatial analysis and temporal optimization of priorities. Monitoring will be implemented as part of the adaptive Strategic Habitat Conservation cycle to ensure the goals and objectives defining the land conservation prioritization criteria are truly predictive of the conservation targets that are the ultimate goal of these efforts. To ensure efficient use of monitoring capacity, all monitoring will be coordinated through both existing partner networks (e.g., NWRS and NPS I&M programs) and those emerging and proposed for the Gulf (e.g., GOMA's Deepwater Horizon Project Tracker). Total funding for implementing the Strategic Conservation Assessment of Gulf Coast Landscapes is just under \$1.9 million over a 3-year period.

Recognizing the vital connection between strategic planning and actual on-the-ground delivery, the work described herein is referenced by the Mississippi Department of Environmental Quality (MDEQ) in a companion proposal that focuses on land conservation in practice (acquisitions and easements). The intent of the Department of the Interior (DOI) in this "dual" submission is to bolster the work outlined in the MDEQ proposal by underscoring the importance of the strategic planning aspect of land conservation represented by the SCPT and SCA. Viewed in that light, this complementary proposal describes the need, development, and ultimate application of these tools in greater detail.

## PROPOSAL NARRATIVE

### *Introduction/Background*

The U.S. Gulf Coast is a large and diverse landscape, exhibiting great ecological richness due to the various influences of coastal geomorphology, climate, and hydrology (Yáñez-Arancibia and Day 2004a, Love et al. 2013). This richness is also reflected in the human settlement and culture on the coast, with major ports and communities positioned to conduct trade, raise crops, harvest seafood, produce energy, and support tourism. However, as development on the Gulf Coast has increased, the overall ecological health of the region has diminished (Turner 1997, Gosselink et al. 1998, Sklar and Browder 1998, White and Wilds 1998, Rabalais et al. 2002). In addition, the 2010 Deepwater Horizon explosion and subsequent oil spill further disrupted the Gulf of Mexico ecosystem and economy, dramatically demonstrating how critically important a healthy, productive, and more resilient Gulf of Mexico is to coastal communities and the Nation (Smith et al. 2011, Sumaila et al. 2011).

There is a strong conservation foundation in the GCR - the legacy of state fish and wildlife agencies, federal land management agencies, NGOs and private land stewards who have recognized the need and have taken action to help protect and restore the ecological richness of the Gulf Coast. This foundation, though, is the result of over 100 years of largely independent initiatives and opportunities that reflect individual mandates and missions, resulting in a patchwork of conservation that in many places is not strategically linked to support broader ecosystem functions and benefits. During this same century, the extent of undeveloped and working lands (e.g., farms, forests, and ranges) that once served as complementary and compatible buffers to protected areas has significantly diminished (McKenzie et al. 1995, Noss et al. 1995). Today, conservation lands and the wildlife dependent upon them are becoming more vulnerable as competing land uses grow on the landscape (Markovchick-Nicholls et al. 2008) and the impacts of climate change increase, especially given vulnerability to sea-level rise (Craft et al. 2009). This reduction of the effective conservation area in the GCR presents a landscape-level challenge: how do we maintain conservation connectivity, ecosystem function, resilience, and natural resource values in the face of rapidly escalating stressors (Christensen et al. 2006, Darling and Cote 2008)?

This is not a new challenge or one that has gone unrecognized. Numerous national and regional entities have identified this growing concern and proffered a common strategy to address it: strategic land conservation investments guided by landscape conservation planning and design that prioritize conservation actions on individual parcels of land in the context of contemporary stressors and future threats (e.g., National Fish, Wildlife and Plants Climate Adaptation Strategy [NFWPCAP 2012], Wildlife Habitat Policy Research Program [WHPRP 2011], Louisiana's Comprehensive Master Plan for a Sustainable Coast [CPRA 2012], among others).

The Gulf Coast Ecosystem Restoration Council itself recognized this challenge by committing to a regional ecosystem and science-based approach in their 2013 Initial Comprehensive Plan *Restoring the Gulf Coast's Ecosystem and Economy* (Gulf Coast Ecosystem Restoration Council 2013). Specifically, the Council identified as one of its 7 objectives “[To] improve science-based decision-making processes” and called out within this objective the need for “development of local and regional ecosystem models to...inform Council decision-making processes related to ecosystem investments.” Similarly, the Gulf Coast Ecosystem Restoration Task Force in their 2011 *Gulf of Mexico Regional Ecosystem Restoration Strategy* (Gulf Coast Ecosystem Restoration Task Force 2011) also identified the need to “expand the network of state, federal, and private conservation areas to ensure healthy landscapes that support the environment and culture of the region and the diverse services provided by the Gulf of Mexico ecosystem.”

With this broad call to action, it is not surprising that a number of design efforts already exist (see Appendix 1 for sampling of existing and ongoing efforts). Although all of these tools are useful for the specific application they were designed for, none meet the broader needs of the Council for assessing land conservation projects, as these designs don’t cover the entire Gulf Coast, represent only a subset of stakeholder interests, lack specificity of action, don’t incorporate anticipated futures, and/or fail to consider the full suite of objectives for restoration, which include, but are not limited to:

- Providing for adaptation of natural and human communities in response to a changing climate and sea-level rise;
- Keeping working lands working by supporting land uses such as ranching and commercial timber operations through voluntary actions and incentives that also conserve wildlife and other natural resources;
- Maintaining ecosystem services – clean air and water, fertile soil, storm buffering, productive fisheries, and abundant recreational opportunities;
- Reducing the vulnerability of rare or at-risk species and protecting biodiversity;
- Enhancing landscape connectivity and permeability – improving the quality and sustainability of habitats; and
- Engaging stakeholders in conservation opportunities for multiple benefits.

Clearly there is a need by the RESTORE Council for a broad-scale and broad perspective decision support system that can integrate the priorities and values of the myriad agencies, entities, and organizations with a stake in Gulf land conservation and can transparently translate those priorities into projects and spatial data layers to inform strategic investments. This proposal addresses this need head-on and will meet the following objectives:

1. Develop shared priorities and objectives

2. Develop a tool to prioritize existing land conservation projects
3. Develop a spatial data layer to prioritize the entire Gulf Coast Region

### ***Implementation/Methodology***

DOI introduced Strategic Habitat Conservation (SHC) in 2006 to change the conservation paradigm from individual, opportunistic actions to a collaborative, connected set of actions that achieve explicit conservation outcomes (National Ecological Assessment Team 2006). SHC is a science-based framework that depends upon an iterative process of biological planning, conservation design, habitat delivery, and monitoring and research. Landscape Conservation Design planning provides “a partnership-driven method to assess current and anticipated future conditions (biological, climatological, and socioeconomic), offers a spatially-explicit depiction of a desired future condition, and helps provide management options for achieving those conditions” (USFWS NWRS 2013).

Numerous approaches to conservation design exist – from exceedingly simple “lines on maps” to extraordinarily complex dynamic optimization procedures (Moilanen et al. 2009). Selection of the “right” design approach for any objective represents a compromise among potentially competing factors of time, cost, rigor, and data availability. For this project, we will take a two-phased approach to address both the short- and long-term needs of the Council for science-based guidance on land conservation investments. First, we will develop a Conservation Prioritization Tool (CPT) to address the immediate need for prioritizing existing land conservation projects. Second, we will conduct a longer-term Strategic Conservation Assessment (SCA) to prioritize the entire landscape and help coalesce partners around the development of future land conservation projects in areas that offer the best return on investment. Both the CPT and SCA will reflect the existing priorities and objectives of the broad conservation community on the Gulf, including state agencies, federal agencies, non-governmental organizations, private industry, and the general public. Three specific aspects of this proposal are detailed below.

***Objective 1: Develop Shared Priorities and Objectives.***-- A first, but necessary, step in any planning and design effort is the establishment of priorities and objectives (Margules and Pressey 2000, Groves et al. 2002, Tear et al. 2005). Although the broad conservation community along the Gulf represents a diverse set of stakeholders with wide-ranging interests, priorities, and objectives, the vast majority of these “conservation targets” are formalized in existing plans and databases (e.g., <http://www.msrestoreteam.com/planning.aspx>). We will use the established conservation targets identified through the Gulf of Mexico Alliance (GOMA), Landscape Conservation Cooperatives (LCCs), Joint Ventures (JVs), State Wildlife Action Plans (SWAPs), the Partnership for Gulf Coast Land Conservation (PGCLC), and the National Estuary Programs (NEPs) among others to forgo the “priority resource setting” process

that so often bogs down similar efforts. To collate these priorities, we will mine these available plans and databases and classify the priorities and objectives contained therein by a variety of scales and levels (Cash et al. 2006, Baillie et al. 2013). These scales will include the familiar spatial and temporal scales as well as the less commonly considered ecological scale (with the hierarchical levels of species, population, community, habitat, landscape), threat scale (with the non-hierarchical levels of urbanization, climate, sea-level rise, etc.), and management scale (including land conservation strategies, actions, projects, and tasks).

The intent of this assessment is to be extensive, but not exhaustive, as we only need to capture the primary considerations for prioritizing the landscape - not every consideration. We anticipate completing this initial priority assessment within 6 months of project initiation. By cataloging and presenting the priorities and objectives in this manner, we will be able to work with all stakeholders to identify scale mismatches, scale pluralities, and scale omissions that left unresolved would ultimately undermine any overarching effort to unify these individual plans and designs (Cash et al. 2006, Game et al. 2013). Issues identified through this meta-analysis will be resolved through discussions among the Core Working Group and in the stakeholder charrettes (see below).

*Objective 2: Develop a Tool to Prioritize Existing Land Conservation Projects.*--A large number of land conservation projects are already “on the books” – most having been identified at some point in the past through any of a variety of individual project development processes that don’t necessarily sum to a holistic Gulf-wide vision. With the prospect of significant funding from the RESTORE Council, many of these projects are being resurrected and brought forth for funding – both by and to Council members. Although many of the projects offer “no regrets” options, no science-based tool exists to prioritize these projects and offer a transparent, defensible, and replicable defense to the accusations of arbitrariness in project selection. Our proposed Conservation Prioritization Tool (CPT) will address this need.

Incorporating the shared priorities and objectives identified as a product of Objective 1, the CPT will be an expert system informed by a multi-criteria decision analysis (MCDA) (Huang et al. 2011). MCDA is a class of decision analysis that decomposes complex problems into a set of criteria reflective of primary objectives and provides a systematic means of evaluating alternatives against them (Mendoza and Martins 2006). Perhaps best described by Keeney (1992), these techniques provide, “a formalization of common sense for decision problems which are too complex for informal use of common sense.” MCDA is particularly effective at analyzing alternatives across dissimilar criteria (Davies et al. 2013), a key feature given the importance of including factors related to not only ecological benefits, but also land costs and likelihood for land-use change in land conservation prioritization (Newburn et al. 2005). Nonetheless, just because the approach is formal and analytical, doesn’t mean it needs to be

complex. Indeed, the Simple Multi-Attribute Rating Technique (SMART) offers an intuitive and commonly used “scorecard” approach to easily rank a variety of projects on multiple criteria (Herath and Prato 2006). The SMART approach calculates a total score for each alternative as the sum of values from each criterion multiplied by the weight for that criterion (Olson 1996). A tabular scoring rubric is a common output from application of SMART (see Appendix 2 for an example) and is the specific deliverable that will be produced to achieve this objective within the first year of this project.

Specific to the CPT, we envision inclusion of a variety of criteria related to ecological, economic, and social values. Again, these criteria represent the existing priorities of established agencies, organizations, and partnerships and it is our intent to provide a means to connect these individual efforts rather than duplicate, compete, or override them. Examples of attributes for assessing ecological value may include habitat quality, heterogeneity and connectivity; tract size; presence of endangered, threatened, or at risk species; proximity to designated conservation lands and other protected areas; expected land-use change (e.g., sea-level rise, climate change, urbanization). Examples of attributes for assessing economic values may include costs associated with implementation of land conservation practices, projected long-term operation and maintenance expenses, and benefits derived from land conservation activities on the production and maintenance of provisioning ecosystem services (e.g., food, fuel, fiber, etc.) (Millennium Ecosystem Assessment 2005). Examples of attributes for assessing social value may include feasibility (e.g., willing seller of fee title or easement), level of local support, cultural resource benefits, and the production and maintenance of provisioning ecosystem services (e.g., recreation, history, identity, etc.) (Millennium Ecosystem Assessment 2005). Summation of values from across each of these attributes will provide a total score for each land conservation project. These scores will be provided at two spatial scales – Gulf-wide and individual watershed – to enable assessment of regional and local land conservation priorities.

*Objective 3: Develop a Spatial Data Layer to Prioritize the Entire Gulf Coast Region.*--Restricting prioritization to preexisting projects assumes perfect knowledge of where prioritization criteria intersect across the landscape. Given the numerous objectives for land conservation and the variety of criteria upon which prioritizations are based, this perfect knowledge is almost certainly a flawed assumption. A geospatial decision support system depicting these criteria across the entire GCR could help identify high priority areas that were overlooked or undervalued (Matthies et al. 2007). Building on the output from Objective 2, the Strategic Conservation Assessment (SCA) will apply the associated scores and weights for the criteria and attributes identified in the CPT to geospatial datasets characterizing these ecological, economic, and social values in a geographic information system (GIS) (Drobne and Lisec 2009). The SCA based on this adaptive conservation design will ultimately depict priority locations for (1)

acquisition, (2) easement, and (3) incentives relative to individual watersheds and the Gulf of Mexico as a whole.

Key among these datasets are geospatial data layers depicting expected sea-level rise and urbanization – the former being funded as a joint project of the four Gulf LCCs along with GOMA’s HCRT, and the latter developed in collaboration with DOI’s Southeast Climate Science Center and USGS. Already some of these preliminary Gulf-wide layers are being assembled by LCC partners cooperating with NOAA’s Northern Gulf Sentinel Site Cooperative to identify barriers to landward wetland migration due to urbanization – results of this work will be incorporated into the SCA to ensure restoration strategies contribute to adaptation, as well. With targets and data layers in hand, application of existing models linking the two will allow assessment of current and future landscapes for achieving objectives. We expect at the end of two years, a geospatial decision support tool depicting priority actions (i.e., the SCA) and all the individual layers used to develop the SCA will be freely available for remote access, download, web servicing, and basic geoprocessing to the general public and all partners through the LCC’s existing Conservation Planning Atlases (visit <http://gcplcc.databasin.org/> for an example Atlas). A guidance document outlining appropriate use of the SCA will also be developed and made available.

Beyond this relatively simple spatial depiction of CPT priorities, we also propose to use either Zonation (Moilanen et al. 2012) or Marxan with Zones (Watts et al. 2009) software to conduct more rigorous and formal optimizations of land conservation activities. Both of these packages offer automated prioritization in a geospatial platform, but their true value is derived from their ability to account for spatial aspects of land conservation activities that cannot be easily considered in a SMART framework (e.g., connectivity and complementarity of conservation activities). Furthermore, both of these packages provide nearly optimal solutions for land conservation investments – something SMART can only approximate (Moilanen et al. 2009). This tailored analysis will also be used to explicitly integrate existing designs (e.g., South Atlantic LCC Blueprint, GCPO LCC Comprehensive Conservation Strategy) in a transparent process to inform a broader Gulf-wide design. Similar to the CPT, these analyses will be conducted at two spatial scales – regionally (Gulf-wide) and locally (HUC 4 watershed level) to allow priorities to vary locally while maintaining a link to ecological processes operating at the regional scale (e.g., connectivity) (Moilanen and Arponen 2011).

*Coordination/Project Management.*--Activities proposed under all three objectives of this project will be facilitated by the Department of the Interior working through the science and technical capacity of the LCCs in the Gulf Coast Region. Each of these LCCs is a conservation partnership comprised of private, state, and federal agencies and organizations committed to sustaining natural and cultural resources through implementation of SHC (see Appendix 3 for a

letter from the LCC Steering Committee Chairs to the Restore Council, which also lists all LCC Steering Committee members). Each LCC is developing a design or blueprint, which will be linked by 2016 and will provide much of the foundational information for the CPT and SCA. These LCCs will coordinate this work through a Core Working Group comprised of representatives from state and federal agencies and conservation partnerships. Funding will be directed to increase the geospatial and modeling capacity of the LCCs and other conservation partnerships, enabling dedicated staff to focus exclusively on Gulf Coast conservation design under the auspices of the existing planning and design efforts and expertise that lie within these LCCs.

The cooperative, regional partnerships in the GCR that will be engaged in this Core Working Group include representatives from each of the four LCCs: Gulf Coast Prairie, Gulf Coastal Plains and Ozarks, Peninsular Florida, and South Atlantic LCCs; four Bird Habitat Joint Ventures: Gulf Coast, Lower Mississippi Valley, East Gulf Coastal Plain, and Atlantic Coast JVs; the Southeast Aquatic Resources Partnership (SARP); the Partnership for Gulf Coast Land Conservation (PGCLC); and the Gulf of Mexico Alliance (GOMA). Representatives from RESTORE Council members and their partners with land conservation programs will be invited to participate as well. This working group, under the direction of an Assessment Coordinator, will collate objectives, develop the CPT and SCA, facilitate data sharing, and engage stakeholders locally to receive input and validate conservation priorities. The Assessment Coordinator and Core Working Group will work across their partnerships to best integrate efforts and provide the primary technical support in landscape conservation design modeling and geospatial analysis as well as all necessary administrative support.

This project is envisioned as a broad collaborative effort that will also solicit additional participation and input from research institutions, conservation NGOs, and corporate/private landowners. To facilitate this engagement, interim products and draft deliverables from each objective will be brought to a series of “charrettes” (stakeholder meetings used to resolve conflicts and map solutions, commonly used in urban planning; Walters 2007) – four or more hosted in each state – where breakout groups of participants will be walked through existing priorities and criteria and asked to assess and evaluate in small forums the suitability, completeness, and accuracy of these priorities and the decision support tools derived from them. We anticipate periodic charrettes over the course of the project to evaluate and improve the different phases and products of this project.

## TIMELINE OF ACTIVITIES

Table 1. Timeline of specific tasks associated with individual objectives, by quarterly period.

Objective Task	Performance Period											
	Q 1	Q 2	Q 3	Q 4	Q 5	Q 6	Q 7	Q 8	Q 9	Q 10	Q 11	Q 12
Collate Existing Priorities and Objectives												
Review Plans and Databases	X											
Catalog Priorities and Objectives	X	X										
Charrettes		X										
Conservation Prioritization Tool												
Identification of Criteria		X	X									
Draft CPT			X									
Charrettes			X	X								
Final CPT				X								
Strategic Conservation Assessment												
Assemble Existing Geospatial Data			X	X	X	X						
Apply Values and Weights to Data					X	X	X					
Draft SCA							X					
Charrettes							X	X				
Final SCA								X				
Marxan/Zonation Initialization								X	X			
Marxan/Zonation Optimization									X	X	X	
Charrettes											X	X
Marxan/Zonation Finalization											X	X

## MEASURES OF SUCCESS

Providing direct measures of success for projects whose priority RESTORE objective is to “Improve Science-Based Decision-Making Processes” is difficult. However, there are tangible – yet indirect – measures that offer promise. On-time delivery of the CPT and SCA are valuable success measures in their own right, but developing a tool is not the same as seeing it used – a necessary condition of improved science-based decision-making. Distribution of the tool will be tracked by measuring traffic to the specific webpages housing the tools developed through this project. Google Analytics are already set up on each Conservation Planning Atlas and are currently used to regularly monitor the number, timing, and geographic distribution of visitors to these sites. The truest measure of success for this project, though, is the adoption of these tools by the Council, and the broader conservation community, and their use in informing land conservation investments.

To evaluate the former, informal conversations with Council members and Council staff will be conducted to determine if information from these tools were used in making funding decisions. In particular, improvements and customization options to make these tools more amenable to

the Council's specific decision processes will be sought. We will also seek input from other agencies and conservation organizations as to the utility of these tools in their conservation delivery decisions for the GCR. More formally, we will use a rank test to determine how well the CPT and SCA prioritize land conservation projects compared to those actually funded by the Council, NFWF GEBF, NAWCA, LWCF, MBCF, etc (Zar 2010). To be clear, the objective of these analyses is solely an evaluation of the tools' abilities to effectively prioritize projects not an evaluation of the Council's adherence to the prioritization criteria of the CPT and SCA. We understand and want to emphasize that these are tools to improve decision-making not substitute for it. We recognize that additional factors may play important roles in the decision-making process – particularly initially – and expect that there may be some discrepancies between tool outputs and actual decision (Knight et al. 2008). These will be addressed through adaptive management and monitoring (see below).

### **ADAPTIVE MANAGEMENT AND MONITORING**

DOI is committed to all phases of SHC – from planning and design to implementation and evaluation. Criteria guiding land conservation investments must regularly be assessed to ensure they are accurately prioritizing parcels and projects that are biologically meaningful, economically beneficial, and socially responsible. During year 3 of this project, using an adaptive management framework, we will link the shared objectives and priorities to conservation decisions necessary in the future. A monitoring plan for metrics connected to these decisions will be developed. Monitoring both the criteria and the shared objectives and priorities they are serving as proxies for, will allow empirical assessments of the linkages between them and refinement of the values and weights placed on each criterion, thus continually improving the SCA tool. Additional projects should be developed to review existing and emerging monitoring programs (e.g., NWRS and NPS I&M Networks), determine if the monitoring is at a resolution adequate for making decisions (e.g., adaptive management), and if not, propose refinements or additional monitoring to specifically evaluate the effectiveness of restoration projects.

Beyond the testing of the prioritization tools themselves, monitoring of land conservation actions is also necessary to continually update the SCA with the ever-changing spatial extent of the conservation estate. As land conservation is implemented, it alters the relative rankings of proposed projects by affecting their individual scores for connectivity, complementarity, and other landscape factors. This tracking of activity will be conducted by GOMA partners and made available through its Deepwater Horizon Project Tracker. The SCA will be updated during funding cycles to reflect project accomplishments between cycles.

## **RISKS AND UNCERTAINTIES**

The CPT and SCA are being proposed as adaptation strategies to potentially limit long-term risks and uncertainties. Scenarios of land-use change from urbanization, climate change, and sea-level rise will be incorporated into both the CPT and SCA to minimize the impacts of unacknowledged, but potentially foreseeable, threats to the sustainability of land conservation investments. The purpose of the SCA is to provide decision makers with sound decision support tools on which to base design of a functional conservation landscape for the GCR. Risks in developing the CPT and SCA include both the relatively short timeframe and modest budget for completion. The proposed 3-year timeline is an accelerated goal reliant on the planning and design experience within the LCCs, Core Working Group, and stakeholder community. The budget is optimistic but reflects our expectation that additional funding will support relatively few new staff (particularly for a project of this magnitude), and those staff that are brought on will be embedded within the LCCs for completion of a project – not for creation or augmentation of a program. Uncertainties exist in the monitoring aspects of this project as well, as those activities will be conducted through existing and proposed capacities, the latter of which may not materialize. Future funding requests – albeit limited – may be periodically needed to update the CPT and SCA to reflect long-term restoration investments in the GCR.

## **OUTREACH AND EDUCATION**

This project incorporates stakeholder-intensive charrettes, at least four per state over the life of this project (additional charrettes are likely needed to adequately cover Florida and Texas). The primary objective of these charrettes is to obtain stakeholder input on priorities and objectives and to validate draft versions of the CPT and SCA. Meeting with stakeholders in their individual conservation landscapes will encourage buy-in into the process and also provide insights as to what are the best conservation strategies in a particular landscape given local concerns over conservation and socio-political issues. Ultimately, this partnership-based conservation assessment will provide decision-makers at local and regional levels with information to help achieve landscape-scale conservation and enhance the long-term resilience of Gulf Coast ecosystems (Yáñez-Arancibia and Day 2004b). Nevertheless, this information may go unused without effective outreach and extension regarding the availability and appropriate use of the CPT and SCA. We anticipate hosting and participating in numerous webinars and workshops throughout the course of this project, taking advantage of established lines of communication within LCCs, SeaGrant, GOMA, NERRs, etc. Furthermore, a dedicated extension specialist will be contracted in the last two years of this project to provide specialized support to partners looking to use and improve the CPT and SCA for their conservation decisions. A similar model is currently being successfully employed in the South Atlantic LCC for outreach and extension of their Blueprint v1.0.

## **LEVERAGING RESOURCES AND PARTNERSHIPS**

The collaborative process in developing the structure of the conservation assessment will encourage larger landscape conservation actions across the GCR by identifying leveraging opportunities with other Gulf restoration funding streams (i.e., RESTORE Act, NRDAR, NFWF Gulf Environmental Benefit Fund and NAWCA), as well as existing state and federal conservation funding programs, such as the Land and Water Conservation Fund, Migratory Bird Conservation Fund, and the USDA Farm Bill programs. Four Gulf LCCs have committed to jointly support this work (see Appendix 4 for letters of support). Their involvement ensures integration rather than duplication of efforts.

## **PROGRAM BENEFITS – ECOLOGICAL AND ECONOMIC**

Benefits from prioritization tools like the CPT and SCA are both ecological and economic. Rather than address these independently, we treat them here collectively to highlight the importance of incorporating both biological and economic information in conservation prioritizations (Naidoo et al. 2006, Murdoch et al. 2007). The attraction of conservation planning and design lies in its ability to strategically target conservation actions on those portions of the landscape with the highest potential to achieve specific objectives due to the unique spatial context of their location. The biological potential gained by making decisions informed by strategic planning is well documented (Twedt et al. 2006, Johnson et al. 2010, North et al. 2010). Similar ecological benefits are expected from targeted use of the CPT and SCA.

Concomitant to these ecological benefits are economic benefits as well. Increasing the efficiency of conservation actions means that objectives and targets can be met with less effort, thereby saving money. By also explicitly incorporating costs into prioritization decisions, planners acknowledge that money is not infinite and can directly quantify return-on-investment (Murdoch et al. 2007). Perhaps more broadly, making wise choices on which lands to place in conservation can impact local economies through increased opportunities for tourism, continuation of legacy land uses such as timber harvest and cattle ranching, and maintenance of ecosystem goods and services (e.g., water quality) provided through green infrastructure (Benedict and McMahon 2006).

## LOCATION AND DESCRIPTION

The Gulf Coast Prairie, Gulf Coastal Plains and Ozarks, South Atlantic, and Peninsular Florida LCCs provide a Gulf-wide network of resource managers and scientists who share a common need for scientific information and interest in conservation (Figure 1). The work described in this proposal will focus on the GCR portion of these LCCs, with all benefits accruing in this area.

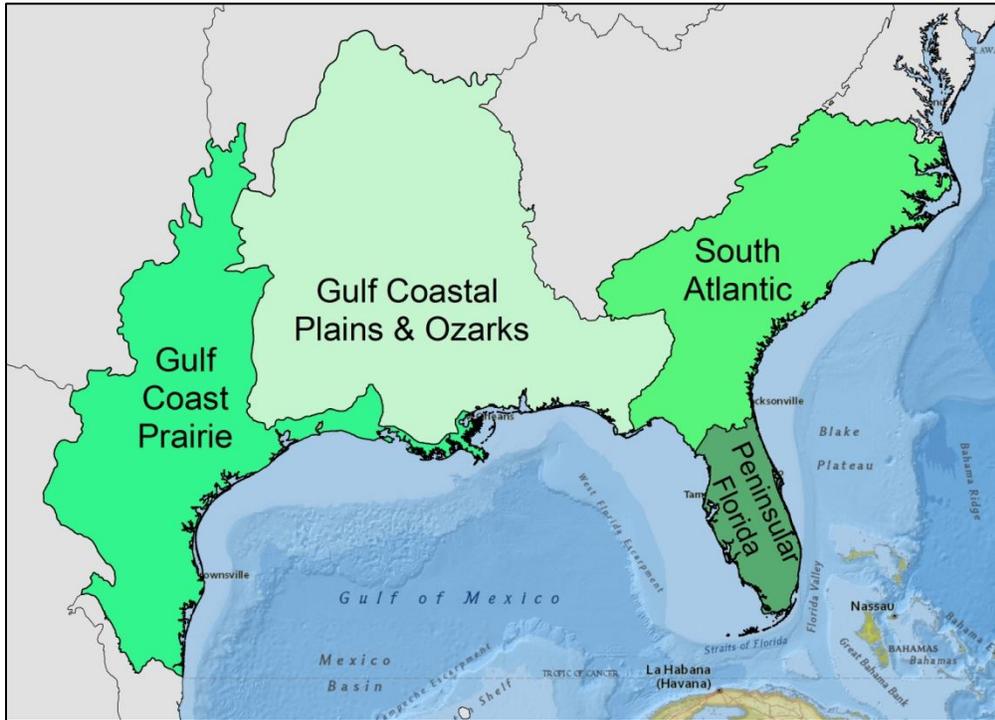


Figure 1. Location and identification of the four Gulf of Mexico LCCs.

## BUDGET NARRATIVE

Total funding for implementing the Strategic Conservation Assessment of Gulf Coast Landscapes is \$1,879,378.19, with the work to extend over a 3-year period (Table 2). Funding for the project will be administered by the Gulf Coastal Plains & Ozarks LCC working with the U.S. Fish and Wildlife Service and Mississippi State University through the Gulf Coast Cooperative Ecosystem Studies Unit (CESU). The Gulf Coastal Plains & Ozarks LCC is already engaged with many of the planned Core Working Group members – including the other 3 LCCs, 3 JVs, SARP, PGCLC, and GOMA – in the development of numerous projects and initiatives that will benefit the restoration effort ongoing in the GCR. The CPT and SCA will leverage these efforts, effectively coordinating the collective science capacity in the GCR to refine the overall landscape conservation needs and priorities. The following positions and activities will be supported by this funding:

Salaries to support 5 positions, each of which will be stationed in the GCR:

1. Assessment Coordinator. This position will serve as overall project lead – ensuring technical staff are engaging appropriate Council member agencies and conservation partnership organizations.
2. Landscape Conservation Design Modeler. This position will be responsible for eliciting existing priorities and objectives from partners and translating these into an prioritization criteria for the initial tool (CPT; year 1), a refined geospatial decision support tool (SCA; year 2), and a formal optimization analysis in Marxan or Zonation (year 3).
3. Geospatial Analyst. This position is responsible for visualizing results of prioritization criteria, including implication of various thresholds and development of affiliated geospatial products (maps, on-line datasets, etc.)
4. Extension and Outreach Specialist. This position will be brought on in the second and third year of the project to serve as a dedicated extension agent to stakeholders looking to use and refine the CPT and SCA for specific and individual purposes. This outreach extends beyond Council members and ensures broad buy-in from across the entire Gulf conservation community.
5. Administrative Support. This full-time position provides administrative support for invitational travel, meeting logistics, meeting materials preparation, etc.

Anticipated meeting support is requested for 4 or more meetings in each of the 5 Gulf States. Funding will be required to cover staff and partner travel, logistics, facilitation services (if required) and other related expenses. Funding needs include hardware, software, IT support, and publication of a report detailing the prioritization model and geospatial decision support tool. Dissemination of the deliverables and other related communication products will be developed by outreach efforts supported through contractual services.

Table 2. Proposed Budget: Strategic Conservation Assessment of Gulf Coast Landscapes

Salaries	Year 1	Year 2*	Year 3*	Total
Assessment Coordinator	\$82,642.00	\$85,396.00	\$87,957.88	\$255,995.88
Landscape Conservation Design Modeler	\$69,497.00	\$71,813.00	\$73,967.39	\$215,277.39
Geospatial Analyst	-	\$59,915.00	\$61,712.45	\$121,627.45
Extension and Outreach Specialist	\$57,982.00	\$59,915.00	\$61,712.45	\$179,609.45
Administrative Support	\$47,923.00	\$49,360.69	\$50,841.51	\$148,125.20
Subtotal – Salaries	\$258,044.00	\$326,399.69	\$336,191.68	\$920,635.37
Benefits Rate (33%)	\$85,154.52	\$107,711.90	\$110,943.25	\$303,809.67
TOTAL – Salaries	\$343,198.52	\$434,111.59	\$447,134.94	\$1,224,445.04
Travel and Support				
Meeting Support (partner travel, logistics, facilitation, etc.)	\$120,000.00	\$123,600.00	\$127,308.00	\$370,908.00
Staff Travel	\$22,500.00	\$23,175.00	\$23,870.25	\$69,545.25
Equipment (hardware, software, IT)	\$20,000.00	\$20,600.00	\$20,000.00	\$60,600.00
Report Production and Publication	-	\$10,000.00	\$15,000.00	\$25,000.00
Outreach	\$7,500.00	\$7,500.00	\$7,500.00	\$22,500.00
TOTAL - Travel and Support	\$170,000.00	\$184,875.00	\$193,678.25	\$548,553.25
Total Direct Costs	\$513,198.52	\$618,986.59	\$640,813.19	\$1,772,998.29
Indirect Costs (6%)	\$30,791.91	\$37,139.20	\$38,448.79	\$106,379.90
TOTAL	\$543,990.43	\$656,125.78	\$679,261.98	\$1,879,378.19

\*Includes a 3% inflation figure on all budget categories.

## DATA MANAGEMENT/INFORMATION SHARING PLAN

An information portal will be developed for the Strategic Conservation Assessment of Gulf Coast Landscapes on individual Conservation Planning Atlases. This portal will include a web mapping environment and a spatially enabled resource library. Functionality of the portal will include the ability to interactively view landscape conservation priorities, geo-referenced project proposals, and other pertinent data throughout the Gulf Coast Region. Geospatial information will be accessible through the LCC supported Conservation Planning Atlas (CPA) which will showcase a cohesive collection of spatial information and supporting documentation. Data can be searched, viewed, downloaded, and used in custom analyses.

Written documentation on how the selected prioritization approach was developed will also be available at this portal. The viewer base map layers may include base layers such as: Hydrologic Unit Code, NHD+, National Wetlands Inventory (NWI), migratory bird flyways, soil types, Sec. 303(d) impaired waters, and aerial imagery. The datasets used in the prioritization approach will also be available for viewing in the web mapping environment. All datasets will follow the strict data management protocols outlined in the LCC's approved data management policy (including standard metadata formats, data sharing requirements, etc.; available [here](#)).

A web-based, spatially-enabled digital library will be created which can act as a clearinghouse for references to important documents and pertinent resources for the GCR. Content might include: proposed projects, current/past projects, funding availability, Best Management Practices (BMPs), and other pertinent management information.

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## OTHER

### *List of Appendices*

Appendix 1: Sample of existing and ongoing design efforts in the Gulf of Mexico

Appendix 2: Example of a tabluar scoring output from Simple Multi-Attribute Rating Technique

Appendix 3: Letter (dated 6/24/2013) from the Steering Committee Chairs of the four Landscape Conservation Cooperatives that directly overlap the Gulf region to the RESTORE Council re: Draft Initial Comprehensive Plan

Appendix 4: Letters of Support from each of the four Landscape Conservation Cooperatives that directly overlap the Gulf region, and Ducks Unlimited

- a. Peninsular Florida Landscape Conservation Cooperative
- b. South Atlantic Landscape Conservation Cooperative
- c. Gulf Coastal Plains and Ozarks Landscape Conservation Cooperative
- d. Gulf Coast Prairie Landscape Conservation Cooperative
- e. Ducks Unlimited

Appendix 5: Gulf Coast Ecosystem Restoration Council Environmental Compliance Checklist

## **Appendix 1: Sample of existing and ongoing design efforts in the Gulf of Mexico**

Strategic conservation assessment of Gulf Coast landscapes will be informed by and build upon existing and ongoing state, federal, academic and NGO conservation planning efforts across the GCR. Examples of these efforts include:

**Southeastern Conservation Adaptation Strategy (SECAS)** is an effort to develop a coordinated regional conservation adaptation strategy to achieve broader landscape level conservation goals in light of anticipated changes on the landscape. The 4 LCCs that include pieces of the Gulf are each developing a design or Blueprint. These blueprints will be linked by 2016 and will provide much of the foundational information for the CPT and SCA. SECAS is supported by the Southeast Association of Fish and Wildlife Agencies, which is comprised of 15 southeastern states, Southeast Natural Resource Leaders Group of all federal agencies in the south, and conservation partnerships such as Southeast Aquatic Resources Partnership, Bird Habitat Joint Ventures, and Landscape Conservation Cooperatives.

**State Wildlife Action Plans** have been developed in each Gulf State to assess the health of the state's wildlife and habitats, identify problems, and determine proactive conservation actions to address those problems before they become too costly to implement. These plans are regularly updated and include strategies with neighboring states to address shared resource concerns (Alabama Department of Conservation and Natural Resources - Wildlife and Freshwater Fisheries Division 2005, Florida Fish and Wildlife Conservation Commission 2012, Lester et al. 2005, Mississippi Museum of Natural Science 2005, Texas Parks and Wildlife 2005).

**USFWS Vision for a Healthy Gulf of Mexico Watershed** articulates the Service's science-based conservation priorities in the Gulf with the purpose of advancing collaboration with partners. The Vision document identifies eight conservation strategies and 13 focal areas in the GCR that are meant to guide collaborative conservation planning and delivery for large-scale Gulf restoration with the states, local communities, other federal agencies, NGOs and other conservation stakeholders (USFWS 2013).

**NRCS' Landscape Conservation Initiatives – The Gulf of Mexico Initiative (GoMI)** helps producers in Alabama, Florida, Louisiana, Mississippi and Texas improve water quality and ensure sustainable production of food and fiber. Assistance helps producers apply agricultural and wildlife habitat management practices that avoid, control and trap nutrient runoff, reduce sediment transport, reduce over-use of water and prevent saltwater from entering the habitats of many threatened and endangered species.

**EPA's Healthy Watershed Initiative** addresses protection of aquatic ecosystems at the state scale based on the implementation of strategic watershed protection priorities established by partnerships comprised of state and federal agencies. Protecting an integrated ecological network or infrastructure of healthy watersheds, in addition to removing and reducing the causes of degradation, is important to sustaining healthy watershed processes and ensuring successful restoration (EPA 2011).

**The Nature Conservancy's Ecoregional Planning** approach engages partners to assess and coordinate conservation actions across relatively large geographic areas, irrespective of geopolitical lines. The resulting plans help define regional visions for conservation success while emphasizing conservation of all plant and animal communities and ecosystems (Beck et al. 2000).

**Partnership for Gulf Coast Land Conservation's *Conservation Vision for the Gulf Coast*** identifies important conservation opportunities agreed to by a coalition of over 30 local, regional and national Land Trusts and conservation organizations that can help guide region-wide conservation, protection, restoration, and resiliency planning efforts on private lands across the Gulf Coast. The draft planning document includes science-based consensus maps of important opportunities for voluntary land protection/conservation and serves as a resource for state and federal policymakers in developing landscape-level conservation and restoration plans (Partnership for Gulf Coast Land Conservation and Land Trust Alliance 2014).

**Gulf Coast Vulnerability Assessment** is an interagency LCC sponsored project to enhance conservation and restoration planning by providing an understanding of the effects of sea-level rise and climate change on Gulf of Mexico coastal ecosystems and their species.

**Louisiana's 2012 Coastal Master Plan** offers a vision for restoration, conservation, and protection of the Louisiana Coast for the benefit of current and future citizens. The restoration projects identified within are guided by priorities and objectives shaped by formal outreach with coastal stakeholder and are bolstered by the latest science and engineering (CPRA 2012).

**Appendix 2: Example of a tabular scoring output from Simple Multi-Attribute Rating Technique**

**PROPOSAL RANKING FORM - 2013 GCPO LCC RFP**

Reviewer \_\_\_\_\_  
 PI \_\_\_\_\_  
 Title of Project \_\_\_\_\_

	Max Score	Your Score	Notes
<b>I. GCPO LCC ATTRIBUTES</b>			
Landscape-scale	5		_____
Integrative	5		_____
Forward-looking	5		_____
Decision-focused	5		_____
Adaptive	5		_____
Relevant	5		_____
<b>Subtotal</b>	<b>30</b>	<b>0</b>	
<b>II. TECHNICAL MERIT</b>			
Well-defined objectives	5		_____
Clear statement of need	5		_____
Methods transparent and valid	10		_____
Deliverables specific and valuable	10		_____
Reasonable timeline	5		_____
Appropriate budget	5		_____
<b>Subtotal</b>	<b>40</b>		
<b>III. EXPERTISE OF INVESTIGATORS</b>			
Credentials	5		_____
Credibility	5		_____
<b>Subtotal</b>	<b>10</b>		
<b>IV. POTENTIAL FOR SUCCESS</b>			
Experience	5		_____
Demonstrated delivery	5		_____
<b>Subtotal</b>	<b>10</b>		
<b>V. LEVERAGE</b>			
External funds	5		_____
External capacities	5		_____
<b>Subtotal</b>	<b>10</b>		

**TOTAL SCORE: 100**

**ADDIT'NL NOTES:** \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_

Appendix 3: Letter (dated 6/24/2013) from the Steering Committee Chairs of the four Landscape Conservation Cooperatives that directly overlap the Gulf region to the RESTORE Council re: Draft Initial Comprehensive Plan



Gulf Coast Ecosystem Restoration Council  
c/o U.S. Department of Commerce  
1401 Constitution Avenue, N.W., Room 4077  
Washington, DC 20230

June 24, 2013

Dear Secretary Blank:

The Steering Committees of the Peninsular Florida, South Atlantic, Gulf Coastal Plains & Ozarks, and Gulf Coast Prairie Landscape Conservation Cooperatives (Gulf LCCs) commend the Gulf Coast Ecosystem Restoration Council for the development of the *Draft Initial Comprehensive Plan: Restoring the Gulf Coast's Ecosystem and Economy*. Through this plan, the Council provides a strong framework for restoring, protecting, and revitalizing the Gulf Coast region following the Deepwater Horizon oil spill.

Landscape Conservation Cooperatives (LCCs) are a national network of non-regulatory, public-private partnerships. The Gulf LCCs have established a geographically-broad partnership across the Southeast with a shared mission to define, design and deliver landscapes capable of sustaining natural and cultural resources at desired levels now and into the future (see Attachment 1). Through this partnership, we implement many activities to achieve this mission that are strongly aligned with the goals and objectives outlined in the Draft Comprehensive Plan (see Attachment 2).

The Draft Comprehensive Plan highlights the fact that Gulf Coast ecosystem restoration will require a long-term vision and multidisciplinary approach. It will involve not only identifying opportunities to restore ecosystems that provide critical ecological services, but strategies to ensure that those ecological services will persist given changing conditions. Climate change, sea level rise and other landscape scale challenges require innovative conservation strategies that reflect our best understanding of ecological vulnerabilities to changing conditions. The Gulf LCCs invested in the Gulf Coast Vulnerability Assessment and other ecological modeling efforts to identify resources that would be "at risk" under projected changes anticipated along the Gulf Coast. This is a vital first step towards a coordinated, science-based, proactive approach to effective conservation through adaptation. Therefore, we are encouraged by the inclusion of sustainability within the objectives of the Draft Comprehensive Plan as a critical element to restore the ecosystem and economy of the Gulf Coast region.

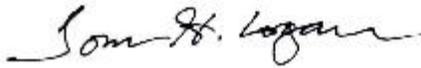
The Gulf LCCs work closely together to ensure their conservation plans will result in an ecologically-connected landscape conservation network. This requires considering both the coastal environment and the critical inland lands and waters that sustain them for a "white water to blue water" landscape approach. For example, the Gulf LCCs represent conservation partnerships that span large landscapes and major river systems important to the Gulf Coast, such as the Rio Grande, Mississippi River, the Mobile-Tensaw Delta, and Apalachicola-Chattahoochee-Flint River Basin. Therefore, we are encouraged by the Council's commitment to ecosystem-based and landscape-scale restoration and your recognition that upland, estuarine, and marine habitats are intrinsically connected.

We are also encouraged by the Council's commitment to both science-based decision-making and measuring outcomes, which are the cornerstones of the LCC approach. Together, the Gulf LCCs work to develop and apply conservation science that incorporates the best available understanding of future change. As multidisciplinary, self-directed partnerships we provide a forum for leveraging resources and expertise to not only provide the best available conservation science, but also address critical science gaps

for conservation planning. Additionally, LCCs use an adaptive, science-based approach to regularly evaluate the effectiveness of scientific information and conservation to improve decision-making. For example, each of the Gulf LCCs is working with partners to select indicators and set conservation targets to define shared, measurable goals for sustainable fish, wildlife, and cultural resources.

Thank you for this opportunity to provide input to the Draft Interim Comprehensive Restoration Plan. The Gulf LCCs are committed to a partnership approach to conservation in the Gulf Coast region and look forward to working with the Council.

Sincerely,



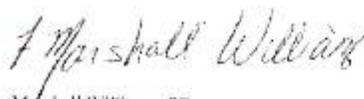
Thomas H. Logan  
~~Vice President~~ *Retired*  
~~Broadview, Dennis & Associates, Inc.~~  
Chair, Peninsular Florida Landscape Conservation Cooperative



Kenny Ribbeck  
Chief, Wildlife Division  
Louisiana Department of Wildlife and Fisheries  
Chair, Gulf Coastal Plains & Ozarks Landscape Conservation Cooperative



Allison A. Shipp  
Associate Regional Director  
Southwest Region  
U.S. Geological Survey  
Chair, Gulf Coast Prairie Landscape Conservation Cooperative



Marshall Williams, PE  
Regional Environmental Coordinator/Engineer  
Army Regional Environmental and Energy Office- Southern (REEO-S)  
Chair, South Atlantic Landscape Conservation Cooperative

**Attachment 1: List of Gulf LCCs Steering Committee Organizations**

**Gulf Coastal Plains and Ozarks LCC**

<http://gcpolcc.org/>

- Alabama Department of Conservation and Natural Resources
- American Bird Conservancy
- Arkansas Game and Fish Commission
- Auburn University
- Ducks Unlimited
- Florida Fish and Wildlife Conservation Commission
- Kentucky Department of Fish and Wildlife Resources
- Louisiana Department of Wildlife and Fisheries
- Mississippi Department of Wildlife, Fisheries, and Parks
- Mississippi State University
- Missouri Department of Conservation
- Oklahoma Department of Wildlife Conservation
- Tennessee Wildlife Resources Agency
- Texas Parks & Wildlife Department
- National Bobwhite Conservation Initiative
- National Oceanic and Atmospheric Administration
- National Park Service
- U.S. Army Corps of Engineers
- U.S. Fish and Wildlife Service
- U.S. Forest Service
- U.S. Geological Survey
- The Conservation Fund
- The Nature Conservancy

**Gulf Coast Prairie LCC**

<http://gulfoastprairie1cc.org/>

- Ducks Unlimited
- Gulf Coast Joint Venture
- Louisiana Department of Wildlife and Fisheries
- National Park Service
- National Oceanic and Atmospheric Administration
- Natural Resource Conservation Service
- Oaks and Prairies Joint Venture
- Oklahoma Department of Wildlife Conservation
- Reservoir Fisheries Habitat Partnership
- Rio Grande Joint Venture
- Southeast Aquatic Resources Partnership
- Texas Parks and Wildlife Department
- The Conservation Fund
- The Nature Conservancy
- U.S. Fish and Wildlife Service
- U.S. Geological Survey
- U.S. Natural Resources Conservation Service

**Peninsular Florida LCC**

<http://peninsularfloridalcc.org/>

- Florida Department of Agriculture and Consumer Services
- Florida Department of Environmental Protection
- Florida Farm Bureau
- Florida Fish and Wildlife Conservation Commission
- Florida Forestry Association
- Florida Land Council
- Florida Natural Areas Inventory
- Florida Forest Service
- Florida Regional Planning Councils
- Florida Wildlife Federation
- Miccosukee Tribe
- National Park Service
- National Oceanic and Atmospheric Administration
- Natural Resource Conservation Service
- Private Sector Members At Large
- Seminole Tribe
- St John's River Water Management District
- South Florida Water Management District
- Southwest Florida Water Management District
- The Nature Conservancy
- U.S. Department of Defense
- U.S. Environmental Protection Agency
- U.S. Fish and Wildlife Service
- U.S. Forest Service
- U.S. Geological Survey

**South Atlantic LCC**

<http://www.southatlanticlcc.org/>

- Florida Fish & Wildlife Conservation Commission
- Georgia Department of Natural Resources
- National Park Service
- National Oceanic and Atmospheric Administration
- North Carolina Wildlife Resources Commission
- South Atlantic Fishery Management Council
- South Carolina Department of Natural Resources
- The Nature Conservancy
- U.S. Department of Defense
- U.S. Environmental Protection Agency
- U.S. Fish and Wildlife Service
- U.S. Forest Service
- U.S. Geological Survey
- Virginia Department of Game and Inland Fisheries

**Attachment 2:**

<b>Example Gulf Coast LCC-led Efforts Supporting Gulf Coast Restoration and Conservation</b>		
<b>Project Title</b>	<b>Description</b>	<b>Key Project Partners with the Gulf LCCs</b>
Gulf Coast Vulnerability Assessment	The GCVA will enhance conservation, restoration planning, and implementation by providing a better understanding of the potential range of effects of climate change, sea level rise, and land use change on Gulf of Mexico coastal ecosystems and their species.	U.S. Fish and Wildlife Service, Gulf of Mexico Alliance, The Nature Conservancy, NOAA, and USGS.
Evaluation of Regional SLAMM Results to Establish a Consistent Framework of Data and Models and to Identify Critical Gaps for Evaluating Sea Level Rise Impacts to Coastal Marshes across the Gulf Coast.	The Sea Level Affecting Marshes Model (SLAMM) has been used in several projects along the Gulf Coast to model impacts to coastal marshes resulting from sea level rise (SLR). This project will synthesize, assess, and map the results from multiple modeling efforts for the Gulf Coast that can be used to characterize the impacts of SLR on coastal marshes.	Gulf of Mexico Alliance
Geospatial Vulnerability Analysis Tool: Gulf of Mexico Barrier Island System	This project will provide regionally comparable datasets that will be used to perform geospatial analysis to evaluate vulnerability of the Gulf of Mexico barrier island system. Available geospatial change analysis tools will be used with integrated physical and biological data sets to identify data gaps, characterize and map vulnerability variables, and develop an integrated set of data that can be used in decision support and visualization tools.	U.S. Fish and Wildlife Service, Gulf of Mexico Alliance, The Nature Conservancy, NOAA, and USGS.
Southeast Urban Growth Modeling	This project will develop long term urbanization scenarios by expanding existing SLEUTH urban growth models. By understanding where urban growth is likely to occur under existing conditions, conservation and urban planners can develop better, more targeted strategies for land conservation.	DOI Southeast Climate Science Center
Conservation Planning Atlas	The Conservation Planning Atlas (CPA) is a science-based mapping platform where conservation managers can go to view, retrieve, and perform analyses on spatial information with specific conservation goals in mind. The CPA also allows its users to create groups of members from several organizations who may have the same conservation goals. Within a group, you can perform analyses, upload data, and share information for other group members to use.	Conservation Biology Institute, Data Basin
Southern Instream Flow Research Agenda	Flow alteration is identified by experts as one of the major threats facing aquatic habitats across the region. The importance of natural flow regimes to the ecological integrity of rivers has been established for decades, but more specific information is needed to develop and implement scientifically credible instream flow standards to protect our rivers.	Southeastern Aquatic Research Partnership

<b>Example Gulf Coast LCC-led Efforts Supporting Gulf Coast Restoration and Conservation</b>		
<b>Project Title</b>	<b>Description</b>	<b>Key Project Partners with the Gulf LCCs</b>
Factors influencing autumn-winter distribution of dabbling ducks in the Atlantic, Mississippi, and Central Flyways of North America	Changes in climate can influence availability of habitat and cause shifts in wildlife populations. A Weather Severity Index (WSI) to help explain weather-related duck migration will be used to estimate future distributions of duck populations given climate change scenarios.	Longpoint Waterfowl, University of Western Ontario
Climate change effects on fish and mussels in the ACF	Multi-scale modeling capabilities for forecasting climate change effects on stream fishes and mussels.	University of Georgia
Ecological implications of mangrove forest migration in the southeastern United States	Winter climate change has the potential to have a large impact on coastal wetlands in the southeastern U.S. Warmer winter temperatures and reductions in the intensity of freeze events would likely lead to mangrove forest range expansion and salt marsh displacement in parts of the U.S. Gulf of Mexico and Atlantic coast. The objective of the proposed research is to better evaluate the ecological implications of mangrove forest migration and salt marsh displacement.	USGS National Wetlands Research Center

Appendix 4: Letters of Support from each of the four Gulf LCCs



To: Gulf Coast Ecosystem Restoration Council

From: Tim Breault, Coordinator, Peninsular Florida Landscape Conservation Cooperative

Subject: Support for USFW Proposal "*Strategic Conservation Assessment of Gulf Coast Landscapes*"

This letter is to provide an endorsement by the Peninsular Florida Landscape Conservation Cooperative (PFLCC) Steering Committee for a project being submitted by the US Fish and Wildlife Service titled ***Strategic Conservation Assessment of Gulf Coast Landscapes***. The PFLCC is a conservation cooperative comprised of federal and state agencies, tribes, nongovernmental organizations, private landowners and academia whose vision is:

*Our conservation cooperative is a valued resource for conservation design and delivery that supports a Florida landscape comprised of functional and interconnected ecosystems, valued by citizens, which contribute to regional and national conservation landscape connectivity.*

In keeping with the underlying goal of the vision, The PFLCC is desirous of seeing a network of linked conserved landscapes across the breadth of the Gulf of Mexico that can provide sustained and fully functional ecological, recreational, cultural and economic benefits. This approach requires a forward looking Gulf-wide strategy of conservation investments including land acquisition and easements integrated with the existing conservation framework. Developing a strategic conservation framework that synthesizes and advances the conservation planning and design efforts underway in the Gulf of Mexico is crucial to establishing resiliency to large scale stressors and adaptation strategies to ensure a functional network of conservation and working landscapes into the future for the benefit of people.



The FWS proposal will feature a collaborative approach building on existing partnerships like LCCs to develop partner driven priorities using a science based process to evaluate the benefits of individual parcels. This approach will leverage existing and ongoing efforts and incorporate them into a transparent and seamless assessment across the entire Gulf to define a portfolio of potential and valuable land conservation projects.

If this project is selected by the Council the PFLCC stands ready to engage and assist in this effort.



## SOUTH ATLANTIC LANDSCAPE CONSERVATION COOPERATIVE

1751 Varsity Drive, 2nd Floor, Rm. 218  
Raleigh, NC 27606-2576  
919.707.0122  
www.southatlanticcc.org

11/6/2014

To: Gulf Coast Ecosystem Restoration Council

Subject: Support for USFWS Proposal "Strategic Conservation Assessment of Gulf Coast Landscapes"

This letter is to provide an endorsement by the South Atlantic Landscape Conservation Cooperative Steering Committee for a project being submitted by the US Fish and Wildlife Service titled **Strategic Conservation Assessment of Gulf Coast Landscapes**. The South Atlantic LCC is a partnership of federal, state, nonprofit, and private organizations dedicated to conserving a landscape capable of sustaining the nation's natural and cultural resources for current and future generations.

The South Atlantic LCC is one of four Landscape Conservation Cooperatives across the Gulf Coast and we remain committed to alignment for a unified "One Gulf" approach to conservation. The cooperative has already completed version 1.0 of the South Atlantic Conservation Blueprint (A living spatial plan describing the conservation actions needed to achieve the cooperative's shared vision of the future). As part of the Southeast Conservation Adaptations Strategy (SECAS), we are updating that shared spatial plan and working to integrate it with similar plans in development for all of the LCCs in the Southeast. This project will help with that integration and provide the Council with cutting edge tools to support the Restore Council's forward thinking land conservation strategy.

If this project is selected by the Council the South Atlantic LCC stands ready to engage and assist in this effort.

Sincerely,

Rua Mordecai  
Science Coordinator  
South Atlantic Landscape Conservation Cooperative



November 6, 2014

To: Chair, Gulf Coast Ecosystem Restoration Council (the Council)  
From: Greg Wathen, Coordinator, Gulf Coastal Plains & Ozarks Landscape Conservation Cooperative  
Re: USFWS Gulf Restoration Program proposal for *Strategic Conservation Assessment of Gulf Coast Landscapes*

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The Gulf Coastal Plains and Ozarks Landscape Conservation Cooperative (GCPO LCC) offers strong support the proposal submitted by the Department of the Interior to the Council entitled *Strategic Conservation Assessment of Gulf Coast Landscapes*, to contribute to the long-term sustainability of the Gulf Coast Region.

The GCPO LCC is one of four Landscape Conservation Cooperatives working towards a forward-looking and unified approach to conservation planning across the Gulf Coast Region, demonstrated through a *Gulf Coast Vulnerability Assessment* project, a project on *Establishing Explicit Biological Objectives to Guide Strategic Habitat Conservation for the Gulf Coast (National LCC Project)*, and an emerging *Gulf Coast Adaptation Strategy*, which is envisioned to connect the dots of conservation planning, biological objectives, and vulnerability assessments into a comprehensive and adaptive strategy for sustaining Gulf Coast natural and cultural resources in the 21<sup>st</sup> century. We view the *Strategic Conservation Assessment of Gulf Coast Landscapes* project to be value-added to the above-listed ongoing efforts, and a good example of collaborative, landscape-scale conservation.

The GCPO LCC is a collaborative partnership that brings together scientific and technical capacities represented by 20 federal, state, and private organizations, with a mission to “define a shared vision for sustainable natural and cultural resources in the face of a changing climate and other threats; design strategies to achieve that vision; and deliver results on the ground through leadership, partnerships, contributed resources, evaluation and refinement over time.” The subject proposal clearly fits within our Mission, and, if funded, we offer our full support to be an active participant in its implementation. We believe that the objectives articulated in the subject proposal offer a high potential for collaborative conservation planning that meets all 4 RESTORE Act Priority Criteria, addresses the primary RESTORE Act goal to *Restore and Conserve Habitat*, and addresses many other RESTORE Act Goals and Objectives. We see the work described in this proposal as adding value to our ongoing efforts and believe it is a good example of what a true landscape conservation effort would look like.

The opportunity to achieve that vision in coordination with the other Gulf LCCs and GOMA under the auspices of the RESTORE Council is a unique and exciting opportunity to lay an important foundation for future conservation.

On behalf of the GCPO LCC, we thank you for your consideration of this important work that our Partnership strongly supports. If you have questions about any of our comments please contact GCPO LCC Coordinator, Greg Wathen at (615) 781-6670 or [greg.wathen@tn.gov](mailto:greg.wathen@tn.gov).

November 5, 2014



**MEMORANDUM**

**To:** Chair, Gulf Coast Ecosystem Restoration Council (the Council)  
**From:** Gulf Coast Prairie Landscape Conservation Cooperative  
**Re:** USFWS Gulf Restoration Program proposal for *Strategic Conservation Assessment of Gulf Coast Landscapes*

The Gulf Coast Prairie Landscape Conservation Cooperative (GCP LCC) has reviewed the proposal submitted by the Department of the Interior to the Council entitled *Strategic Conservation Assessment of Gulf Coast Landscapes*, and we strongly support the project as a means to conserve lands that will contribute to the long-term sustainability of the Gulf Coast Region.

The GCP LCC is one of four Landscape Conservation Cooperatives across the Gulf Coast Region and we remain committed to alignment for a unified “One Gulf” approach to conservation. Our partners firmly believe in the power of partnerships as a means to address large-scale conservation issues through integrated conservation design efforts like this one. We see the work described in this proposal as adding value to our ongoing efforts and believe it is a good example of what a true landscape conservation effort would look like.

We have clearly supported a multi-agency approach, including the use of shared positions, in our work on the Gulf. We have funded specific projects to further conservation on the Gulf, including the Gulf Coast Vulnerability Assessment (GCVA). As we build on this momentum driving the GCVA towards a gulf-wide adaption strategy, we expect to actively participate in the development of and ultimately use the proposed Strategic Conservation Assessment to inform our Partnership’s conservation design efforts along the Gulf. The opportunity to achieve that vision in coordination with the other Gulf LCCs and the Gulf of Mexico Alliance (GOMA) under the auspices of the RESTORE Council is a unique and exciting opportunity to set an important foundation for future conservation.

On behalf of the GCP LCC partnership, we thank you for your consideration of this important work that our Partnership supports. If you have questions about any of our comments please contact GCP LCC Coordinator, Bill Bartush at (337) 266-8816 or GCP LCC Science Coordinator, Cynthia Edwards at (337) 207-9377.

CC: GCP LCC Steering Committee



**SOUTHERN REGIONAL OFFICE**

193 Business Park Drive, Suite E  
Ridgeland, MS 39157-6026  
(601) 956-1936 Fax (601) 956-7814  
www.ducks.org

November 11, 2014

**MEMORANDUM**

To: Chair, Gulf Coast Ecosystem Restoration Council (the Council)

From: Ducks Unlimited, Southern Region

Re: USFWS Gulf Restoration Program proposal for *Strategic Conservation Assessment of Gulf Coast Landscapes*

Ducks Unlimited (DU) has reviewed the proposal submitted by the Department of the Interior to the Council entitled *Strategic Conservation Assessment of Gulf Coast Landscapes*, and we support the project as a means to conserve lands that will contribute to the generational viability of the Gulf Coast region for wildlife and people.

DU is directly engaged in on the ground conservation across the Gulf Coast region as it is one of the highest landscape priorities for our organization, with a North American Waterfowl Management Plan population goal to return over 15 million wintering waterfowl to breeding areas. This proposal provides for a truly inclusive conservation design along the Gulf that has many benefits. Chief among these benefits is a reasoned and well thought out understanding of the integrated impacts of restoration and protection efforts.

The cataclysmic DWH event in April of 2010 was damaging in many known and as yet unknown ways, but it provides a once in a lifetime opportunity to leave a lasting conservation legacy in the five Gulf Coast states.

On behalf of the DU, we thank you for your consideration of this important. If you have questions about any of our comments please contact Dr. Tom Moorman, Ducks Unlimited Director of Operations Southern Region, 601-956-1936, [tmoorman@ducks.org](mailto:tmoorman@ducks.org).

Respectfully,

Thomas E. Moorman, Ph.D.  
Director of Operations  
Ducks Unlimited Southern Region

## Appendix 5: Gulf Coast Ecosystem Restoration Council Environmental Compliance Checklist

Please check all federal and state environmental compliance and permit requirements as appropriate to the proposed project/program.

Environmental Compliance Type	Yes	No	Applied For	N/A
<b>FEDERAL</b>				
National Marine Sanctuaries Act (NMSA)				X
Coastal Zone Management Act (CZMA)				X
Fish and Wildlife Coordination Act				X
Farmland Protection Policy Act (FPPA)				X
NEPA – Categorical Exclusion	X			
NEPA – Environmental Assessment				X
NEPA – Environmental Impact Statement				X
Clean Water Act – 404 – Individual Permit (USACOE)				X
Clean Water Act – 404 – General Permit(USACOE)				X
Clean Water Act – 404 – Letters of Permission(USACOE)				X
Clean Water Act – 401 – WQ certification				X
Clean Water Act – 402 – NPDES				X
Rivers and Harbors Act – Section 10 (USACOE)				X
Endangered Species Act – Section 7 – Informal and Formal Consultation (NMFS, USFWS)				X
Endangered Species Act – Section 7 - Biological Assessment (BOEM,USACOE)				X
Endangered Species Act – Section 7 – Biological Opinion (NMFS, USFWS)				X
Endangered Species Act – Section 7 – Permit for Take (NMFS, USFWS)				X
Magnuson-Stevens Fishery Conservation and Management Act Essential Fish Habitat (EFH) – Consultation (NMFS)				X
Marine Mammal Protection Act – Incidental Take Permit (106) (NMFS, USFWS)				X
Migratory Bird Treaty Act (USFWS)				X
Bald and Golden Eagle Protection Act – Consultation and Planning (USFWS)				X
Marine Protection, Research and Sanctuaries Act – Section 103 permit (NMFS)				X
BOEM Outer Continental Shelf Lands Act – Section 8 OCS Lands Sand permit				X
NHPA Section 106 – Consultation and Planning ACHP, SHPO(s), and/or THPO(s)				X
NHPA Section 106 – Memorandum of Agreement/Programmatic Agreement				X
Tribal Consultation (Government to Government)				X
Coastal Barriers Resource Act – CBRS (Consultation)				X
<b>STATE</b>				
As Applicable per State				



# ELIGIBILITY REVIEW

Bucket 2 – Council Selected Restoration Component

**PROPOSAL TITLE**

Strategic Conservation Assessment of Gulf Coast Landscapes

**PROPOSAL NUMBER**

DOI-4

**LOCATION**

Across landscapes within the Gulf Coast Region

**SPONSOR(S)**

Department of the Interior

**TYPE OF FUNDING REQUESTED (Planning, Technical Assistance, Implementation)**

Planning

**REVIEWED BY:**

Bethany Carl Kraft/ Ben Scaggs

**DATE:**

November 18, 2014

**1. Does the project aim to restore and/or protect natural resources, ecosystems, fisheries, marine and wildlife habitat, beaches, coastal wetlands and economy of the Gulf Coast Region?**

YES     NO

Notes:

This proposal seeks to conduct a strategic Conservation Assessment of Gulf Coast landscapes.

**2. Is the proposal a project?**

YES     NO

**If yes, is the proposed activity a discrete project or group of projects where the full scope of the restoration or protection activity has been defined?**

YES     NO

Notes:

**3. Is the proposal a program?**

YES  NO

**If yes, does the proposed activity establish a program where the program manager will solicit, evaluate, select, and carry out discrete projects that best meet the program's restoration objectives and evaluation criteria?**

YES  NO

Notes:

**4. Is the project within the Gulf Coast Region of the respective Gulf States?**

YES  NO

**If no, do project benefits accrue in the Gulf Coast Region?**

YES  NO

Notes:



## Eligibility Determination

ELIGIBLE

## Additional Information

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## Proposal Submission Requirements

1. Is the project submission overall layout complete? *Check if included and formatted correctly.*

- |                                |                                     |                                       |                                     |
|--------------------------------|-------------------------------------|---------------------------------------|-------------------------------------|
| A. Summary sheet               | <input checked="" type="checkbox"/> | F. Environmental compliance checklist | <input checked="" type="checkbox"/> |
| B. Executive summary           | <input checked="" type="checkbox"/> | G. Data/Information sharing plan      | <input checked="" type="checkbox"/> |
| C. Proposal narrative          | <input checked="" type="checkbox"/> | H. Reference list                     | <input checked="" type="checkbox"/> |
| D. Location information        | <input checked="" type="checkbox"/> | I. Other                              | <input checked="" type="checkbox"/> |
| E. High level budget narrative | <input checked="" type="checkbox"/> |                                       |                                     |

If any items are NOT included - please list and provide details

2. Are all proposal components presented within the specified page limits (if applicable)?

YES     NO

Notes: