

Expanding the Toolbox of Land Conservation Strategies in Two Distinct Regions

PHASE II FINAL REPORT - April 2019

Prepared for:



GAYLORD AND
DOROTHY DONNELLEY
FOUNDATION

A collaboration of:



Executive Summary

Like in many other regions, the traditional conservation funding sources in the Chicago Wilderness Region and the Lowcountry of South Carolina have been instrumental in acquiring and stewarding land, but they are insufficient to meet growing natural resource needs. The work of the Gaylord and Dorothy Donnelley Foundation has significantly advanced conservation in these regions, and this report is the second of two to help the foundation identify emerging and/or underutilized funding and financing strategies to accelerate the pace of conservation. This report builds on the work completed during Phase I, which included a broad scan of conservation strategies (see Attachment 8) and highlighted eleven top tier strategies for further examination.

During Phase II of the project, the team was focused on further evaluating strategies that emerged as holding promise during Phase I. The team developed evaluation criteria in collaboration with foundation staff. Those criteria included:

- Scale of impact: rough gauge of conservation impact as measured by acres, dollars and/or environmental uplift
- Readiness/enabling conditions: nonprofit capacity, cultural climate, statutory changes needed, political climate and funding availability
- Timeliness/urgency: exceptional threats and exceptional opportunities
- Ability for philanthropy to affect change: especially, the opportunity for Donnelley to play a catalyzing role, alone or in partnership with others
- Opportunity to increase diversity, equity and inclusion in conservation
- Value or efficiency: land conservation achieved per dollar spent

During Phase II, the consulting team turned to local experts and land conservation practitioners in each region to ground truth the initial findings (see interview lists below). We are grateful to the foundation's land conservation grantees and other partners who shared their time and insights with the consulting team. Both the Chicago Wilderness region and the South Carolina Lowcountry are home to some of the country's leading land conservation practitioners and innovators. The ideas that emerged from this study are not necessarily new to these regions. In fact, many of the Tier 1 ideas are already underway or have been tried in some form. The goal of the study, and especially Phase II, is to discover how Donnelley can support the land conservation community's desire to think innovatively about their work and focus on the most impactful strategies.



Chicago Wilderness Region Local Practitioner Interviews

Name	Title	Organization
Brook McDonald	President and CEO	The Conservation Foundation
John Sentell	President and CEO	Lake Forest Openlands/PSCC
Josh Ellis	Vice President	Metropolitan Planning Council
Peg Kohring	Senior Associate, Conservation Services	The Conservation Fund
Emy Brawley	Associate Director, Conservation Services, Midwest (formerly served as VP of Conservation for Openlands)	The Conservation Fund
Kris Krouse	Executive Director	Shirley Heinze Land Trust
Rebecca Sanders	VP, Great Lakes and Upper Mississippi Flyway	Audubon Great Lakes
Jack Darin	Chapter Director	Sierra Club, Illinois Chapter
Jeff Walk	Director of Conservation, IL	The Nature Conservancy
Brian Sauder	President and Executive Director	Faith In Place
Eileen Figel	Deputy General Superintendent	Forest Preserve District of Cook County
Sharon Bush	Executive Director	Grand Victoria Foundation
Wendy Paulson	Chairman	Bobolink Foundation
Marcy Twete	Division Manager, Corporate Responsibility, Americas; ED USA Foundation	ArcelorMittal
Jason Navota	Director	CMAP
Brian Daly	Associate Planner	CMAP

South Carolina Lowcountry Local Practitioner Interviews

Name	Title	Organization
Chris DeScherer	Managing Attorney	Southern Environmental Law Center
Ashley Demosthenes	Executive Director	Lowcountry Land Trust
Lisa Jones Turansky	Chief Conservation Officer	Coastal Conservation League of SC



David Bishop	Coastal and Midlands Conservation ACE Basin/Southern Lowcountry Project Director	The Nature Conservancy, SC
Jamie Rader	Manager of Conservation Programs	Ducks Unlimited
Jennie Stephens	Executive Director	Center for Heirs' Property Preservation
Raleigh West	Executive Director	Lord Berkeley Conservation Trust
Roy Richards, Jr.	Philanthropist	
Jenny Russell	Executive Director	Merck Family Fund

The following report is divided into two major sections - the first section focuses on the Delta Institute's findings in the Chicago Wilderness region. The second section focuses on Open Space Institute's (OSI) findings in the South Carolina Lowcountry. Both of the regional reports center around "Tier 1 Strategies" - those identified by the project teams as having the highest potential. The sale of forest carbon, a strategy with potential in both regions, is included last. Those strategies slated for Tier 2 and Tier 3 still warrant further consideration, but are lower priority for the purposes of this report and are not discussed in detail here (see Attachment 1).

Summary of Tier 1 Strategies

Chicago Wilderness Region

1. **Leverage federal agricultural programs for conservation.** There are approximately 3.8 million acres of farmland within the Chicago Wilderness region, representing 49% of the total land area. Agricultural land buffers many of the region's critical conservation areas and improving and protecting these lands is vital to protecting the region's investment in landscape scale conservation. 82% of currently protected areas in the region have agricultural lands that buffer the them. Recommendations are discussed in more depth in the report and include:
 - Provide funding to the Association of Soil and Water Conservation Districts and other agricultural organizations in the Chicago Wilderness states for capacity building.
 - Provide match/cost-share for conservation organizations and private landholders seeking funding through Natural Resources Conservation Service (NRCS) programs.
 - Support the development of [Regional Conservation Partnership Programs](#) (RCPPs) in the region.
 - Provide funding to train conservation implementation organizations to become Technical Service Providers (TSP) through NRCS.
 - Support increases in capacity at NRCS offices in the region.
 - Serve as a convener and educator for those interested in agricultural programs.



2. **Link watershed protection and stormwater management.** Linking watershed protection and stormwater management can bring significant funding to enhance conservation outcomes in the Chicago Wilderness region, while strengthening collaboration between communities, municipalities, and conservation practitioners. In an era of increasing major storm events, this strategy is also an important aspect of climate resilience. State Revolving Loan Funds in the Chicago Wilderness states provide over \$1 billion dollars in loans annually. If a larger portion of that funding could be positioned to support watershed protection, we would see a huge win for conservation. Stormwater user fees could also make a significant contribution to green infrastructure. Recommendations are discussed in more depth in the report and include:
 - Support advocacy work currently underway to change the State Revolving Loan Fund to ensure that conservation objectives are incorporated into program administration.
 - Support initiatives for user fees for green infrastructure with a focus on permanent conservation.
 - Promote the development of implementation strategies that align stormwater and conservation objectives by investing in organizations that specifically target the interaction between the two.
 - Continue to monitor and support innovative trading programs.
 - Educate and train the practitioner community around the link between stormwater management and conservation.
3. **Utilize utility corridors as conservation corridors.** Some of the largest sustained corridors in the Chicago Wilderness region can be found on utility and publicly held property. Electric power line utility corridors represent between 135,000 and 160,000 acres of open space within the Chicago Wilderness Region. Of this, approximately 9.5% of those acres (13,000 to 15,000 acres) are within or adjacent to managed and protected lands in the Chicago Wilderness region. Recommendations are discussed in more depth in the report and include:
 - Prioritize natural area conversion in corridors that directly meet the Foundation's landscape scale conservation objectives.
 - Directly fund and support the conversion of corridors.
 - Fund research into best practices for rights of way (ROW) conservation and maintenance.

South Carolina Lowcountry

1. **Expand local ballot measures for land conservation.** The potential impact of local bond initiatives on South Carolina's Lowcountry is substantial. Prior ballot initiatives have far outweighed federal and state conservation spending. In addition, the more local funding a project generates, the more it may help demonstrate to state legislators broader support for conservation, and in turn lead to increased state funding. Donnelley has a history of supporting efforts to explore local funding options and we suggest continuing and expanding these efforts. Recommendations are discussed in more depth in the report and include:
 - Support polling and economic analysis of conservation need and ability to pay in counties where public funding programs might be expanded or initiated.



- Develop targeted retrospectives of the value of public funding for community economic and social well-being.
- Support efforts around specific transactions to link state and local funding to showcase for local communities how small amounts of funding can leverage state and private funds.
- Encourage Lowcountry partners to develop a shared strategy for increasing scope, impact and public perception of the existing local funding measures and ways to leverage local funding with existing state and federal sources.

2. **Finance forest protection.** With large tracts of timber land potentially up for sale soon, the conservation community is interested in identifying new sources of finance for forest protection. Resource Management Service (253,591 acres), Weyerhaeuser (104,278 acres), and FIA (135,290 acres) control extensive land holdings in South Carolina and particularly across the Lowcountry. This provides an excellent opportunity to work with a limited number of entities to affect landscape scale conservation. Recommendations are discussed in more depth in the report and include:

- Identify highest priority Timber Investment Management Organization (TIMO) lands and understand ownership structure and timelines for timber fund expirations.
- Research easement transactions with TIMOs and determine how best to ensure high level of ecological protection for a variety of possible scenarios.
- Assemble experts to advise on financing scenarios that include different mix of public and private funding, debt and equity (“deal doctoring”).
- Conduct further analysis on forest condition and the feasibility of selling carbon credits and securing and transferring Scenic River Tax Credits.
- Play a direct role in financing conservation easements or land acquisition through a mix of grants, low-interest loans and/or interest rate sweeteners or guarantees.

3. **Conserve coastal wetlands and ensure marsh migration along critical resilient corridors.** By conserving coastal wetlands and ensuring marsh migration along critical resilient corridors that will absorb sea level rise and related flooding and maintain water quality, the Lowcountry can become a model of urban adaptation to climate change. Such a strategy will require using resilience science to target public and mitigation funding and integrating various regulatory efforts, as well as floodplain protection and buyout programs, to ensure a sustainable future for the region. The Donnelley Foundation is already funding the advocacy organizations that are working on these issues. However, there may be ways to strengthen and target this work for increased effectiveness. Recommendations are discussed in more depth in the report and include:

- Support more comprehensive mapping, utilizing ecological resilience, marsh migration models, and flooding data, to identify the highest priorities for land acquisition and buyouts. This can establish explicit protection, restoration, and stewardship priorities for the land trust community.
- Use the above analysis to identify categories of floodplains for protection, based on ecological and human criteria, and identify communities located in those floodplains



that have completed a FEMA Community Rating System (CRS) application and those that have not.

- Support a “circuit rider” to assist local towns in digitizing protected lands within their floodplains and other elements of the CRS application process that can improve CRS scores. This represents a significant barrier to increased CRS enrollment as most towns lack the staff and technology to do the work.
- Engage community members, particularly in economically underserved areas, in the design and implementation of adaptation strategies.
- Continue to connect with national groups that have targeted the coastal Carolinas for support to help communities adapt to climate change.
- Assist communities in identifying the required 25% local match required to receive FEMA buyout funds after a natural disaster and final title holders for the lands acquired.

Sale of Forest Carbon Offsets

The sale of forest carbon offsets holds promise in each of the foundation’s focus regions. In the Chicago Wilderness, the forest preserve and conservation districts contain tens of thousands of acres of well-stocked forests that are managed only for wildlife and recreation. As such, they are well-suited for the potential sale of forest carbon offsets that could generate tens of millions of dollars, which could then be directed toward additional land protection and stewardship. In the South Carolina Lowcountry, the bottomland hardwood forests of large industrial ownerships may be attractive targets for carbon offset sales, which would eliminate or severely restrict harvesting in these ecologically-sensitive forests. In addition, there may be opportunities to aggregate smaller, family-owned forests into collaborations that can sell forest carbon offsets as the markets begin to develop. Recommendations are discussed in more depth in the report and include:

Chicago Wilderness

- Introduce forest preserve and conservation district staff to carbon developers based upon recommendations of this project team or other experts.
- Support a convening of forest preserve and conservation district representatives specifically focused on this opportunity to gauge interest and provide educational opportunities.
- Provide case studies and introductions to experts and other public agencies that have pursued carbon offset sales.
- Fund data collection and other aspects of an initial feasibility study.
- Consider a PRI to support a carbon development project if a project seems feasible.
- Support efforts to engage corporations in discussions about the potential for voluntary acquisition of forest carbon offsets.
- Identify opportunities for potential carbon offset sales revenue to target conservation minded activities such as restoration or additional land protection.

South Carolina Lowcountry

- Support workshop(s) with local and/or national experts on the potential for the sale of forest carbon offset sales and/or technical assistance programs for land trusts and landowners.



- Fund initial research and feasibility studies on the potential for forest carbon offset sales on large timberland ownerships as well as aggregated individual ownerships.
- Support efforts to engage corporations in discussions about the potential for voluntary acquisition of forest carbon offsets.
- Engage national conservation organizations in discussions about the potential to expand their carbon offset sales programs to South Carolina.

Cross-Cutting Recommendations

The following report provides in-depth information on each of the Tier 1 strategies, including detailed recommendations and action steps for the foundation. The consulting team also wanted to highlight cross-cutting recommendations that could help accelerate the pace of multiple strategies in both regions.

Convening and Catalyzing

Groups in both regions felt Donnelley could take an even more active role in convening grantees and others to share best practices and lessons learned from implementing innovative conservation strategies. Many of the Tier 1 strategies are already underway, or have been tried, but encountered significant challenges. The following suggestions come from the project team, and to be successful, they should be implemented in close collaboration with grantees and with an eye toward addressing barriers and challenges currently felt by conservation practitioners. The following suggestions are listed roughly by increasing complexity and cost:

- Sponsor webinars or “charrettes” with regional and national experts to work through a conservation strategy or project.
- Send a team to industry conferences like the Conservation Finance Network Boot Camp or the Network for Large Landscape Conservation, for example.
- Fund research on specific issues relating the opportunities/challenges practitioners are grappling with.
- Host multi-day workshops similar to the Yale School of Forestry & Environmental Studies Berkeley Workshops, which invite in regional and national subject matter experts to explore a particular land conservation topic in depth and produce reports with detailed recommendations.

Broadening Coalitions

The Donnelley Foundation is already actively supporting a number of conservation-focused collaborations. Many conservation groups have begun to examine their role in the community and the need to engage more deeply with non-conservation oriented organizations to advocate successfully for shared goals. The Donnelley Foundation can help support this work in the following ways:

- Look for opportunities to support collaborations of non-traditional conservation allies, like healthcare organizations, affordable housing advocates and communities of faith, among others.
- Fund capacity assessments not only within conservation organizations, but also within partner agencies.



- Support efforts to communicate and translate complex conservation data (like climate resiliency) into actionable and meaningful steps to ensure long-term ecosystem health.
- Continue to join with other funders (philanthropic and corporate) to promote conservation goals.

Communicating about Conservation Goals

Many practitioners mused about whether acreage was the proper metric for measuring conservation success, particularly in the Chicago Wilderness region. Due to the highly fragmented landscape, the large acre parcels present in other geographies are absent from the Chicago Wilderness region. In addition, certain very high value parcels are quite small but remain incredibly important from an ecological standpoint. As such, the interviewees wondered if there might be an alternative way of measuring “conservation value.” Similarly in the South Carolina Lowcountry groups felt that the ultimate conservation metrics are more about clean water, wetlands protected or restored (“ecological uplift”), access to nature and recreation, increased climate resilience, and involvement of underserved communities in conservation work.

The Donnelley Foundation is already helping to lead this change in mindset by supporting a broad set of conservation goals in its foundational documents for each region and in the goals and indicators of the Lowcountry Land Conservation Partnership. However, there was a disconnect between the perceived foundation priority of acres articulated by the interviewees and the more nuanced goals of the foundation. If the foundation were to promote and communicate its broader conservation goals (i.e. those not strictly related to increased acreage) more strongly, it would likely see good support from the group of practitioners interviewed for this work.

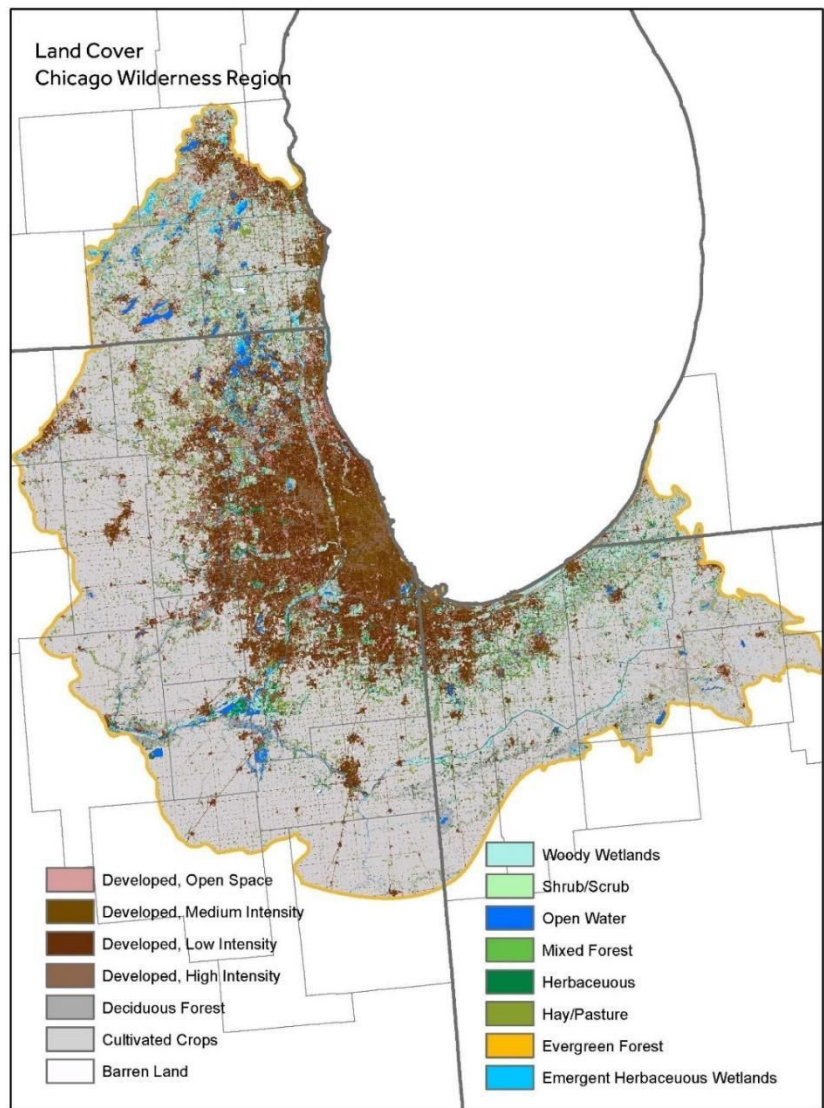


Chicago Wilderness

Executive Summary

The Chicago Wilderness region, stretching from the southeastern part of Wisconsin to northwest Indiana and into Michigan following the Lake Michigan Coast, is incredibly diverse in both ecology and people. As such, diverse strategies for implementing conservation are needed in order to create landscape scale impact. Strategies implemented on the north shore of Chicago will be significantly different than those used to implement contextually appropriate conservation in Southern Cook County or the Kankakee. We see this as a strength for the region because it makes a number of different strategies viable within the defined geography. With this study, we hope that conservation practitioners and those funding their work will be able to better align their efforts with the strategies most primed to be successful in their sub-regions.

Readers should note that for the sake of simplicity, feasibility considerations for the Chicago Wilderness study region were at times limited primarily to Illinois and Indiana within this report.



DATA: GIV; National Land Cover Database 2011

Observations from Local Land Conservation Practitioners

In order to evaluate the strategies highlighted in the Phase 1 report, the project team interviewed a set of local land conservation practitioners and identified a number of important observations that should be considered as the foundation identifies key strategies moving forward. These observations included:

- There continues to be a disconnect between the work done by the conservation community and the communities served within the region. Many practitioners emphasized the need to rethink



what it means to be a “conservation practitioner,” expanding our work through new partnerships and participants.

- Interest in innovation remains high, but capacity and knowledge gaps that would allow for experimentation and innovation remain key barriers to success.
- The current state of Chicago Wilderness as an organization has left a void in conservation collaboration and has left many practitioners asking about the best and most effective way to collaborate for conservation goals. This gap creates a short-term deficit but a long-term opportunity for new leadership and innovative partnerships to form that might not have been readily identifiable under the previous conditions.
- Many innovative conservation strategies in our region require partnerships with municipal and state governments, as well as regulated entities. In order for these models to be successful, conservation practitioners emphasized that their current lack of capacity for advocacy create barriers to region-wide opportunities.
- The need to communicate and interpret climate resilience data was identified by practitioners as an area of deficiency in the region. Climate change poses a risk to all the existing investment in conservation in the region and identifying resilience strategies will be key to ensuring the long-term success of our work. Communicating and translating complex climate data will create systems and structures that ensure long-term ecosystem health in the region.
- Understanding how best to measure and track conservation value continues to be a debate within the conservation community. This is not something easily solvable but ecosystem service metrics might provide a more nuanced approach to evaluating the work of conservation practitioners in our region.

Opportunities for Innovation: Tier 1 Strategies

Beginning with the 11 strategies identified as promising in the Phase 1 report and based upon the evaluation criteria developed, we evaluated applicability of each strategy to the Chicago Wilderness region. This evaluation was based on the feedback provided by our interview group and additional research conducted by the project team. The results of that detailed evaluation process can be found in the evaluation matrix in Attachment 2.

Through the evaluation, three strategies were identified as Tier 1 strategies because of their readiness, timeliness, and opportunity for supporting landscape scale conservation outcomes. In addition, these three strategies – leveraging agricultural programs for conservation, linking watershed protection and stormwater management, and utility corridors as conservation corridors— represent not just single strategies but a number of aligned strategies that make them applicable to the diverse landscapes within the region. All three of these strategies represent opportunities for public-private partnerships to leverage private dollars with state or national programs. Each of these strategies also have established funding programs that could be utilized for conservation if aligned better with the current users of the funds (the agricultural community, water utilities, and utility agencies, respectively). A number of practitioners interviewed referenced these collaborations as something they were exploring or currently participating in, but almost all practitioners emphasized that they see opportunities for action and growth as well.



Region-Wide Recommendations

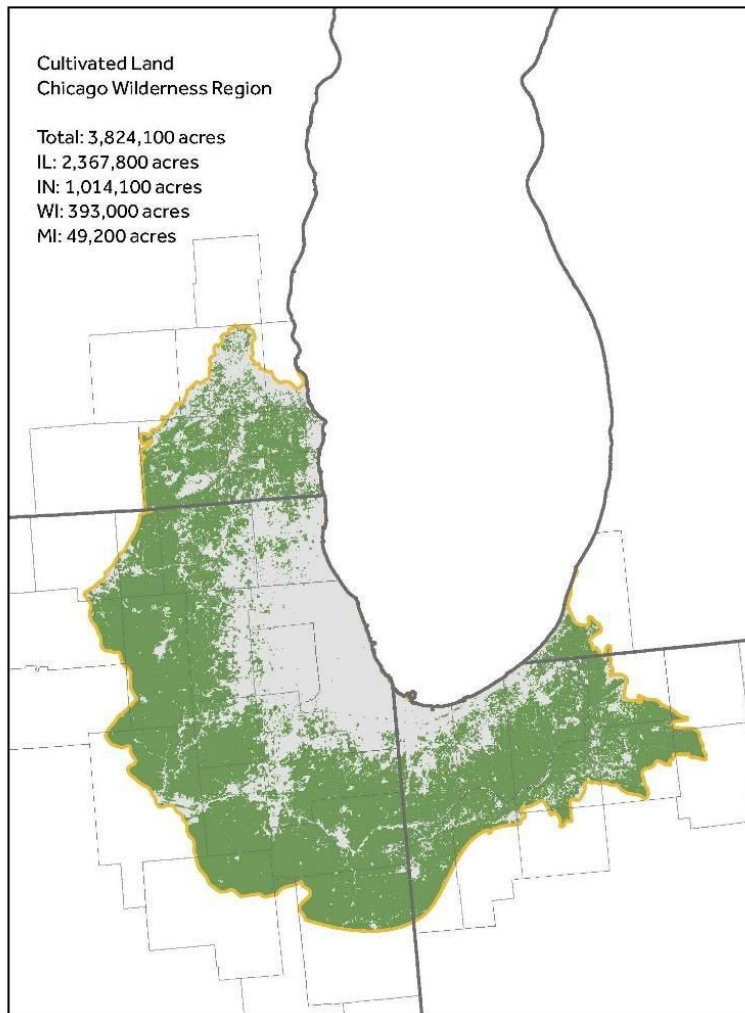
When evaluating these strategies, opportunities for philanthropic engagement, and specifically the involvement of Donnelley Foundation, were discussed with practitioners. In our discussions, and in our follow up research, the following overall recommendations were identified, with more detailed recommendations for each strategy found within the report:

- Practitioners emphasized the Donnelley Foundation's role as educator, convener, and facilitator in our region. This role is one that should be built upon and continued. All three strategies will require additional expertise within the community and new collaborations with organizations who do not necessarily look at conservation as their primary mission.
- Assessing capacity, not only within the conservation organizations, but also within partners such as NRCS and utility corridor managers, will be key to success of any of the three strategies. Donnelley Foundation can provide the resources to conduct a capacity assessment in the region.
- Invest in organizations to create a long-term presence in communities where they work in addition to around specific conservation projects. This will require funding to cover less formal relationship building. Conservation groups will need to view their work differently, engaging differently than when it was more targeted. This will support conservation groups in creating local partnerships that allow for alignment of priorities prior to planning and implementing conservation activities.
- Support the communication of nuanced but easy to understand conservation outcome metrics. While we understand that acres will continue to be a primary metric, emphasizing alternative habitat and ecosystem health metrics will create opportunities for sub-regions where large acreage may never become available for permanent protection to improve environmental outcomes nonetheless and create region wide conservation benefits.



Tier 1 Strategies and Analysis

Strategy 1: Leverage Farm Bill Programs for Conservation



There are approximately 3.8 million acres of farmland within the Chicago Wilderness region, representing 49 percent of the total land area.

Agricultural land buffers many of the region's critical conservation areas and improving and protecting these lands is vital to protecting the region's investment in landscape scale conservation. While often not considered "conservation" in its highest form by practitioners, protection and stewardship of agricultural lands, including increasing the utilization of Natural Resource Conservation Service (NRCS) programs has widespread applicability in our region, specifically outside of the near shore urban centers.

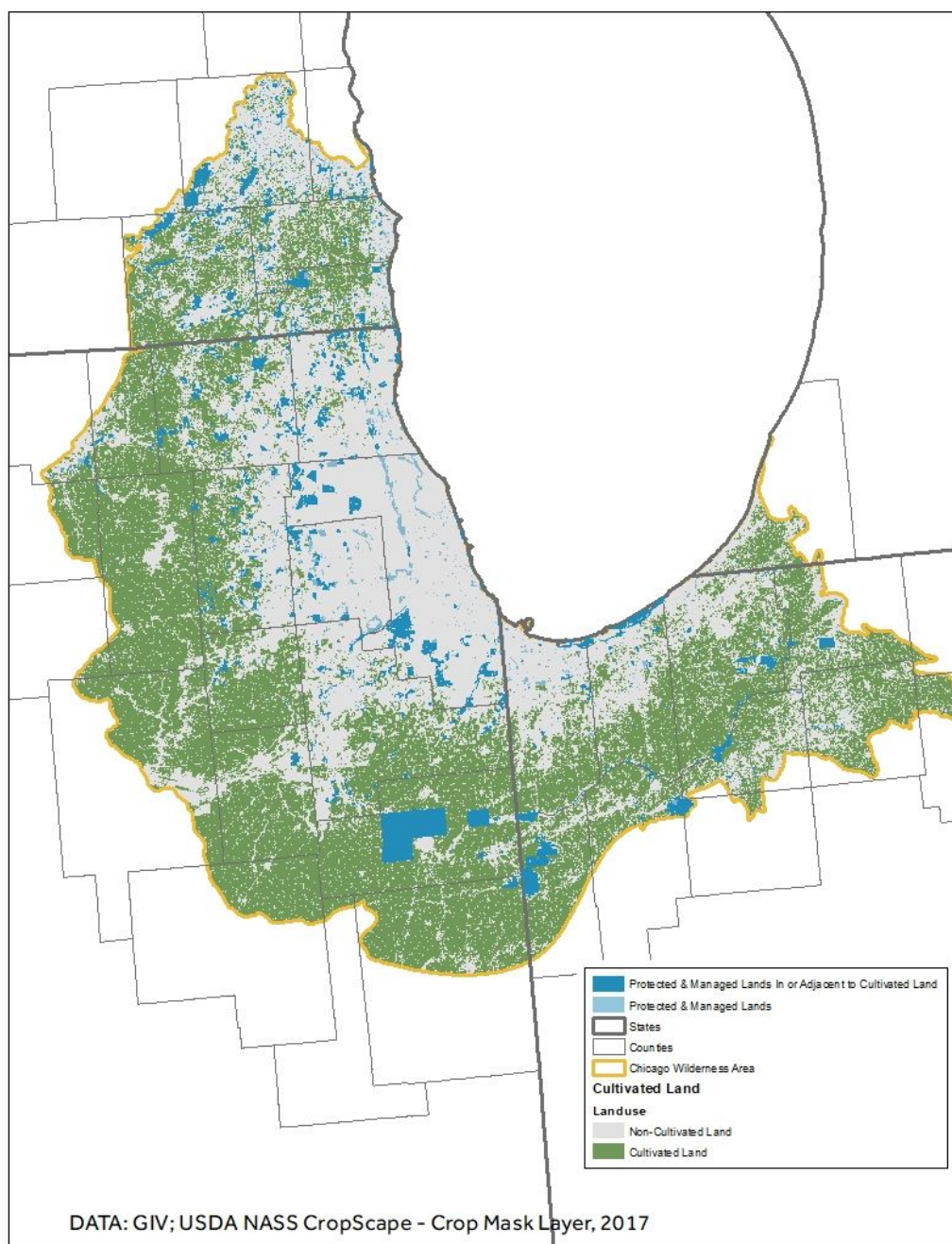
According to the Illinois Department of Agriculture, Illinois has lost 3.6 million acres of farmland since 1950, an average of almost 77,000 acres each year. This loss is mostly due to development. Conserving farmland and improving farming practices is

vital to protecting open space in the Chicago Wilderness region. It's also an important source of rural economic development. Directly and indirectly, the business of farming employs one million Illinoisans and agriculture-related industries, such as farm machinery manufacturing, agricultural real estate, and production and sale of value-added food products contribute billions more to the state's economy.

After long considering the agricultural community outsiders to conservation, the community is now excited about partnership and seeing the necessity of collaboration with farmers in order to achieve large scale impact. 82% of conserved land in the Chicago Wilderness is adjacent to or within agricultural acres.



Protected and Managed Lands Adjacent to Cultivated Land



(Note: Map scale obfuscates certain adjacent lands making Cultivated Land difficult to see. Detailed maps can be provided by Delta Institute as requested)



Many NRCS programs are established through the conservation title of the farm bill. **In 2017, approximately \$84.2 million in Illinois, \$64.9 million in Indiana, and \$71.5 million in Wisconsin were obligated through 13 different Title 2 programs for conservation purposes on agricultural land.**

While all of these programs still have contracts in place with farmers, some no longer enroll new participants because they have expired or been rolled into other programs. A full list of the 13 programs with existing contracts can be found in Attachment 4. This table does not include a number of additional technical assistance programs that are currently active for supporting conservation activities indirectly.

Currently seven programs are still actively accepting applicants. Two programs, the Emergency Watershed Protection Program, a natural disaster recovery program, and the Watershed Rehabilitation Program, which repairs aging dams, are not applicable to this work. The remaining five programs fall into three categories: 1) those providing for permanent protection; 2) those providing for long-term protection of more than 10 years; and 3) those providing short-term conservation protection of zero to 10 years.

The Farm Bill conservation programs, taken in total, are the largest single federal source of funding for private land conservation.¹ The 2018 Farm Bill adopted many of the Land Trust Alliance's highest priorities, including provisions that streamline the Agricultural Land Easement program and increase funding for the Agricultural Easement Program (ACEP) by \$2 billion over 10 years. Many of these programs require matching funds or a cost-share. Securing these leverage funds is critical to fully utilizing the available federal resources for conservation on agricultural land. Many practitioners interviewed expressed concerns about identifying matching dollars to be able to access NRCS dollars.

In addition to the investments made through the federal government, private investors also represent a nascent resource for funding conservation efforts. Between 2016 and 2018, private investors intend to deploy \$1.4 billion of already-raised capital in the sustainable food and fiber sector worldwide.² On a local level, a number of alternative farmland investors, such as Iroquois Valley Farms, have partnered with land conservation organizations to conserve farmland and implement enhanced conservation practices such as organic farming, cover crops, and filter strips.

Current Barriers and Challenges

NRCS programs are complex, requiring a deep knowledge of requirements and eligibility and a strong relationship with local NRCS staff, who also face significant capacity constraints. Practitioners emphasized that their knowledge of programs is growing, but that the complexity of the programs creates a capacity hurdle for organizations.

¹ <https://www.landtrustalliance.org/topics/federal-programs/farm-bill-conservation-programs>

² Kelley Hamrick, State of Private Investment in Conservation 2016: A Landscape Assessment of an Emerging Market, (Washington DC: Ecosystem Marketplace, 2016), <http://forest-trends.org/releases/p/sopic2016>.



The capacity of the local NRCS offices in their given region also factors into the ability to access these programs. Organizations must develop the relationships with the local staff, push for them to actively enroll acres in programs, and assist in identifying landowners who might fit specific programs.

Almost all of those interviewed expressed optimism about partnering with the farming community in Illinois, Indiana and Wisconsin, and specifically with the more rural communities outside of the near shore counties. In order to be able to do this more effectively, practitioners felt they must first work to change a broader narrative around the juxtaposition of conservation and agriculture. By better working to find common ground as stewards and by working to find areas where conservation practices could potentially improve farmer resilience and livelihood, the groups might better leverage their individual expertise. A change in mindset for some conservation practitioners, or a hybridized approach to leveraging these programs, will need to occur as some are not keen on the temporary nature of some of the agricultural conservation activities.

Recommendations to Support this Strategy

- **Provide funding to the Association of Soil and Water Conservation Districts and other agricultural organizations** in the Chicago Wilderness states to collaborate with grantees and conservation organizations to develop conservation strategies.
- **Provide match/cost-share** for conservation organizations and private land holders seeking funding through NRCS programs. One of the key barriers for accessing NRCS programs is the identification of the necessary match. The foundation can directly help organizations overcome this barrier through targeted grant-making.
- **Support the development of more [Regional Conservation Partnership Programs \(RCPP\)](#)** in the region. RCPPs streamline NRCS conservation funding for groups partnering on working lands conservation. RCPP awards can be significant, maxing out at \$10 million per project.
- **Provide funding to train conservation implementation organizations to become Technical Service Providers (TSP) through NRCS.** TSPs assist agricultural producers in accessing NRCS programs on behalf of NRCS. These providers add capacity but must be trained and certified.
- **Support increases in local NRCS capacity.** While increasing TSPs and RCPPs will create additional capacity in our region, NRCS offices continue to be under-resourced and lack capacity. In other geographies, organizations have partnered with their local NRCS offices to co-fund positions and increase capacity. We are advocating that conservation organizations in the Chicago Wilderness region explore the possible partnership structures with Chicago Wilderness NRCS offices in an effort to address capacity gaps directly.
- **Serve as a convener and educator.** Many of the organizations we interviewed expressed a desire to learn more about NRCS conservation programs. The Donnelley Foundation can continue to serve as a convener, bringing together grantees and conservation professionals to learn from regional and national experts. There are many opportunities to highlight successful models from around the country to promote innovative thinking within the Chicago Wilderness region.



Strategy 2: Link Watershed Protection and Stormwater Management

Linking watershed protection and stormwater management can bring significant funding to enhance conservation outcomes in the Chicago Wilderness region, while strengthening collaboration between communities, municipalities, and conservation practitioners. In an era of increasing major storm events, this strategy is also an important aspect of climate resilience. Notably in the Chicago Wilderness region, many recent partnerships have involved the implementation of green infrastructure for both conservation and stormwater management. This has been especially true in communities entering into consent decrees with the federal government to reduce their stormwater contributions to natural waterways. **For example, in 2013, the federal government issued a consent decree with the Metropolitan Water Reclamation District of Greater Chicago (MWRD) requiring it to improve water quality by capturing high flows of stormwater and wastewater from the combined sewer system that serves Chicago and 51 surrounding communities. This regulatory pressure creates an opportunity for conservation organizations to emphasize the multiple benefits of conservation for communities with diverse challenges.**

A number of different strategies exist for linking conservation with water management. These mechanisms are detailed in Attachment 5. The three strategies listed below are the most promising in the near term for supporting conservation outcomes in the Chicago Wilderness region. To meet the goals of the foundation, projects that increase connectivity of conserved lands and create habitat at an effective scale should be prioritized.

1. Accessing the State Revolving Loan Programs for Conservation

Each state has two different clean water revolving loan funds capitalized by state and federal funding under the Clean Water Act. In Illinois, the 2018 public water state loan program (drinking water fund) has an intended distribution of \$400 million, while the water pollution control loan program (wastewater/stormwater fund) has one of \$500 million. Indiana, where the loan program is smaller, saw approximately \$21 million in loans through its drinking water state revolving loan and \$367 million through its wastewater revolving loan fund program in 2017. The programs also contain a green project reserve component, which enhances applicant scoring when a project includes green infrastructure. EPA policy states that, to the extent there are sufficient eligible project applications, not less than 10 percent of the funds made available for the revolving loan funds shall be used by the State for projects to address green infrastructure, water or energy efficiency improvements, or other environmentally innovative activities. To date, the program has been used in a limited way in the Chicago Wilderness region to support conservation, but if it were utilized even at the program minimum of 10 percent it would provide significant resources for green infrastructure (see table below).



	Drinking Water Fund	Wastewater/ Stormwater Fund	10% for Green Project Reserve Component (if fully realized)
Illinois (2018 cap)	\$400 million	\$500 million	\$90 million
Indiana (2017 cap)	\$21 million	\$367 million	\$38.8 million
Michigan (2018 cap)	\$42 million	\$115 million	\$157 million
Wisconsin (2018 cap)	\$67 million	\$158 million	\$22.5 million

The revolving loan program provides states with a great deal of flexibility in the administration of the program. This has given certain states the latitude to implement creative incentives for implementing conservation related projects in conjunction with traditional utility infrastructure work. For example, Ohio has led the way in the development of a sponsorship lending programs where in exchange for a reduced interest rate, the wastewater facility invests in a watershed conservation project or green infrastructure investment. A 0.5% reduction in annual interest rates in exchange for that amount being invested in stormwater management and conservation could mean as much as \$80 million dollars annually in the region for conservation.

Although there are barriers to accessing the state revolving loan funds in the region (see “Current Barriers and Challenges” section below), this could be a sizeable source for conservation funding in the future. In addition, the time appears right for a change. Practitioners are unifying around the advocacy needed to push regulators, elections might result in openings for policy change, and water utilities are understanding the impact conservation can have on meeting stormwater management requirements.

2. Stormwater User Fees to support Permanent Green Infrastructure

Until recently, the costs of managing stormwater, specifically in heavily populated areas, were borne by local municipalities. With aging infrastructure and an increased understanding of the impact of stormwater runoff on our natural environments, a number of stormwater districts have implemented stormwater fees. These funds can be invested specifically in traditional grey infrastructure, and should be in some cases; however, they can also be utilized for nature-based solutions that better align with conservation goals.

While some municipalities have stormwater fees in place, not all within the region currently utilize this funding mechanism. Communities such as Michigan City, Indiana have begun public campaigns to pass legislation allowing for the fees with the goal of generating between half a million and 1.6 million dollars annually. EPA estimates find that the typical stormwater utility fee ranges from \$3 to \$7 per month per effective residential unit. If fully applied to the approximately 3 million households in our



region, between \$100 and \$250 million could be generated annually.³ Linking these fees to conservation and green infrastructure to support reduced stormwater impacts may help sway public opinion in favor of these relatively small fee increases.

3. Stormwater Retention and Water Quality Trading

An environmental credit trading program is a market mechanism where one entity undertakes an activity that provides environmental benefits in exchange for payment from another entity. These programs work best when there is a regulatory framework requiring entities and property owners to meet certain caps or standards.

There are several trading schemes that could generate revenue for landscape scale conservation in the Chicago Wilderness geography. Stormwater credit trading is most applicable in urban communities throughout the region. Under this structure, a property owner can earn credits for practices that increase stormwater storage onsite. These credits can then be sold at a premium to another entity who is not able to meet their retention goals on site. In order for a stormwater retention trading program to work, there must be onsite retention ordinances within a given geography. A number of municipalities and utilities have retention requirements in place, however that is not universal. A first step from an implementation standpoint would be to insure that low-impact development or stormwater retention ordinances are a requirement for development throughout the region.

While models for credit trading programs exist in other geographies, the Nature Conservancy, Metropolitan Water Reclamation District (MWRD), and Metropolitan Planning Council are conducting the groundwork needed to implement a trading program, known as “Stormstore,” in MWRD’s operating region. The feasibility work identified that there was the demand and supply needed for a trading program; however that the scale of that program might be marginal (hundreds of acres) compared to the overall conserved acreage goal of the Chicago Wilderness region.[1] Similar studies would have to be conducted in other communities to determine if there was enough interest in a trading program.

DC Water’s Stormwater Retention Credit program, established in 2013, has served as a national model for retention programs and provides some insight into the potential for similar programs in our region. Each site within the district must meet minimum stormwater retention requirements. If a site installs green infrastructure or other stormwater management practices beyond its onsite requirements, they can generate credits. Credits can be sold directly to the Department of Energy and Environment (DOEE) for a fixed price (between \$1.70 and \$1.95 per credit in 2017) or through an DOEE approved private market based sale (average price of \$2.07 per credit in 2017). In 2017, 2,422,586 credits were approved for sale or future sale. This could represent approximately \$4.5 million in additional investment for green infrastructure and conservation annually.⁴

³https://cdn.ymaws.com/www.chicagowilderness.org/resource/resmgr/Publications/biodiversity_recovery_plan.pdf

⁴ <https://doee.dc.gov/service/src-press-releases-srccs-news-and-src-program-reports>



In a similar structure to stormwater retention, water quality trading can be used to incentivize land conservation by creating an economic value for the environmental outcomes of conserved landscapes. While water quality trading programs are often tailored to the users in a given geography, at the core of the program a point source water polluter within a given watershed purchases credits from non-point source polluters who have made verifiable improvements at a different part of the watershed.

Current Barriers and Challenges

While many states have taken innovative approaches to implementing their SRF programs, Chicago Wilderness States have room for improvement. In Illinois, a group of practitioners has begun discussions on what it would take to allow for programs like the one in Ohio to be developed locally. Those practitioners report that the administrative burden of additional programs appears to be hindering progress as Illinois EPA and the Indiana Finance Authority are both resource constrained agencies. Beyond overcoming governmental constraints, the conservation community must work with the water utility companies who may see any changes in the rules as taking away funding from their existing sources. A collaborative effort between the two groups to identify program structures such as the sponsorship program, instead of direct project allocation, could help alleviate concerns.

Trading programs can be complex and require additional administrative capacity. In addition, they require consistent development demands. As such, at this time, they might only be well-suited for the northern part of the Wilderness region where development demands are higher and utilizing property for conservation onsite is more costly. Additionally, trading programs are best-suited for communities with regulatory frameworks that require environmental improvements. Not all municipalities and regions currently have regulatory frameworks in place. Lastly, trading programs can often be hard to implement as monitoring and verification become costly. However, if implemented correctly they can directly tie the benefits of conservation lands with a source of funding, resulting in increased implementation.

Recommendations to Support this Strategy

- **Support advocacy work currently underway around the State Revolving Loan Fund** to ensure that conservation objectives are incorporated into program administration and decision making frameworks.
- **Support initiatives for user fees** for green infrastructure with a focus on permanent conservation. Initially an inventory of municipalities without user fees should be conducted followed by targeted support in those communities to conservation advocates.
- **Promote the development of implementation strategies that align stormwater and conservation objectives.** Invest in organizations that specifically target the interaction between the two in an effort to raise awareness around the link between the two.
- **Continue to monitor and support innovative trading programs.** Market-based strategies continue to hold potential but groundwork needs to continue before robust trading platforms can be developed. We suggest that the Foundation continues to integrate into larger networks like the Conservation Finance Network and the Coalition for Private Investment in Conservation.



- **Educate and train the practitioner community around the link between stormwater and conservation.** Highlight successful models from around the country to promote innovative thinking within our region.



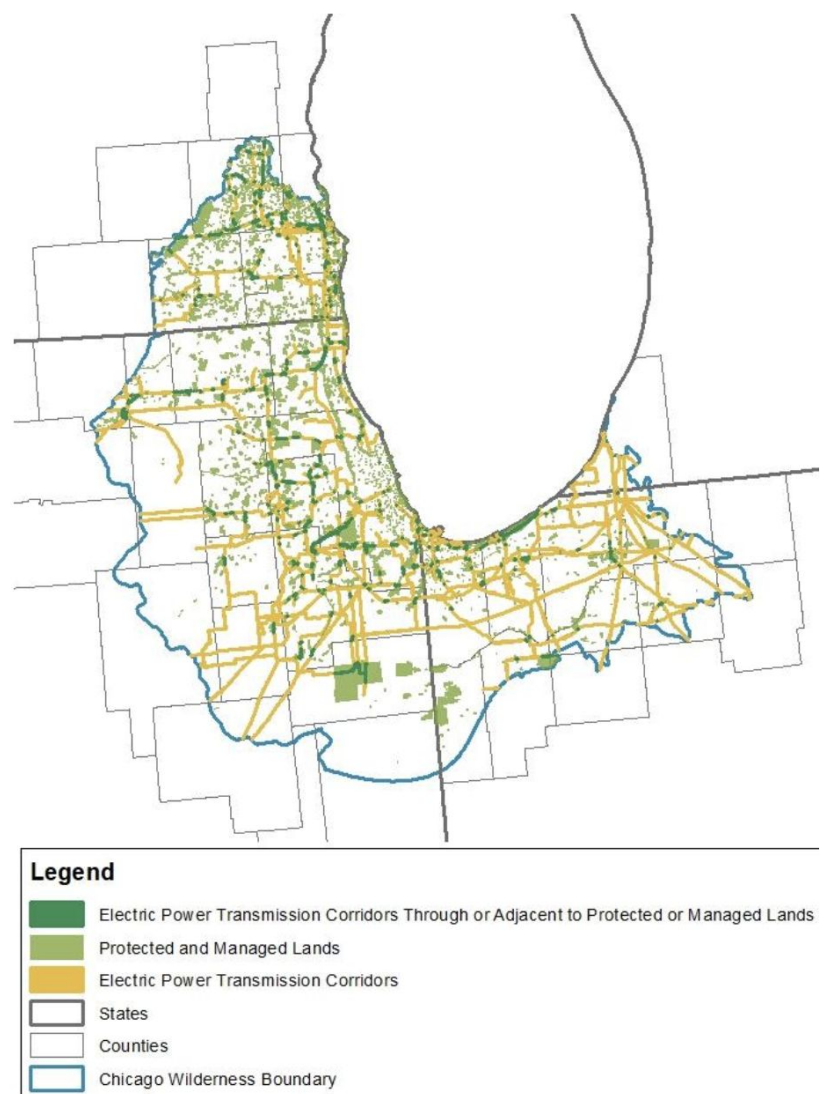
Strategy 3: Partnerships with Utility Providers for Resources and Right-of-Way Conservation

Some of the largest sustained corridors in our region can be found on utility and publicly held property. Electric power line utility corridors represent between 135,000 and 160,000 acres of open space within the Chicago Wilderness Region. Of this, approximately 9.5 percent of those acres (13,000 to 15,000 acres) are within or adjacent to managed and protected lands in the four-state Wilderness region. Pipeline rights-of-way present an additional opportunity for conservation outcomes. In addition, MWRD has legacy properties that may not currently represent high quality habitat but could represent a long-term opportunity.

Utility corridors can serve as habitat corridors for pollinators and birds or can be utilized as connection corridors between key natural areas within the region. They constitute large land acreage on a cumulative basis, are generally maintained in sunny areas with low vegetation height (ideal pollinator habitat), and often extend for considerable distances. These corridors also serve as potential public access points, well-suited for trails and paths that connect constituencies to conservation.

Conservation efforts are not uncommon for utilities in our region as Comed has engaged in strategic partnerships while NiSource/NIPSCO in Indiana practices integrated vegetation management (IVM) which supports pollinator habitat.⁵ In 2017 NiSource began a company-wide initiative to create pollinator habitats alongside right-of-way. Simple behavioral changes in operations have

Electrical Utility Corridors in the Chicago Wilderness Region



⁵ <https://napipelines.com/monarch-pollinator-habitats-pipeline-routes/>



already improved conservation value on these utility rights-of-way and easements and by establishing additional partnerships, we can improve upon the conservation benefits for the region.

With growing interest in pollinator habitat as well as an increased awareness on the conservation potential of these lands, our evaluation matrix placed this strategy within the top group of opportunities in the Chicago Wilderness region. Practitioners saw these acres as “low-hanging fruit,” opportunities for conservation on acres that couldn’t be used for much else. They also saw utility companies and agencies as key partners who are currently experimenting with pollinator habitat and are reaching the point where more robust, widespread implementation can take place. Practitioners also emphasized that because utilities currently manage these corridors, the change doesn’t have to be in who manages or owns the properties, but only in how they manage it.

The current existence of a number of unique partnerships, an increased interest in pollinator, and specifically monarch habitat, and the number of dedicated funding sources available to utilities and transportation agencies create the conditions for conservation at scale. Our interviews identified a number of different partnerships already in place that could be used as models for other sub-regions.

Current Barriers and Challenges

While this strategy has buy-in from many conservation partners, it still does not represent the norm within the utility community and has not been fully implemented throughout the region. Practitioners who were part of the interview group emphasized that land management staff of utility companies must change their behavior significantly. For years, management has been focused on mowing rights-of-way so that they look clean and deliberate. Now we are asking these professionals to change their approach and reframe their thinking on what an acceptable utility corridor might look like. Many companies have effectively made this transition and these early adopters may represent the best champions for widespread adoption moving forward.

The conversion of turf grass to a naturalized landscape also takes expertise and resources. Partnerships with local practitioners and sharing experience from pilot projects currently underway (such as the partnership between Comed and the Conservation Foundation) will be helpful. While some utility companies have the resources to make these shifts throughout their lands, others do not and are slowly integrating conservation practices. An injection of external funds from federal, state, or private sources could also help to accelerate the pace of conversion.

Recommendations to Support this Strategy

- **Prioritize natural area conversion in corridors that directly meet the Foundation’s landscape scale conservation objectives.** Identifying and publicizing the utility corridors that are adjacent to or within existing natural areas or those that provide connections between high quality areas directly supports conservation work of practitioners and the Foundation in our region.



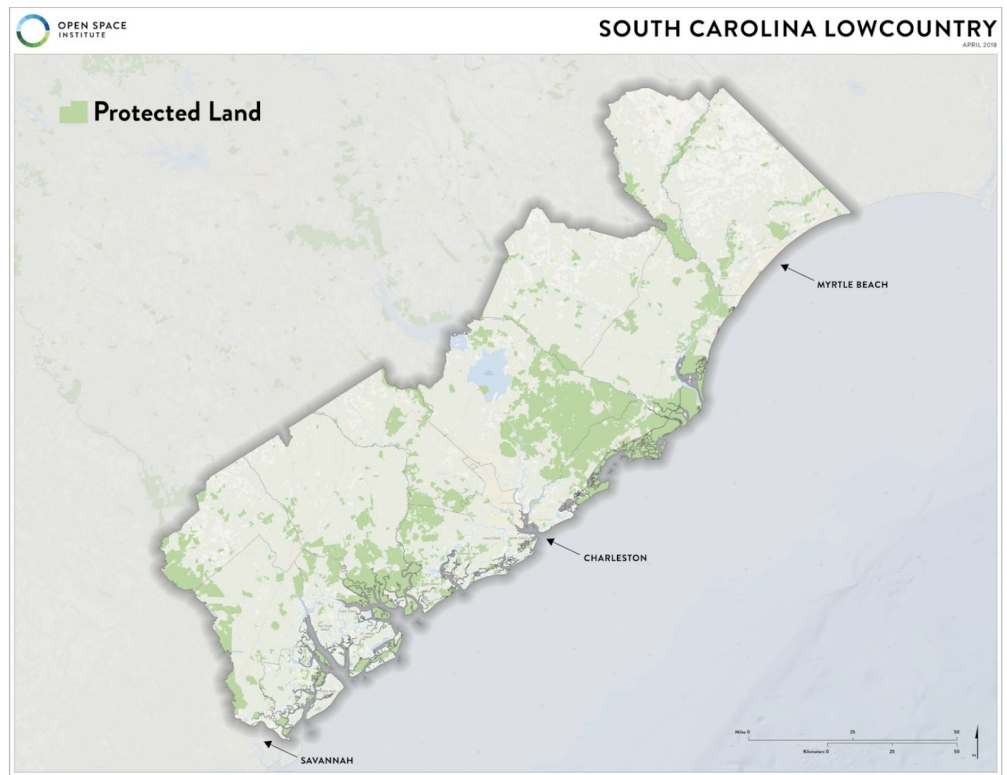
- **Directly fund and support the conversion of corridors.** While utility companies are converting acres over time, the Foundation can accelerate progress by directly funding the conversion beginning with priority areas and then more broadly throughout the region.
- **Fund research into best practices for ROW conservation and maintenance** through groups like the Right of Way for Habitat Working Group that highlight the habitat types that are best suited for corridors. Support the creation of resources/tools for practitioners and investigate other areas where this strategy has been successful.



South Carolina Lowcountry

Executive Summary

The Lowcountry in South Carolina contains a diverse mix of conservation organizations that have worked for decades to protect the region's ecologically significant landscapes. These groups, which include sophisticated advocacy organizations and highly effective land conservation groups, have evolved the collaborative conservation model they forged in the ACE Basin 30 years ago into a true landscape-level partnership across the Lowcountry.⁶



Observations from Local Land Conservation Practitioners

Interviews with field leaders suggest they are willing to experiment in search of innovative, new financing strategies, as evidenced by current efforts to create a water fund in the Savannah and direct mitigation funding toward protection of iconic landscapes. But the challenge of keeping pace with development, as well as intensive extractive resource use, has underlined the need to investigate ways to increase the scale and effectiveness of their work. Specific observations include:

- More expertise is needed to develop cutting edge strategies, such as carbon finance.
- Practitioners say they need more resources to implement what they are already doing.
- A better division of labor is needed among practitioners, e.g., groups should specialize instead of them all requesting a little bit of funding to do many of the same things.
- Climate resilience could become an organizing principle for work in the Lowcountry, especially around the highly resilient river corridors that drain from the mountains into the sea and the coastal wetlands that facilitate marsh migration. Protecting these "natural strongholds" could safeguard species in the long term and provide other ecological and human benefits, including

⁶ Note that in this report all maps of the South Carolina Lowcountry include Marion County and Williamsburg County although these areas are currently outside the defined service area of the Gaylord and Dorothy Donnelley Foundation.



reducing flooding and facilitating recreation. It is essential to engage community leaders, including from economically underserved areas that are disproportionately affected by climate-induced sea-level rise, in the design and implementation of adaptation strategies.

- There is a strong consensus among field leaders, which can be both a strength and a weakness. Collaboration has produced excellent results, but it may inhibit somewhat the infusion of new ideas.
- There is a strong mesh between regulatory and non-regulatory approaches, e.g., protecting floodplains through acquisition or easements and improving municipal ordinances to reduce stormwater runoff.

Opportunities for Innovation: Tier 1 Strategies

Our three Tier 1 strategies include **Ballot Measures**; **Forest Conservation Funding**; and an umbrella of climate strategies that include **Wetland Protection**, **FEMA Buyouts** and **Insurance Risk Mitigation**. They ranked highest generally because there was for each strategy either significant readiness and/or urgency; the potential to achieve scale; and a critical role for philanthropy to support their development. See Attachment 3 for a more detailed analysis. We acknowledge that our recommendations probably reflect a bias toward financing strategies that are already in place, as opposed to potentially innovative approaches that may not have been deployed in the region. This seems a natural result of such heavy reliance on interviews with stakeholders in the region: people will express support for tools they're already using or are familiar with and may not have views on promising approaches that haven't been tried in the region.

Region-Wide Recommendations

When evaluating these strategies, opportunities for philanthropic engagement, and specifically the involvement of Donnelley Foundation, was discussed with practitioners. In our discussions, and in our follow up research, the following overall recommendations were identified with more detailed recommendations for each strategy found within the report:

- **Achieving Scale.** The focus on scale may obscure deeper dimensions of impact. For many land trusts, a project over 500 acres becomes truly meaningful; for others, a threshold of 500 acres immediately excludes a whole class of people from participating. For example, with as much as 41,000 acres estimated to be held by heirs in six counties in South Carolina – most of it small parcels, not contiguous or adjacent – helping to secure their title to the land represents a different kind of scale.⁷ FEMA lot buyouts represent a case-in-point of how strategically engaging in small transactions can have a disproportionate community benefit.
- **Protecting Land Forever?** Permanence can be another stumbling block in reaching out to new constituencies. For many farmers, term easements – typically of 10 to 20 years – represent a much more palatable approach to protection, and many Farm Bill programs recognize that. For the Center for Heirs' Property Protection (CFHPP), permanence is a real sticky point as most heirs do not have title and therefore cannot legally encumber land forever. The reality of

⁷ Center for Heirs Land Assessment, 2014. The study area for the assessment included Charleston, Berkeley, Dorchester, Beaufort, Colleton and Georgetown Counties.



climate change suggests that easements should retain flexibility, and that as habitat shifts on the land, perhaps the easements should shift with them.

- **Private Funding.** Amid the hand wringing over the Conservation Bank, several interviewees wondered about whether a *Fund for the Low Country* could be established, and key philanthropists contribute to it. It would assume a shared plan for the region and some mechanism for meting out dollars for eligible projects. But some felt that the time had come to see if the community's collaborative gene might produce such a fund. There was also a feeling that the community could more effectively brand their work and attract corporate donors such as Coke or Apple. There was also interest in attracting more resources from outside funders such as Pew, Duke, the US Endowment, etc.
- **Geography.** Some interviewees felt that while the Lowcountry would always be their primary focus, science and climate change is causing them to look further inland. The resilience science places great priority on the river corridors that extend from the corridors up into the Piedmont, and the reality of coastal inundation will ultimately pose challenges for conservation work there.

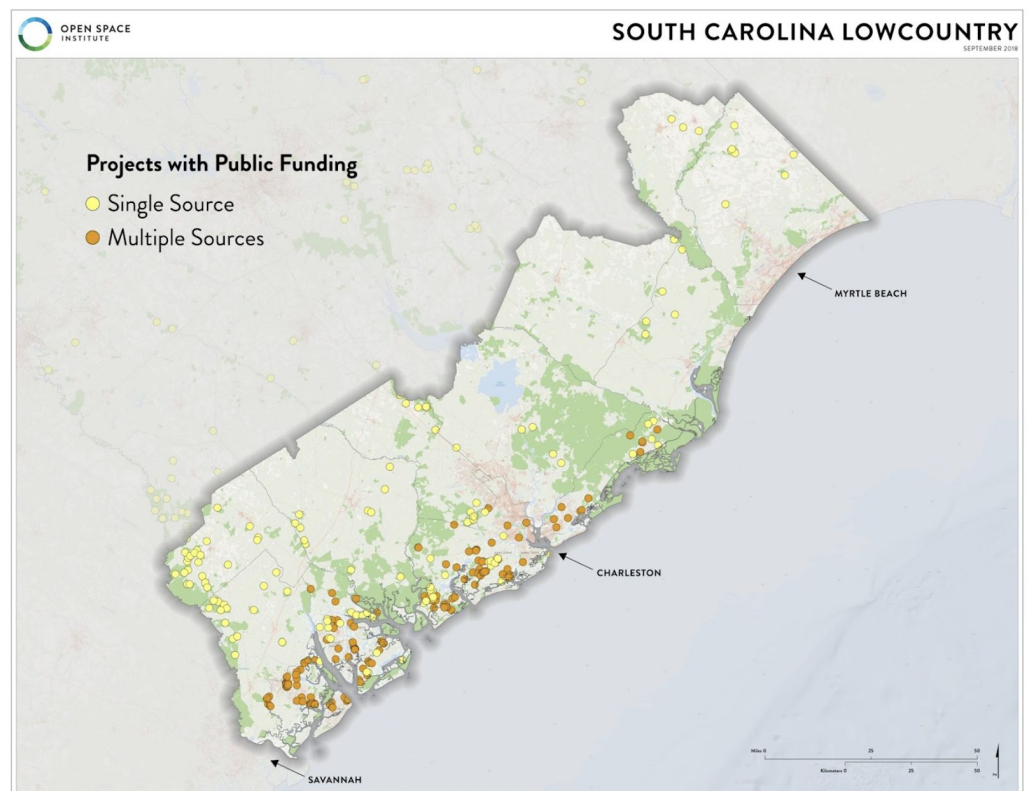
Tier 1 Strategies and Analysis

Strategy 1: Local Ballot Measures

The potential impact of local bond initiatives on South Carolina's Lowcountry is substantial. Prior bond initiatives have far outweighed federal and state conservation spending. In addition, the more local funding a project generates, the more it may help demonstrate to state legislators broader support for conservation, and in turn lead to increased state funding. The success of the two

existing county-level Lowcountry bond initiatives in Charleston and Beaufort Counties demonstrate the potential impact for scaling up conservation locally.

The Beaufort County Rural and Critical Lands program has completed 112 land protection projects, preserving over 23,900 acres of land for conservation, parks, buffers, and scenic vistas. Since 1998,



Beaufort County voters have approved four successive bond referendums totaling \$135 million, with an average 71 percent approval rate, to fund the Rural and Critical Lands program. This November, Beaufort County will vote on whether to extend that funding with a \$25 million bond to protect clean water, beaches, creeks and rivers, wildlife habitat, and coasts.

Charleston County Greenbelt Bank was reauthorized for \$210,000 in 2016 by a 52% vote after spending nearly all of the \$221 million voters authorized (via a transportation sales tax) in a 2004 referendum. The Bank protected 21,000 acres over ten years which allowed the County to reach a goal of placing 30% (approx. 190,000 acres) in permanent protection. Protected greenbelt lands include 10,275 acres near the Francis Marion National Forest and 5,610 acres of wetlands. Also, the county used greenbelt funds to purchase 4,675 acres for parks.

Interviews with South Carolina partners affirmed the importance of replicating these successful public funding programs in other Lowcountry communities. Practitioners see three avenues for conservation action around this strategy: (1) to reauthorize, bolster or expand existing local public funding programs, (2) develop new local funding initiatives in strategic locations, and (3) to link local funding to the recently reauthorized South Carolina Conservation Bank.

It will be important to the Lowcountry conservation community to invest in retaining and improving the existing local funding initiatives. The Charleston County Greenbelt Bank and Beaufort County Rural and Critical Lands Program should be celebrated and supported by the Lowcountry conservation practitioners through positive media, leveraging dollars, and thoughtful partnerships with local communities to meet the needs for parks and open space. Several interviewees mentioned an interest in accessing Beaufort Rural and Critical Lands Program funds, currently deployed by only one land trust organization, to increase leverage and the scope and scale of impact.

Conservation leaders are training their sights on initiating new county-level funding programs in the Lowcountry. Several interviewees mentioned Berkeley, Georgetown and Horry Counties as strategic locations to investigate. Others expressed interest in a comprehensive assessment to determine which municipalities and/or counties were ripe for further exploration (see table below). Assuming that addressing growth patterns, increasing existing protection, and protecting high conservation value areas are compelling messages for initiating local funding, Horry, Dorchester, Georgetown and Berkeley Counties could warrant special attention for exploration in the Lowcountry.



Table 1. Projected population growth and density, percent of the county identified as a conservation priority in the recently released TNC Conservation Vision map, and percent of county in permanent protection for ten Lowcountry counties.

Lowcountry County	Projected growth Rate (2010-2020) Source UNC Population Center	Population Density per sq mi (2018) Source World Media Group LLC	Conservation Priority (%)	Protected Lands (%)
Horry	>18%	225.7	44	7
Georgetown	0-6%	58.4	84	22
Charleston	0-6%	269.3	44	36
Berkeley	6-12%	153.6	60	35
Dorchester	>18%	248	43	17
Colleton	0-6%	33.7	49	18
Beaufort	12-18%	182.4	30	20
Hampton	Population loss	36.7	79	18
Jasper	6-12%	37.2	92	18

Measuring the potential impact of this strategy would depend on funding levels and local goals and priorities. For example, if Horry and Jasper Counties (currently with 7% and 18% of their lands in conservation status respectively) could achieve a 10% increase in land protection through a local ballot measure for conservation funding, protection would increase by roughly 13,700 acres – 5,700 acres in Horry County and 8,000 in Jasper.

Many past projects in the Lowcountry have combined local and state funding. The South Carolina protected lands database shows that of 437 Lowcountry projects funded by a local, state, or federal program, 144 were funded by two sources. However, there may be the potential to link these sources more closely or more deliberately in the future. Under the Conservation Bank’s reauthorization, state funding is now available to local governments to protect and own land whereas in the past it had to be state-owned or held by a qualified non-government organization. This could create greater alignment between local and state priorities and accelerate local support for conservation funding as residents may now see that local priorities attract more state funding. The more local funding a project generates, the more it may help demonstrate to state legislators broader support for conservation, and in turn lead to increased state funding.

Current Barriers and Challenges

The careful design of a ballot initiative for land conservation is challenging and time consuming. It requires a compelling champion(s); selecting the “right” funding source; strategic language or perhaps linking funds to other popular public-works projects such as roads, libraries or schools; impeccable timing; and careful and thoughtful research and polling. The Trust for Public Land (TPL) describes five critical steps in the design of a ballot measure: feasibility research, public opinion polls, program recommendations, ballot language, and public campaign. This strategy would likely require a



substantive investment to engage knowledgeable consultants to help identify which Lowcountry counties or communities are ripe for a ballot measure and to design and implement the initiative.

Recommendations to Support This Strategy

Through its support in the Lowcountry, the Donnelley Foundation is funding key organizations working to expand public funding. But some additional focus and small levels of support could be helpful in increasing the probability of success. Efforts to consider include:

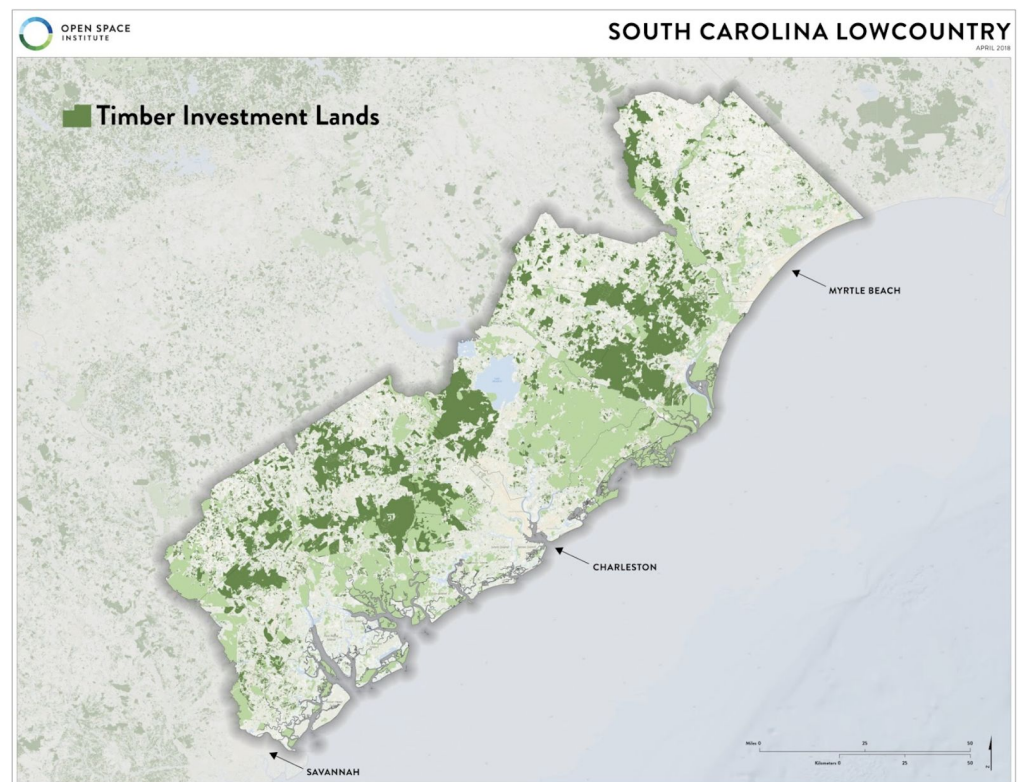
- Supporting polling and economic analysis of conservation need and ability to pay in selected counties where public funding programs might be expanded or initiated.
- Developing targeted retrospectives of the value of public funding for community economic and social well-being.
- Supporting efforts around specific transactions to link state and local funding to showcase for local communities how small amounts of funding might leverage state and private funds.
- Encourage Lowcountry partners to develop a shared strategy for increasing scope, impact and public perception of the existing local funding measures and ways to leverage local funding with existing state and federal sources.



Strategy Two: Financing Forest Protection

With large tracts of timber land potentially up for sale soon, the conservation community is interested in identifying new sources of finance for forest protection. Resource Management Service (253,591 acres), Weyerhaeuser (104,278 acre), and FIA (135,290 acres) control extensive land holdings in South Carolina and particularly across the Lowcountry.⁸ This provides an excellent opportunity to work with a limited number of entities to affect landscape scale conservation. Timber Management Organizations (TIMOs) and Real Estate Investments Trusts (REITs) together own or manage about 16 million acres or 10% of the timberland across 11 southern states.⁹ In South Carolina much of the plantation forest ownership is found in the coastal plain and has changed hands from industrial forest corporate ownership to timber investment ownership– an estimated 1.5 million acres in the northern coastal plain and 1 million acres in the southern coastal plain.

An unusual convergence of interests has made timber investors and conservationists unlikely partners at times. Some investors, having bought land at high prices more than a decade or more ago, are now looking for ways to monetize their assets to achieve desired returns. Conservation easements offer substantial cash today in exchange for restrictions that some timber investors have found palatable, i.e., prohibitions on development in certain places, and sometimes measures to encourage more sustainable forestry. This has resulted in some of the largest private lands sales in history. The growing success of such partnerships is promising for conservation in the Lowcountry.



⁸ Hatcher, J.E, T. J. Straka, Richard A. Harper, T. O. Adams. 2012. Shifting Private Timberland Ownership in South Carolina: Implications for Management Intensity. Open Journal of Forestry Vol 2. No 4 pg 279-285.

⁹ Zhang, D., B. J. Butler, and R. V. Nagubadi. 2012. Institutional Timberland Ownership in the US South: Magnitude, Location, Dynamics, and Management. Journal of Forestry 110(7) pg 355-361.



Resource Management Service, a TIMO with the most land ownership in South Carolina of any timber investment company, has garnered special attention from Lowcountry partners. The Company is beginning to plan for the 2021 sale of its Red Mountain Timber Fund, which includes 2.3 million acres across the southeast with approximately 200,000 acres located in the northern coastal plain of South Carolina. If investment interest is high enough, the Company may try to move much of this land into a new evergreen fund and conservation groups could play a role in bringing much needed capital to the table to make this possible (see Attachment 6- Approaches to Addressing TIMO Lands).

Table 2. Acres and percent of 10 Lowcountry counties in plantation forest ownership (based on TNC's Plantation Forest data layer generated for Terrestrial Resilience analysis).

Lowcountry County	Plantation forest ownership (Acres) Source TNC	Plantation forest ownership (% of County) Source TNC
Horry	53,948	7
Georgetown	221,815	41
Charleston	34,039	6
Berkeley	138,545	18
Dorchester	80,786	22
Colleton	231,074	34
Beaufort	11,296	3
Hampton	86,196	24
Jasper	88,769	21

To achieve return for investors, timber investment companies realize value through appreciation of the asset (timber and land), timber sales and, in certain instances, sale of the land or easements. Timber holdings in the Lowcountry are highly productive and in some cases companies will want to retain ownership and seek to realize revenues from an easement sale. It is unclear how much coastal land holdings might be worth, how much timber companies may seek to ease and importantly how much is necessary to conserve. If conservation partners pursued conservation easements on the 200,000-acre outsale of Red Mountain Timber, it alone could be worth as much as \$200 million. Even if the conservation community could conserve a small part of the ownership, assembling the necessary financing will be a huge challenge.

To protect these and other large forested tracts, the conservation community will likely require a mix of public and private funding, including grant and low-cost loan capital and very likely collaboration with timber investors. The region's land trusts, in particular TNC, TCF, OSI and Lowcountry Land Trust, have experience working with investors, though typically with individuals who are more charitably inclined. Partnerships with institutional investors, such as TIMOs, can be much more challenging because of their fiduciary responsibility to secure market rate returns.



Philanthropy remains the obvious first choice of funding. It is flexible, free and either available outright or through payouts over a limited number of years. Yet, there are a limited number of foundations and individuals who provide grants for land acquisition in the Lowcountry. One promising source of funding may be through the sale of carbon credits, in which forestland owners are compensated if they agree to restrictions on their land in order to facilitate carbon sequestration (see pages 41-44 for an extensive discussion of the sale carbon offsets).

Absent large amounts of up front grants, land trusts will likely need to secure significant flexible, low-cost debt to purchase and hold land until permanent “take-out” funding can be found. One source of such capital may be the State Revolving Fund (SRF). The state actually operates two loan funds, one focused on wastewater and stormwater treatment and a second focused on drinking water. To date, the South Carolina SRF has made loans totaling almost \$1 billion through both funds for projects ranging from sewer upgrades and expansion of wastewater facilities. While nonprofits have tapped SRFs for loan capital in other states, including neighboring Georgia, this has not occurred in South Carolina. Nor has the “sponsorship model” pioneered by various states including Ohio been utilized, in which the interest rate on loans for traditional “grey” infrastructure is reduced, and the funds from the “avoided” interest are earmarked for acquisition of forestland that complement, for example, wastewater investments downstream by enhancing water quality upstream. But several groups interviewed expressed interest in trying to pilot the model.

Current Barriers and Challenges

Since TIMOs are not subject to public scrutiny as much as publicly traded companies, there is little incentive to engage in conservation to bolster their public image. Their only motivation is usually for money.¹⁰ In Yancey’s 2007 research assessing the growing relationship between conservation NGOs and TIMOs, TIMO respondents said that fee simple sales were the best method of transaction, with some going as far as to say that their respective TIMO would not engage in conservation easements. Their reluctance was attributed to several factors - decreased liquidity of the tract, perpetuity of easement (in a highly dynamic future), and inability to get a proper return for investors. All this notwithstanding, in 2014 Resource Management Service, which owns close to 200,000 acres in Georgetown and Williamsburg Counties alone, engaged in a landscape-scale conservation easement effort with The Conservation Fund in Alabama and Florida. The Coastal Headwaters project will permanently protect approximately 205,000 acres of working forestlands across the Mobile, Perdido, Pensacola, and Blackwater Bay watersheds in Alabama and Florida and is the largest single longleaf pine landscape restoration effort on private lands in history.

To negotiate well with a timber investor, the conservation community needs to understand their business model. In the Coastal Headwaters Initiative, RMS approached TCF as a partner through a fee for service agreement. The project clearly met the financial needs of the organization and the conservation imperative of the NGO. But most NGOs are unfamiliar with the TIMO business model and may be at a disadvantage in negotiating with timber investors.

¹⁰ Yancey, H. 2007. Effective Instruments for Timber Investment Management Organizations Cooperation with Conservation Groups. Master of Environmental Management degree and Master of Forestry degree in the Nicholas School of the Environment and Earth Sciences of Duke University.



Recommendations to Support This Strategy

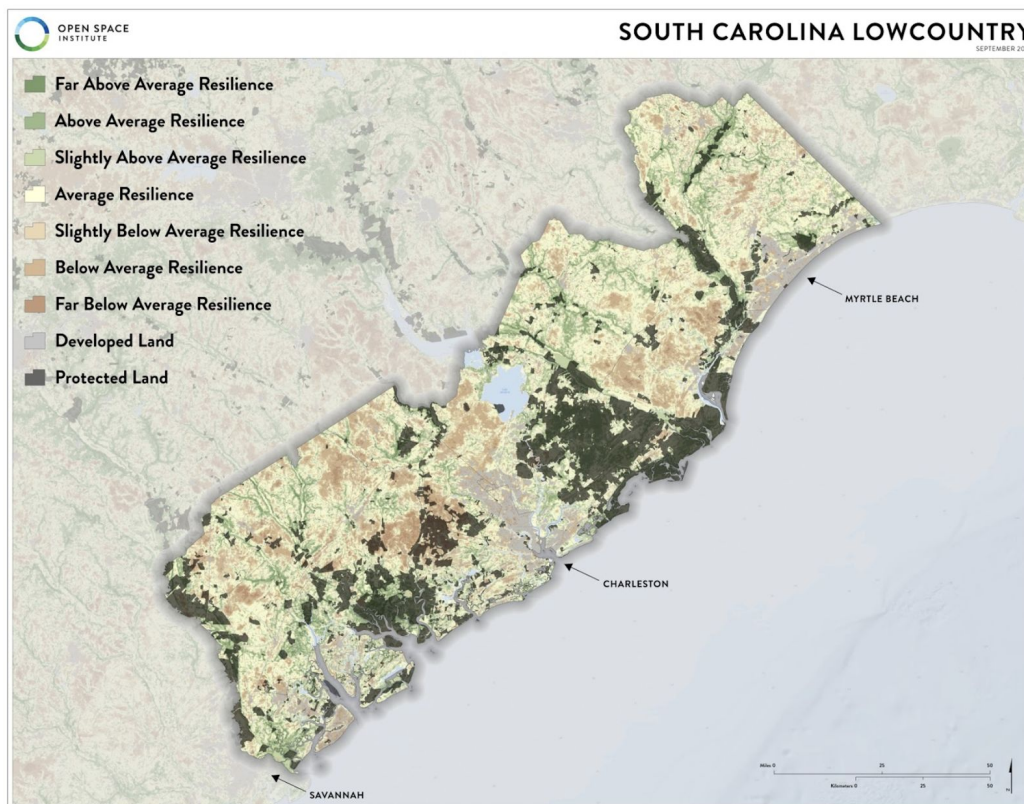
In addition to its valuable role in convening and facilitating communication among Lowcountry conservation groups, the foundation could support targeted research and assistance on financing strategies. Specifically, there is a need to:

- Identify highest priority TIMO lands and understand ownership structure and timelines for timber fund expirations.
- Research easement transactions with TIMOs and determine how best to ensure high level of ecological protection for a variety of possible scenarios.
- Assemble experts to advise on financing scenarios that include different mix of public and private funding, debt and equity ("deal doctoring"). Conduct further analysis on forest condition and the feasibility of selling carbon credits and securing and transferring Scenic River Tax Credits.
- Play a direct role in financing a conservation easement or land acquisition through a mix of grants, low-interest loans and/or interest rate sweeteners or guarantees.



Strategy Three: Coastal Wetlands and Climate Resilience

By conserving coastal wetlands and ensuring marsh migration along critical resilient corridors that will absorb sea level rise and related flooding and maintain water quality, the Lowcountry can become a model of adaptation to climate change. Such a strategy will require using resilience science to target public and mitigation funding and integrating various regulatory efforts, as well as floodplain protection and buyout programs, to ensure a sustainable future for the region.



The destruction caused by Hurricane Florence has highlighted both the precariousness and value of coastal wetlands. Coastal wetlands, some of the most diverse and productive ecosystems on Earth, are important and irreplaceable habitats for slowing the pace of climate change and protecting Lowcountry communities. Intact coastal wetlands continuously remove and store atmospheric carbon while also increasing the resilience of ecosystems and human communities in the face of climate change. Wetlands store flood waters from increasingly intense rainstorms, provide water during droughts and help cool surrounding areas when temperatures are elevated. Wetlands within and downstream of urban areas are particularly valuable, counteracting the greatly increased rate and volume of surface-water runoff from pavement and buildings. The holding capacity of wetlands helps control floods and prevents crop damage from flooding. Preserving and restoring wetlands, together with other water retention actions, can often provide the level of flood control otherwise provided by expensive dredge operations and levees.¹¹

¹¹ Source: <http://water.epa.gov/type/wetlands/flood.cfm>



The U.S. Fish and Wildlife Service estimates South Carolina has about 383,000 acres of salt marsh and marine wetlands along thousands of miles of saltwater creeks which eventually give way to 182,000 acres of freshwater tidal wetlands. According to NOAA, sea level has risen steadily by about a foot in coastal South Carolina over the past century. The average annual sea-level rise since 1993 has been nearly double according to NOAA's 2017 Climate Report. The City of Charleston uses a forecast of 1.5 to 2.5 feet for its 50-year sea-level rise planning. The coast might be a great deal more vulnerable were it not for the conservation community's protection from development of nearly 1 million coastal acres, mostly in the Santee River delta and in the Ashepoo-Combahee-Edisto (ACE) Basin between Charleston and Beaufort, giving salt marshes and other tidal wetlands room to migrate. The challenge now is to conserve additional wetlands north of the Santee River, closer to developed area, and to steward and restore wetlands on protected lands.

Resilience science offers a blueprint for identifying high priority floodplains and wetlands and key corridors for marsh migration, as well as complementary efforts to strengthen regulations and accelerate the rate of buy-outs to increase the region's resilience. Four interrelated sub-strategies warrant further investigation:

1. Protecting (or stewarding on already protected land) salt marsh migration space to allow this essential coastal habitat to persist in the face of sea level rise.
2. Engaging communities in the Federal Emergency Management Agency (FEMA) Community Rating System (CRS) program to elevate floodplain protection as a community priority.
3. Working with counties and municipalities to leverage FEMA repetitive loss funding.
4. Building upon recent successes in targeting highly resilient conservation areas for regulatory wetlands mitigation.

Protecting Marsh Migration Space - In developed areas along South Carolina's coast, human infrastructure will be protected with hardened shoreline from rising sea levels. With no space to migrate, areas adjacent to development are likely to become marsh-loss locations if existing marshes aren't able to keep pace with rising seas. This places additional pressure on conservation organizations to protect marsh migration space where it exists and to better understand the role their existing and future conservation easement properties might play in allowing or hindering marsh migration.

Protecting Floodplains through Planning and Buyouts and Engaging Communities in FEMA CRS - Supporting and engaging communities in completing a Community Rating System (CRS) application is a powerful indirect means of leveraging land conservation in the Lowcountry. The goal of the program, which is managed by the Federal Emergency Management Agency (FEMA), is to reduce flood risk. Participating communities receive "credits" for undertaking measures to preserve floodplains that include conserving open space and implementing land use policies that encourage development away from wetlands, dunes, and other naturally protective features. FEMA offers discounts on flood insurance premiums for policyholders based on the credits earned by their communities. When Horry County updated their application in 2016, their score improved from 711 points to 1827 and flood insurance rates for county residents were reduced from 5 to 15%. Incorporating open space protection



in the application accounted for the most significant point increase (329 points) in the updated application.

There are a myriad of opportunities for conservation organizations to provide information, resources or technical assistance to coastal communities to initiate or improve a FEMA CRS application, and plan and facilitate future floodplain protection. South Carolina's Office of Coastal Resource Management has made a significant first step by initiating the Coastal South Carolina CRS Users Group to provide a forum for coastal communities to share lessons learned, identify best practices and gain efficiencies in planning processes of CRS. Investing in this program simultaneously elevates the importance of floodplain protection and provides a direct financial benefit to residents who pay flood insurance. Of the ten Lowcountry counties, only six are currently participating in CRS. At least four of these counties could likely increase their scores with technical assistance on the application. Additionally, only a handful of coastal towns and cities have completed the application process.

Table 3: Six Lowcountry counties currently participating in FEMA CRS, CRS Class ranking (1-10:1= highest possible score and 10=no application submitted), and percentage discount applied to flood insurance premiums.

Lowcountry County	Effective Date of CRS Application (as of 2016)	FEMA Class (ranked 1-10)	Percent Discount of Flood Insurance
Beaufort	05/1/12	6	20
Berkeley	05/1/13	8	10
Charleston	10/1/10	4	30
Colleton	05/1/07	7	15
Georgetown	05/1/10	8	10
Horry*	10/1/10	9	5

*Horry County updated their application in 2016, but current data was not available.

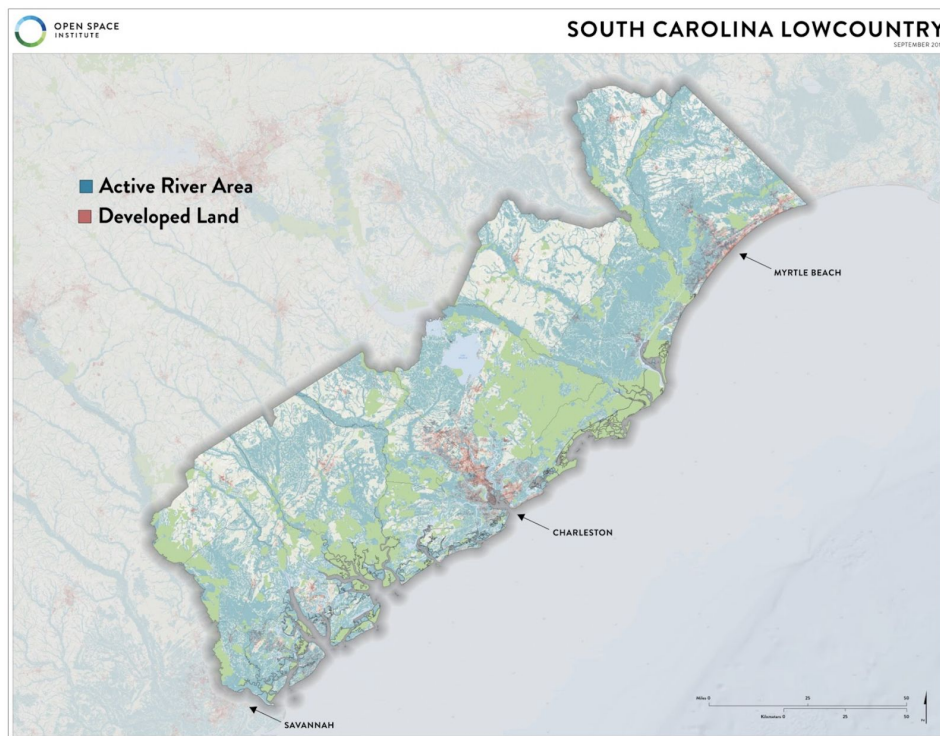
FEMA Repetitive Loss Funding - About 400,000 people - or almost 10% of the state's population - live in flood-risk areas. With several millennial storms having occurred in the last five years, there is growing acceptance of the risks from flooding and weather-caused disasters. South Carolina's coastal communities have been proactive about securing disaster relief funding. Between 2010 and 2015, FEMA has provided almost \$40 million in disaster relief in South Carolina, an increasing amount for buy-outs. In Oct 2017, the Charleston Post and Courier announced that FEMA was awarding the city of Charleston more than \$10 million in grants to help buy 48 flood-prone properties in West Ashley where residents were eager to sell. Thirty-two townhomes, which have been flooded four times in the past three years, are among the first properties the city will purchase with the grants to transform the properties into greenspace. Similarly, the City of Conway, in Horry County, earlier this year received \$10 million to buy out structures, which could end up improving the ability of its floodplains to absorb increased water and prevent further property destruction.

Two of the region's advocacy groups - the Coastal Conservation League (CCL) and the Southern Environmental Law Center (SEL) – are working with FEMA in Charleston County, as well as other cities



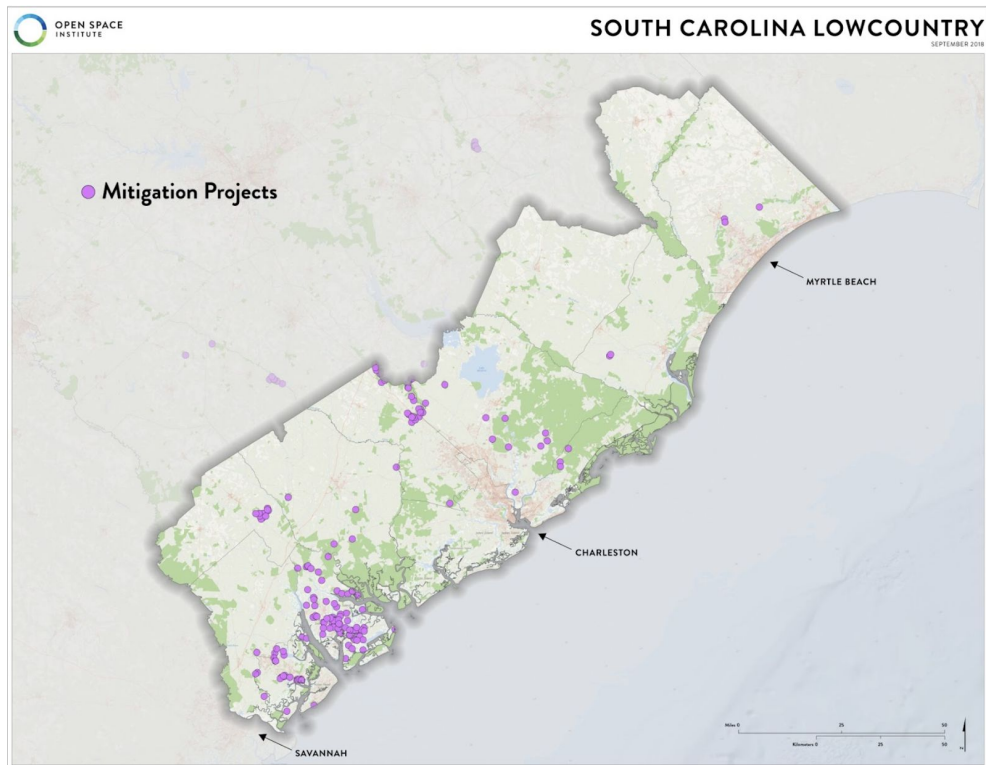
and towns, both to shape disaster relief as well as help local governments secure relief services. CCL is working with the Natural Resources Defense Council on a pilot program to identify optimal properties for buy-out in Charleston, and SELC is using resilience analysis to determine “no go” development zones that can facilitate marsh migration in the face of climate change. Both efforts are promising approaches to increase local investment in floodplain protection.

This strategy provides a mechanism to directly improve community resilience, increase parks and open space in developed areas, and restore formerly developed land to natural areas. With potential application across coastal counties and compounding benefits, this represents a cost-efficient conservation strategy. However, this nuanced strategy will require special sensitivity to a landowner’s, neighborhood’s, or community’s interest in engaging in buy-outs. Where buy-outs are not of interest, increasing community resilience through protection and restoration efforts (discussed above) may be.



Compensatory Wetlands Mitigation

In a region that is nearly half wetlands and that is booming economically, it is inevitable that some development will harm important wetlands. The legal framework requires that the first obligation is to prevent such harm, the next is to ensure that if it is to occur, resulting mitigation is efficient and strategic. With careful attention, wetland mitigation can provide a source of significant funding for conservation in the Lowcountry. A strategic opportunity is to focus potential mitigation funding on protecting the most important wetlands, and marsh migration corridors.



Some mitigation needs, like long term road planning, are easier to forecast, while others are less predictable and project specific, such as mitigation needs for new large manufacturing facilities. When done correctly, applicants who need permission to fill wetlands fund protection and restoration of threatened wetland landscapes that connect to other ecologically significant and/or public lands to offset the proposed impacts to wetlands. When done incorrectly, applicants propose lowest cost preservation and restoration without consideration of where the mitigation tract falls in the larger conservation landscape. Through advocacy, education, litigation, and science, the Lowcountry conservation community has changed the way wetlands mitigation occurs in South Carolina. A system that used to be controlled by private conservation bankers and was based on lowest land and restoration cost to maximize profit is now based on meaningful conservation priorities and protects threatened habitat, at a landscape scale.

With the dedication of the conservation community, USACE, and the other state and federal agencies, South Carolina has become a model for how to handle wetlands permitting. A process that was slow, expensive, did not build on previously conserved lands and regularly landed applicants and citizen groups in court is now fast, reliable, and achieving landscape scale conservation at a record pace (see Attachment 7 for description of factors in South Carolina's wetlands mitigation success).



The South Carolina Secretary of Commerce has lauded this approach to mitigation and emphasized its role in facilitating landscape scale conservation successes behind the Boeing, Mercedes, Palmetto Railways, South Carolina Department of Transportation and South Carolina Ports permits and the reauthorization of the South Carolina Conservation Bank. Both the South Carolina Department of Commerce and the South Carolina Conservation Bank are developing maps to further guide mitigation dollars to meaningful projects.

Conservation partners have the opportunity to continue to shape the future of mitigation by solidifying and institutionalizing the role of conservation groups in the mitigation process, directing mitigation dollars to the highest quality conservation projects, and incorporating thoughtful restoration measures on mitigation properties that incorporate climate resilience as a lens.

Barriers and Challenges

Ensuring coastal resilience requires wholesale changes in how to manage the human footprint in the most vulnerable ecosystems, and sometimes the most vulnerable human communities. The challenges are political, economic and psychological as relocation and even retreat raise difficult issues, including that sea level rise is disproportionately affecting economically underserved communities which face the greatest difficulty in relocating. Key challenges include working collaboratively with these communities to balance human needs with the need to protect the most sensitive wetlands and floodplains; creating incentives for increased enrollment in FEMA buyout programs; using climate science to present a vision that can guide disaster relief and other funding programs for community economic development; and using a mix of compensatory and regulatory tools to help communities take steps to reduce flooding and modify the pattern of future development. While these challenges are significant, there are seeds of a forward-looking vision within some of the most vulnerable coastal communities. For example, the City of Conway has experience three historic flood events in less than 5 years., In response to these events, the City passed an ordinance after Hurricane Matthew that prohibits building in areas that were under water during Matthew. The City is also an active partner in conservation planning and protection projects within the Waccamaw River floodplain. The challenge is to replicate these successes at greater scale across the region.

Recommendations to Support This Strategy

The Donnelley Foundation is already very involved in watershed protection in the region. The source water protection efforts engaging utilities and communities in the Savannah River and the Pee Dee River watersheds are among the most innovative in the country. Donnelley is also funding the advocacy organizations that are working on these issues. However, there may be ways to strengthen and target this work for increased effectiveness. Some potential strategies:

- Support more comprehensive mapping, utilizing ecological resilience, marsh migration models, and flooding data, to identify the highest priorities for land acquisition and buyouts. This can establish explicit protection, restoration, and stewardship priorities for the land trust community.



- Use the above analysis to identify categories of floodplains for protection, based on ecological and human criteria, and identify communities located in those floodplains that have completed a FEMA Community Rating System (CRS) application and those that have not.
- Support a “circuit rider” to assist local towns in digitizing protected lands within their floodplains and other elements of the CRS application process which can improve CRS scores. This represents a significant barrier to increased CRS enrollment as most towns lack the staff and technology to do the work. One model may be the Georgia Sea Grant Program, which has dedicated its sole staff member to help counties along the state’s coast become CRS certified.
- Engage community members, particularly in some of the most economically underserved areas, in the design and implementation of adaptation strategies.
- Continue to connect with national groups, such as NRDC, and the Pew Charitable Trusts, which has targeted the coastal Carolinas for support to help communities adapt to climate change. Another funding source is the Climate Resilience Fund (<http://climateresiliencefund.org/about/>).
- Assist communities in identifying the required 25% local share required to receive FEMA buyout funds after a natural disaster (additional justification and purpose for local ballot measures) and final title holders for the lands acquired.



Sale of Carbon Offsets

During the Phase I analysis, the sale of carbon offsets was identified as part of a potential strategy to finance forest protection in South Carolina, a Tier 1 strategy. Initially, the sale of carbon offsets did not seem to be a strong fit for the Chicago Wilderness, since it requires large forested blocks. Although the forest preserve and conservation districts contain large forested blocks, they are already conserved, which appeared to obviate the need for the sale of forest carbon as a path to conservation. In addition, our understanding was that the forest preserve and conservation districts were not open to the potential sale of carbon offsets. However, after conversations with representatives from the forest preserves in northeastern Illinois, we now believe that the sale of carbon offsets should be considered a viable and important revenue-producing strategy.

Strategy Description

Regulated cap-and-trade systems place a limit on total greenhouse gas pollution by issuing or auctioning a limited number of tradable permits to pollute. Some cap-and-trade systems allow emission reduction projects from unregulated sectors of the economy to sell offsets to companies in regulated sectors.¹² The California cap and trade program, for instance, allows the use of carbon offset credits from projects that are capable of reducing greenhouse gas emissions to be sold in California's carbon market as a means of compensating owners for reducing greenhouse gas emissions. Carbon offset credits can be created by any qualified project in any part of the U.S. and sold to a compliance company in California to offset its emissions.¹³

In a voluntary carbon market, emitters may elect to buy carbon offsets to mitigate the effects of their emissions to fulfill corporate sustainability or marketing goals or in anticipation of future regulations. In North America, the voluntary market for forest carbon offsets is significantly smaller than the compliance market. According to Forest Trends' Ecosystem Marketplace, in 2015 in North America forest carbon offset sales totalled \$74.5 million, with \$63.2 million from compliance offset sales and \$11.3 million in voluntary sales. However, there are a number of large companies operating in both study regions that could be approached about the voluntary purchase of carbon offsets.

In order to meet rigorous carbon accounting standards, offsets must be:¹⁴

- Real: tangible greenhouse gas-emissions reductions or increased carbon sequestration
- Additional: emissions reductions or carbon sequestration beyond a "business as usual" scenario and that is not a product of prior legal commitments
- Verifiable: quantifiable, monitorable and verifiable by an accredited third-party actor through a standardized system

According to Paula Chamas from the Conservation Finance Network, forest carbon offsets work well when:

¹² "Conservation Assets: Forest Carbon and Mitigation Banking," New Forests Sector Overview, 2014 <https://www.newforests.com.au/wp-content/uploads/2014/01/Conservation%20Assets%20for%20web.pdf>

¹³ "Carbon Offsets for South Carolina Family Forest Landowners" Clemson Cooperative Extension Forestry and Wildlife, August 2017

¹⁴ <https://www.conservationfinancenetwork.org/2018/06/26/forest-carbon-offsets>



- A landowner is willing to make a binding, long-term commitment to maintaining carbon stocking on the property beyond any existing legal requirements.
- Maintenance of a high level of carbon stocking is compatible with other management objectives applied in the property. These may include goals related to product harvests, wildlife habitat, watershed protection, or cultural resources.
- The forest property already has a high level of timber stocking relative to what is typical in its region – or has moderate stocking but substantial growth potential.
- The forest property is large enough to achieve an economy of scale. Because carbon projects require rigorous inventory, verification and monitoring, the expense of a carbon project often prevents smaller landowners from participating in the forest carbon markets. The size required depends on many factors. Typically, project areas are at least several thousand acres. However, there are efforts underway to aggregate smaller-scale projects to make it economically feasible.

Applicability and Recommendations for the Chicago Wilderness

The Chicago Wilderness region includes the forest preserve districts in Cook, DuPage, Kane, Kendall, Lake and Will counties and the conservation district in McHenry County. Because the forest preserves and conservation districts are well stocked and will continue to be managed primarily for wildlife and recreation, they could meet the conditions outlined above. Although the sale of forest carbon would not be necessary to help protect the forest preserve and conservation districts from development, the sale of forest carbon offsets could produce significant revenue that could be used to conserve additional land and for stewardship. For example, the sale of forest carbon offsets could help the Cook County Forest Preserves meet the goals of its Next Century Conservation Plan, which calls for adding 21,000 acres of land and restoring 30,000 acres to good ecological health.

Not all of the acreage in the forest preserve and conservation districts will be suitable for forest carbon offset sales, nor will the districts be universally open to the concept. However, to provide a very rough estimate of the scale of the potential opportunity, we conducted a basic analysis below using the example of six compliance forest carbon offset projects recently completed in New England. These projects yielded an estimated average of \$137 of revenue per acre in their first year of offset sales and an estimated additional \$5-10 per acre annually after the first year of offset sales through forest carbon storage in excess of the new baseline.¹⁵ If even a portion of the forest preserve and conservation district lands were utilized for the sale of forest carbon offsets, there could be significant revenue potential.

Preliminary Estimate of Carbon Offset Sales Potential

County	Acres of Preserves	Revenue From Year 1 Offset Sales (\$137/acre)	Annual Revenue Potential (\$5/acre)
Cook	69,000	\$9,453,000	\$345,000
DuPage	26,000	\$3,562,000	\$130,000
Kane	21,000	\$2,877,000	\$105,000

¹⁵ Jenkins, D. (2015, May-June). Cash for Carbon Revisited. Retrieved from <http://www.finitecarbon.com/wp-content/uploads/2015/06/FiniteCarbon-FLA-article-June2015.pdf>



Kendall	2,663	\$364,831	\$13,315
Lake	31,000	\$4,247,000	\$155,000
McHenry	25,104	\$3,439,248	\$125,520
Will	21,876	\$2,997,012	\$109,380
TOTALS	196,643	\$26,940,091	\$983,215

Carbon offset sales are complex and an industry of carbon finance developers has emerged to shepherd landowners and public agencies through the process in return for a cut of project revenues. In order to help ensure that potential carbon offset revenues are directed toward additional conservation, the foundation could help support the forest preserves and conservation districts in pursuing this opportunity by:

- Introducing forest preserve and conservation district staff to carbon developers based upon recommendations of this team or other experts.
- Supporting a convening of forest preserve and conservation district representatives specifically focused on this opportunity to gauge interest and provide educational opportunities.
- Providing case studies and introductions to experts and other public agencies that have pursued carbon offset sales.
- Funding data collection and other aspects of an initial feasibility study.
- Supporting efforts to engage corporations in discussions about the potential for voluntary acquisition of forest carbon offsets.
- Considering a PRI to support a carbon development project if a project seems feasible.
- Supporting efforts to identify opportunities for potential carbon offset sales revenue to target conservation-minded activities such as restoration or additional land protection.

Applicability and Recommendations for the South Carolina Lowcountry

As described above, forest conservation is a vital part of protecting the ecological health of the South Carolina Lowcountry. Given the presence of large forested blocks in the region, there are already carbon developers active in South Carolina and a number of successful carbon offset sales, including the Francis Beidler Forest, which sold about 450,000 carbon credits through Blue Source, a San Francisco-based carbon developer. Although carbon offset sales are not likely to be a good fit for the plantation-style forests managed by TIMOs for large timberland investors or longleaf pine forests emphasized on private recreational tracts, there may be potential for carbon sales in the bottomland hardwoods of these ownerships, which would dramatically reduce or eliminate limit harvests in for the 100-year duration of the carbon contract.

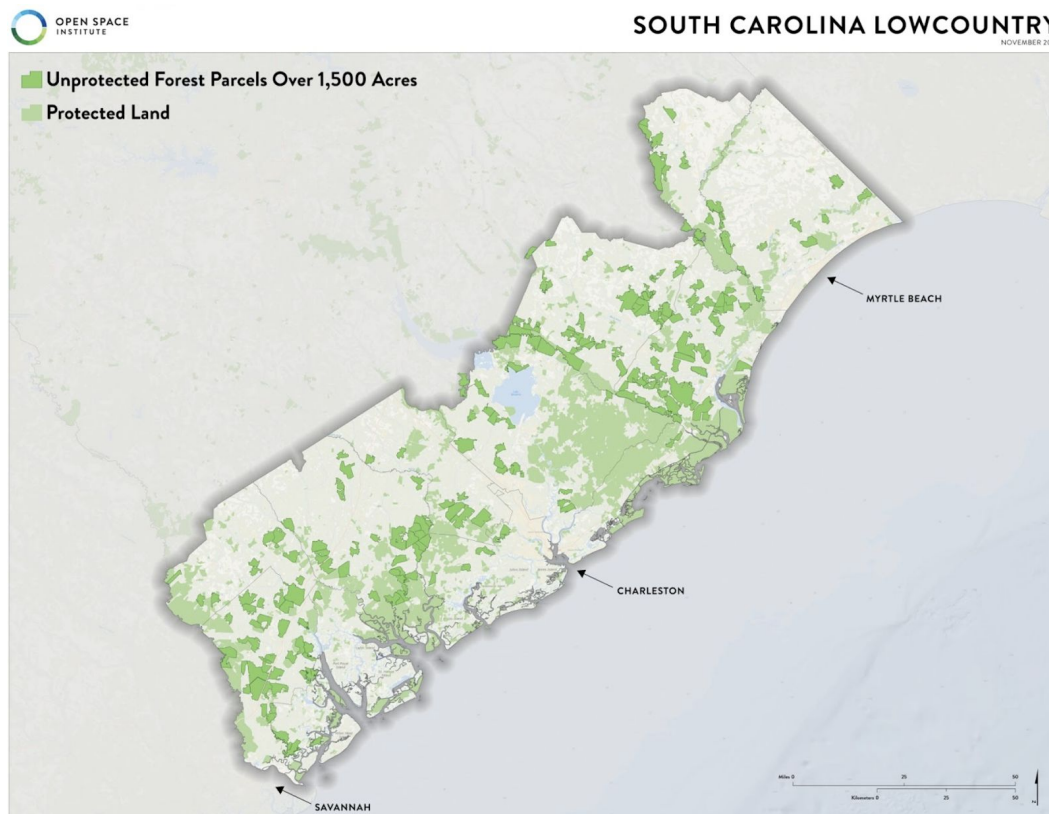
Because the costs of selling and verifying forest carbon offsets are significant, the strategy only makes sense for small, individual landowners if they join forces with other landowners. Fortunately, The Nature Conservancy (TNC) and other NGOs are beginning to develop models for aggregation that may be effective in South Carolina. Data from the South Carolina Forestry Commission shows that 88 percent of the state's forests are privately owned and 63 percent of these private forests are family owned.¹⁶ TNC's Working Woodlands program has enrolled more than 56,000 acres of forests in

¹⁶ Clemson Extension



Pennsylvania and four other states. At the heart of the Working Woodlands program are management plans that TNC develops to help landowners manage their forests. In some cases, TNC has helped aggregate land for third-party certification, conservation easement sales and carbon offset sales.

The map below provides very preliminary insight into the potential for carbon sales on privately-held lands in the South Carolina Lowcountry. The map highlights privately-owned parcels greater than 1,500 acres, the parcel size considered by many to be the minimum for the economical sale of carbon offsets, given the cost of selling and verifying carbon offsets. Extensive additional work would be required to determine the amount of carbon, landowner interest and other aspects of feasibility, but it is notable that these parcels aggregate to nearly 500,000 acres. Many of these parcels are adjacent to previously-protected land, making them important buffers to existing conservation investments.



The foundation could help land trusts in the South Carolina Lowcountry further explore carbon offset sales by:

- Supporting workshop(s) with local and/or national experts on the potential for the sale of forest carbon offset sales
- Funding initial research and feasibility studies on the potential for forest carbon offset sales on large timberland ownerships as well as aggregated individual ownerships
- Supporting efforts to engage corporations in discussions about the potential for voluntary acquisition of forest carbon offsets
- Engaging national conservation organizations in discussions about the potential to expand their carbon offset sales programs to South Carolina



Attachments

1. Table: Summary Evaluation of Top Tier Strategies
2. Table: Detailed Evaluation for Chicago Wilderness
3. Table: Detailed Evaluation for South Carolina Lowcountry
4. Table: Key NRCS Programs and Funding in Chicago Wilderness Region
5. List of Strategies for Connecting Watershed Management and Conservation
6. Approaches to Addressing TIMO Lands in SC Lowcountry
7. Description of factors in South Carolina's wetlands mitigation success
8. Table: Conservation Funding and Financing Matrix



Attachment 1: Phase II Summary Evaluation - Strategy Ranking and Rationale

Strategy	Chicago Wilderness	South Carolina Lowcountry
Collaboration with water management utilities - water quality trading - stormwater credit trading - accessing state revolving funds for clean water and drinking water - managing water quantity - environmental impact bonds and other “pay for performance” models - leverage federal grant programs (like EPA 319 grants)	Tier 1 - See report for rationale	Tier 2 - Lack of funding availability and lack of regulatory threat. Water funds, which have elicited some support from water utilities, are likely to remain small and of limited impact without a more near-term threat – such as pressure from the Environmental Protection Agency to filtrate - that would cause the utilities to commit to financing a full-fledged water fund.
Agriculture conservation \$ - NRCS regional conservation partnership programs - NRCS easement programs - NRCS financial assistance programs - Conservation investors in sustainable agriculture	Tier 1 - See report for rationale	Tier 2 - Some interest in NRCS programs, but over 70% of the land area is forested, not in agricultural uses.
Forest conservation - Conservation investors in sustainable timberland - Purchase of forest carbon offsets - NRCS Regional Conservation Partnership Program - Forest Legacy Program - Scenic Rivers tax credit - NRCS Regional Conservation Partnership Program - US Endowment for Forestry and Communities grants, including Sustainable Forestry and African American Land Retention	Tier 1 - For sale of forest carbon offsets in Forest Preserves only. Forest conservation otherwise scores low because lack of contiguous forest blocks in the region.	Tier 1 - See report for rationale
Local funding measures - taxes and bonds for open space	Tier 2 – Recent polling by local practitioners indicates constituent burnout from ballot measures at current time.	Tier 1 - See report for rationale
Voluntary offsets - Partnership w/ corporate sustainability efforts	Tier 3 - Limited interest from local land conservation practitioners.	Tier 2 - Some interest, but voluntary offsets are very new.

Compensatory mitigation - mitigation banks - in-lieu fees - permittee responsible - fines and settlements	Tier 3 - Limited political will for this strategy with lack of momentum for widespread adoption.	Tier 1 - Part of protecting coastal wetlands and improving climate resilience
Federal tax credit programs - New Markets Tax Credits - Opportunity Zone Funds	Tier 3 - Little interest from local land conservation practitioners	Tier 3 - Limited interest from local land conservation practitioners
Partnership with transportation and utilities for conservation \$ and ROW for habitat and public access - Transportation ROW for habitat - Utility ROW for habitat and public access - Accessing CMAQ funds for conservation	Tier 1 - See report for rationale	Tier 3 - Limited interest from local land conservation practitioners
Land Banks for surplus land, typically foreclosed or abandoned	Tier 3 – Indiana currently lacks necessary regulatory framework while practitioners expressed limited excitement in connection to land conservation.	Tier 3 - Low rates of foreclosure
FEMA and insurance company risk mitigation \$ - FEMA hazard mitigation assistance grants - FEMA community ratings system (to reduce insurance premiums) - Insurance payments for environmental risk mitigation	Tier 2 - Limited nonprofit capacity to pursue this strategy	Tier 1 - See report for rationale
Investors in Conservation Development	Tier 2 – Geographically restrained within the CW region to areas with development pressures.	Tier 3 - Limited interest from local land conservation practitioners

Attachment 2: Chicago Wilderness Strategy Evaluation Matrix

Strategy	Funding Availability	Cultural Climate	Supportive Political Climate	Nonprofit Capacity	Statutory Policies in Place	Exceptional Threat	Exceptional Opportunity	Opportunity to Increase Diversity, Equity and Inclusion	Opportunity for Philanthropy Impact	Scale of Impact	Conservation Value (landscape scale impact/\$ spent)	Score (High =3, Medium =2, Low=1)
Collaborating with Water Management Utilities	HIGH	HIGH	HIGH	MEDIUM	MEDIUM	HIGH	HIGH	HIGH	MEDIUM	HIGH	HIGH	27
Agriculture Conservation Dollars	HIGH	LOW	HIGH	MEDIUM	HIGH	HIGH	MEDIUM	HIGH	MEDIUM	HIGH	MEDIUM	24
Partnerships with Transportation and Utility Providers for Resources and ROW Conservation	MEDIUM	MEDIUM	MEDIUM	LOW	HIGH	MEDIUM	MEDIUM	LOW	MEDIUM	HIGH	MEDIUM	22
Local Funding Measures	HIGH	LOW	LOW	MEDIUM	LOW	MEDIUM	LOW	HIGH	HIGH	HIGH	HIGH	20
FEMA and Risk Mitigation Money	MEDIUM	MEDIUM	MEDIUM	LOW	LOW	MEDIUM	MEDIUM	HIGH	LOW	HIGH	HIGH	20
Investment in Conservation Development	MEDIUM	MEDIUM	HIGH	MEDIUM	MEDIUM	LOW	MEDIUM	MEDIUM	MEDIUM	MEDIUM	MEDIUM	20
Federal Tax credit programs	LOW	MEDIUM	MEDIUM	MEDIUM	LOW	LOW	HIGH	HIGH	LOW	MEDIUM	MEDIUM	19
Compensatory Mitigation	MEDIUM	MEDIUM	LOW	MEDIUM	MEDIUM	MEDIUM	LOW	MEDIUM	LOW	MEDIUM	HIGH	18
Land Banking for Conservation	LOW	MEDIUM	LOW	LOW	MEDIUM	LOW	MEDIUM	HIGH	MEDIUM	MEDIUM	LOW	17
Voluntary Offset Programs	MEDIUM	MEDIUM	MEDIUM	LOW	HIGH	LOW	LOW	MEDIUM	LOW	LOW	MEDIUM	16
Forest Conservation Dollars	LOW	LOW	MEDIUM	LOW	LOW	MEDIUM	LOW	LOW	LOW	LOW	MEDIUM	13

Attachment 3: South Carolina Lowcountry Strategy Evaluation Matrix

Strategy	Funding Availability	Cultural Climate	Supportive in Political Climate	Nonprofit Capacity	Statutory Policies in Place	Timeliness/Urgency	Opportunity for Philanthropy to Affect Change	Opportunity to Increase Diversity, Equity and Inclusion	Scale of Impact	Conservation Value (landscape scale impact/\$ spent)	Score (High=3, Medium=2, Low=1)
FEMA and Risk Mitigation Money	HIGH	MEDIUM	MEDIUM	LOW	HIGH	HIGH	HIGH	MEDIUM	HIGH	HIGH	25
Forest Conservation Dollars					HIGH	HIGH	HIGH			HIGH	24
Local funding measures - taxes and bonds for open space	LOW	MEDIUM	MEDIUM	LOW	MEDIUM	HIGH	HIGH	MEDIUM	HIGH	HIGH	22
Compensatory mitigation	HIGH	MEDIUM	MEDIUM	MEDIUM	HIGH	MEDIUM	MEDIUM	LOW	MEDIUM	MEDIUM	21
Voluntary offset programs	MEDIUM	MEDIUM	MEDIUM	MEDIUM	MEDIUM	MEDIUM	MEDIUM	LOW	LOW	MEDIUM	18
Collaborating with water management utilities	LOW	LOW	LOW	MEDIUM	MEDIUM	MEDIUM	MEDIUM	MEDIUM	MEDIUM	MEDIUM	17
Agriculture conservation dollars	LOW	LOW	MEDIUM	LOW	MEDIUM	MEDIUM	MEDIUM	MEDIUM		MEDIUM	16
Federal tax credit programs New Markets Tax Credits Opportunity Zone Funds	LOW	HIGH	HIGH	LOW	LOW	LOW	LOW	MEDIUM	LOW	LOW	15
Partnership with transportation and utilities for conservation \$ and ROW for habitat and public access	LOW	HIGH	HIGH	LOW	LOW	MEDIUM	LOW	LOW	LOW	LOW	15
Investment in Conservation Development	LOW	MEDIUM	MEDIUM	MEDIUM	MEDIUM	LOW	MEDIUM	LOW	LOW	LOW	15

Attachment 4: Key NRCS Programs and Funding in Chicago Wilderness Region

Category	Relevant Program	Description	Obligated Money (thousands of dollars)			Notes on Status
			Illinois ¹	Indiana ²	Wisconsin ³	
Providing for Permanent Conservation	Agricultural Conservation Easement Program (ACEP)	NRCS provides financial assistance to eligible partners for purchasing Agricultural Land Easements and Wetland Reserve Easements. Agricultural Land Easements protect the agricultural use and conservation values of eligible land. NRCS also provides technical and financial assistance directly to private landowners and Indian tribes to restore, protect, and enhance wetlands through the purchase of a wetland reserve easement.	\$15,433.10	\$14,139.60	\$7,135.40	Active
	Farm and Ranch Lands Protection Program (FRPP)	The Farm and Ranch Lands Protection Program (FRPP) provided matching funds to help purchase development rights to keep productive farm and ranchland in agricultural uses.	\$6.70	\$0.40	\$53.10	Rolled into ACEP in 2014
Providing for Long Term Conservation (10+ years)	Conservation Reserve Program (CRP)	In exchange for a yearly rental payment, farmers enrolled in the program agree to remove environmentally sensitive land from agricultural production and plant species that will improve environmental health and quality. Contracts for land enrolled in CRP are 10-15 years in length.	\$7,813.30	\$6,749.50	\$2,999.70	Active
	Grassland Reserve Program (GRP)	The Grassland Reserve Program (GRP) was a voluntary conservation program that emphasized support for working grazing operations, enhancement of plant and animal biodiversity, and protection of grassland under threat of conversion to other uses.	\$2.90	\$3.50	\$14.50	Rolled into ACEP in 2014
	Watershed Rehabilitation (WRHB)	The Watershed Rehabilitation Program helps project sponsors rehabilitate aging dams that are reaching the end of their 50-year design lives.	0	\$187.70	0	Not applicable to the focus of this project
	Wetlands Reserve Program (WRP)	NRCS also provides technical and financial assistance directly to private landowners and Indian tribes to restore, protect, and enhance wetlands through the purchase of a wetland reserve easement. Land may be enrolled in Permanent Easements, 30 year easements, Term easements or for acreage owned by an Indian tribe, 30 year contracts.	\$1,415.30	\$545.90	\$2,285.50	Rolled into ACEP in 2014
	Wildlife Habitat Incentive Program (WHIP)	The Wildlife Habitat Incentive Program (WHIP) was a voluntary program for conservation-minded landowners who wanted to develop and improve wildlife habitat on agricultural land, nonindustrial private forest land, and Indian land.	\$56.00	\$22.90	\$17.50	Rolled into EQIP in 2014
Providing for Short Term Conservation (0-10 years)	Agricultural Water Enhancement Program (AWEP)	The Agricultural Water Enhancement Program (AWEP) was a voluntary conservation initiative that provided financial and technical assistance to agricultural producers to implement agricultural water enhancement activities on agricultural land to conserve surface and ground water and improve water quality.	\$0.40	\$29.80	\$0	Rolled into RCPP in 2014
	Conservation Stewardship Program (CSP)	CSP helps farms build on your existing conservation efforts by implementing best management practices. NRCS staff provide a plan and potential options. For each approved practice, incentive payments exist.	\$40,424.10	\$11,030.90	\$22,692.60	Active
	Conservation Security Program (CSP)	CSP was a voluntary program that provided financial and technical assistance to promote the conservation and improvement of soil, water, air, energy, plant and animal life, and other conservation purposes on Tribal and private working lands.	\$18.80	\$8.00	\$7.50	Not reauthorized in 2018 Farm Bill
	Environmental Quality Incentives Program (EQIP)	Through EQIP, NRCS provides agricultural producers with financial resources and one-on-one help to plan and implement improvements, or what NRCS calls conservation practices.	\$19,033.60	\$30,523.00	\$35,925.20	Active
	Regional Conservation Partnership Program (RCPP)	Through the program, NRCS and its partners help producers install and maintain conservation activities in selected project areas. Partners leverage RCPP funding in project areas and report on the benefits achieved.	\$47.30	\$249.40	\$301.40	Active
	Emergency Watershed Protection Program (EWP)	The Emergency Watershed Protection (EWP) Program, a federal emergency recovery program, helps local communities recover after a natural disaster strikes. The program offers technical and financial assistance to help local communities relieve imminent threats to life and property caused by floods, fires, windstorms and other natural disasters that impair a watershed.	-\$0.80	\$1,385.90	\$22.60	Not applicable to the focus of this project.
		Total	\$84,250.70	\$64,876.50	\$71,455.00	

¹ https://www.nrcs.usda.gov/Internet/NRCS_RCA/reports/cp_il.html
² https://www.nrcs.usda.gov/Internet/NRCS_RCA/reports/cp_in.html
³ https://www.nrcs.usda.gov/Internet/NRCS_RCA/reports/cp_wi.html

Attachment 5: List of Strategies for Connecting Watershed Management and Conservation

- **Direct project support:** Water utilities within the region, the largest of which is the Metropolitan Water Reclamation District (MWRD), have provided direct funding through grant programs and sponsorship for conservation work. In 2018, MWRD budgeted \$65.6 million for stormwater management.¹ A portion of this funding is going to natural based solutions including the Space to Grow program. This program is a model for collaborative partnerships and demonstrates how environmental benefits can be achieved in addition to community co-benefits. The partnership, a collaboration with Chicago Public Schools, Chicago Department of Water Management, Healthy Schools Campaign, and Openlands demonstrates how to build consensus and enthusiasm for conservation.
- **Stormwater Fees:** Until recently, the costs of managing stormwater, specifically in heavily populated areas, were borne by local municipalities. With aging infrastructure and an increased understanding of the impact of stormwater runoff on our natural environments, a number of stormwater districts have implemented stormwater fees. These funds can be invested in traditional grey infrastructure, and should in some cases; however, they can also be utilized for nature-based solution that better align with conservation goals.

Not all municipalities within the Wilderness region currently have stormwater fees. Communities such as Michigan City, Indiana have begun the public campaign necessary to pass legislation allowing for the fees but this is often met with resistance. Implementation of stormwater fees, and its subsequent use for green infrastructure and conservation in support of stormwater management creates a mutually beneficial long term proposition for the utilities and conservation organizations.

- **State revolving loan funds:** Two different clean water revolving loan funds exist in each state through state and federal funding under the Clean Water Act. The first is dedicated to wastewater and stormwater loans while the second is tailored to drinking water protection. In Illinois, the 2018 public water state loan program (drinking water fund) has an established ceiling of \$300 million, while the water pollution control loan program (wastewater/stormwater fund) has a cap of \$450 million. Indiana saw approximately 21 million in loans through its drinking water state revolving loan and \$367 million through its wastewater revolving loan fund program in 2017. The programs also contain a green program reserve component which enhances applicant scoring when a project includes green components. To date, the program has been used in a limited way in the Chicago Wilderness region to support conservation.

The revolving loan program provides states with a great deal of flexibility in the administration of the program. Ohio leads the way for sponsorship lending programs where in exchange for a reduced interest rate, the wastewater facility invests in a conservation project or green infrastructure investment.

¹ https://www.mwrd.org/irj/go/km/docs/documents/MWRD/internet/Departments/GA/docs/budget/2018/2018_Budget_In_Brief.pdf

Similar efforts have begun in Illinois and Indiana. However, the administrative burden of adding additional programs appears to be hindering progress. There is currently a group of practitioners working with IEPA in Illinois and the Indiana Finance Authority in Indiana to look at ways to move toward a more creative loan program that includes conservation measures as a piece of the implementation mix.

It should be noted that while these programs are large sources of capital, they are loan programs and as such, a form of repayment will be necessary. In addition, the major water utilities in both states have expressed concern about the loss of funding for traditional infrastructure work.

- **Stormwater Retention Credit Trading:** A trading program is one in which a property owner can earn retention credits for managing additional stormwater onsite at a property. Those credits can then be sold at a premium to another entity who is not able to meet their retention goals on site. In order for a model trading program to work, onsite retention ordinances must exist within the given geography. A number of municipalities and utilities have retention requirements in place, however that is not universal. A first step from an implementation standpoint would be to insure that low-impact development or stormwater retention ordinances are a requirement for development.

While models for credit trading programs exist in other geographies, the Nature Conservancy, Metropolitan Water Reclamation District, and Metropolitan Planning Council are conducting the groundwork needed to implement a trading program, known as “Stormstore,” in MWRD’s operating region. The feasibility work identified that there was the demand and supply needed for a trading program; however that the scale of that program might be marginal (hundreds of acres) compared to the overall conserved acreage goal of the Chicago Wilderness region.² Similar studies would have to be conducted in other communities to determine if there was enough interest in a trading program

Trading programs can be complex and require additional administrative capacity. In addition, they require consistent development demands. As such, at this time, they might only be well-suited for the northern part of the Wilderness region where development demands are higher and onsite storage is more costly. One concern with trading programs is the potential for disproportionate impacts to be seen in disadvantaged communities where property values might be more conducive to retention facilities.

- **Water Quality Trading:** Similar to stormwater retention credit trading, water quality trading relies on credits produced by one party to then offset the impacts of another water user. While water quality trading programs are often tailored to the users in a given geography, at the core of the program a point source water polluter within a given watershed purchases credits from non-point source polluters who have made verifiable improvements at a different part of the watershed.

²https://www.ideals.illinois.edu/bitstream/handle/2142/98497/StormStore%20Feasibility%20Study%20Report_LandHydro.pdf?sequence=3&isAllowed=y

Water quality trading programs are difficult to implement as monitoring and verification become costly. However, if implemented correctly, they can directly tie the benefits of conservation lands to a source of funding, resulting in increased implementation.

- **Upstream source-water protection:** In a sense, upstream source-water protection might be considered a specific type of water quality trading program. In this funding scheme downstream water users pay upstream property owners to maintain water quality. This strategy has some applicability in our region however, is difficult to implement due to Lake Michigan serving as the primary water source for Chicago Wilderness.
- **Federal grants such as EPA 319 funding:** A number of federal funding programs exist as part of the Clean Water Act as well as through other EPA programs. Most notably, the EPA nonpoint source management program, otherwise known as the 319 program, provided approximately \$167.9 million dollars in reimbursement grants to local governments and nonprofits for nonpoint source pollution prevention. The funds are distributed by the states (IEPA and Indiana Department of Environmental Management). In 2018, IEPA distributed \$3.5 million in federal funding and \$1 million in state funding, while Indiana expects to distribute \$2 million through its competitive process.³⁴ Like most federal grants, this is a highly competitive program and working collaboratively with governments and utilities will strengthen applications and provide conservation organizations a means to tapping into additional funding.
- **Green Bonds and Environmental Impact Bonds (EIBs):** Green bonds and EIBs behave much in the same way as traditional bonds. However, the returns are tied to an environmental outcome. As such, some of the project risks are transferred to the private investors purchasing the bonds. Because the benefits to a municipality from conservation and green infrastructure projects are seen over years, the expect savings can be shared with the investors. In order for an EIB or green bond to be successful, the metrics must be clearly defined and well understood so that success can be measured.

Attachment 6: Approaches to Addressing TIMO Lands in SC Lowcountry

Initiated by SC TNC, conservation partners met in April 2018 to explore five scenarios for achieving landscape-scale conservation with the outsale of Red Mountain Timber lands in Georgetown and Williamsburg Counties. These scenarios could be explored for other timber investment ownership in South Carolina as well.

Project	Bottomland hardwood preservation and public access (Black River)
Project leader:	Maria Whitehead
● Question: Can we protect the scenic quality and create a core of old growth bottomland hardwood along Black River through preservation easements and acquisitions and create a formal canoe/kayak trail with State Park presence? ● This will build upon existing conservation land along the Black River and add to a goal of protecting a mature bottomland hardwood preserve within the landscape. ● Can we leverage Butler funds, state funds, and match to other traditional sources (RCPP)? ● Are there opportunities with scenic river tax incentives? ● Can we get buy-in from local communities to see this as an amenity and possible economic driver?	

Project	Large-scale acquisition, protection, (restoration?), and outsale
Project leader:	TBD (David temporary)
● Question: Are we able to acquire a large block, restore portions of it (if desired), protect it, and sell it to agency, conservation buyer, or other TIMO while making a return on the investment? ● This could create core habitat, around which to build a working forest matrix. ● Do we create our own TIMO that doesn't have the fiduciary responsibility of an investment, allowing for more flexibility? Could a private TIMO use carbon, bargain-sale easement, timber harvests, to make a return within an acceptable time frame? ● Do we work with other funding models (e.g. NatureVest)? ● Could we use traditional funding sources for an easement (or new mechanisms)? ● Cost-share likely for restoration components such as quail and longleaf ● May need to hire experts to create analysis of wood flow projections depending on future owner of the property ● Mitigation opportunities?	

Project	Public access easements
Project leader:	Nate Berry
● Question: Can SC create a financially-viable program that funds full-value public access (e.g. hunting) easements on industrial forestland? ● Who would manage the program? Part of DNR WMA? ● Could we get DNR to consider Forest Legacy funds and hold easements? ● Could we combine funding pots with woodshed-protection easements? ● Is there potential for novel funding mechanisms such as a tax on recreational purchases (GA trying to do this)?	



Project	Protecting woodsheds (easements)
Project leader:	David Bishop
• Question: Is there a potential funding mechanism that would protect working forests within the haul distance of a mill with the goals of protecting woodsheds, local jobs, and tax revenues? • Are there existing mechanisms in other states that protect woodsheds? • The forest industry is big business in SC. How do we keep it that way? • Would likely involve SC Forestry Commission, mill owners, possibly local governments (keeping jobs). • Is this a tax on forest products? A willingness of communities and mill owners to invest? • Could be combined with public access easements conversation? • May need an analysis of woodshed/mills in state.	

Project	Buy the Dirt, Lease Back Timber
Project leader:	Justin Park
• Question: Can we prevent development or conversion by acquiring fee title to large TIMO tracts and uphold the TIMO's fiduciary duties by leasing timber rights back to them over a long-term? • TIMOs don't have to own the farm to farm the land. • Option for tracts without high conservation values. Initial analysis of area can help identify tracts of land • Can this work where development value is currently low and so the timber rights are enough to support the fiduciary duties of the TIMO regarding the property asset. • Has the same effect as a working forest conservation easement. • Holder ends up with working forest in 30-50 years. • Who would own long-term? • We are already making multi-decade commitments in the carbon context. • Secure income to offset property tax and provide a public benefit by also acquiring recreational rights.	



Attachment 7: Factors in South Carolina's Wetland Mitigation Success

- 1) S.C. Department of Commerce, S.C. Department of Transportation, and private applicants better understand the 404 process, the stakeholders, and the importance of a robust wetlands permit in keeping projects on schedule.
- 2) Extensive pre-application coordination with agencies, Lowcountry Conservation Partners, and others.
- 3) Generally agreed upon conservation focus areas where mitigation should occur.
- 4) NEPA mitigation and the ability to address non-jurisdictional impacts prior to a court challenge.
- 5) Cooperative agreements and partnerships such as the Conservation Land Use Agreement between USACE and the U.S. Forest Service (USFS) that make it easier for federal agencies to be the long term owners of mitigation sites.
- 6) A statewide recognition that whenever possible, wetlands mitigation using public dollars should produce public land.
- 7) Agreement that mitigation should also address growth management when possible by having the mitigation site as a site that is otherwise threatened by development if mitigation were not to occur.



Attachment 8: Conservation Funding and Financing Matrix

Funding Tool/Strategy	Framework Category	Description	Funding and Scalability	Enabling Conditions and Eligibility Requirements	Applicability to IL	Applicability to IN	Applicability to SC Lowcountry	Examples and Resources
Tax Incentives								
Federal tax deductions	Federal tax deduction	If a conservation easement is voluntarily donated to a land trust or government agency, and if it benefits the public by permanently protecting important conservation resources, it can qualify as a charitable tax deduction on the donor's federal income tax return.	Large - difficult to quantify, but the tax incentive was made permanent in 2015 and increases benefits, making it an even more attractive option for landowners	Conservation easement enabling statutes at state level; conservation easement donations must comply with "conservation purposes" as defined in IRC 170(h). A donated easement must be a true gift. It must protect significant natural, agricultural or historic resources that public agencies or land trusts want to have conserved	High - this benefit is well-known to land trusts and utilized widely	High - this benefit is well-known to land trusts and utilized widely	High - this benefit is well-known to land trusts and utilized widely	Land Trust Alliance Brochure on Using the Conservation Tax Incentive
New Markets Tax Credits	Federal tax credit	Administered by the US Department of Treasury, the program helps disadvantaged areas by providing federal income tax credits to encourage job-creating investments in those communities. Tax credits accrue to lending entities - CDFIs; NMTC can be linked to land conservation purchases by offering low-interest financing to companies in exchange for easements or fee interests - must be linked to jobs and sustainable development	Large - \$7B allocated nationwide in 2016	Business must have a substantial presence in a low-income community and must generate revenue and jobs; loan must be in a qualifying census tract; lenders willing to loan outside of "traditional" NMTC areas of commercial real estate, community facilities and manufacturing	Moderate - multiple qualifying census tracts; utilizing for conservation requires businesses that create jobs and conserve/restore land.	Moderate - multiple qualifying census tracts; utilizing for conservation requires businesses that create jobs and conserve/restore land.	Moderate - multiple qualifying census tracts; utilizing for conservation requires businesses that create jobs and conserve/restore land. Industrial timberland coming online. Could be useful for acquisition of RMS land (industrial timberland)	13-Mile Woods Community Forest, New Hampshire
Opportunity Zone Funds	Federal tax incentive	New community development program established by Congress in the Tax Cuts and Jobs Act of 2017 to encourage long-term investments in low-income urban and rural communities nationwide. Provides a tax incentive for investors to re-invest their unrealized capital gains into Opportunity Funds that are dedicated to investing into Opportunity Zones designated by the chief executives of every U.S. state and territory.	Large - Difficult to quantify, but \$2.3 trillion in unrealized capital gains in U.S. stocks and mutual funds	Funds must invest 90% or more of their assets in qualifying businesses or properties within these opportunity zones created by governors in 2018. Treasury and regulators currently writing the rules for how to certify the funds and determine other eligibility requirements	TBD - governors currently nominating areas for inclusion	TBD - governors currently nominating areas for inclusion	TBD - governors currently nominating areas for inclusion	New York Times coverage of Opportunity Zone Funds
State tax credits	State tax credit	16 states, including South Carolina, offer some form of tax credit for conservation easement donations. Many state incentives apply to fee-simple donation of land as well as conservation easements. The most powerful state tax incentives for conservation are the transferable tax credits (like in SC) - if a landowner donates an easement but doesn't owe enough tax to use the full credit, he or she can sell the remaining credit to another taxpayer, generating immediate income.	Moderate - transferable tax credits create significant benefits for sellers of conservation easements in SC and encourage conservation; can scale up with increased demand	Enabling legislation to allow state conservation credits	Low - Illinois does not have state tax credits for land conservation; environmental remediation tax credit (A maximum annual credit of \$40,000 per site, with a maximum total credit of \$150,000 per site.)	Not applicable - IN does not have state tax credits for conservation	High - South Carolina has two tax credit programs including transferable tax credit program; State Scenic Rivers Tax Credit allows 100% of the CE or land donation to be taken as a state tax credit with a 5-year carry forward. CE lands in the program are also exempt from county taxes.	South Carolina State Scenic Rivers
Preferential Assessment of Rural Land (and penalties for conversion)	Local property tax relief	In most states, owners of agricultural land, timberland and/or environmentally sensitive land may qualify for conservation use assessments that lower their property taxes; some states collect a penalty if the owner converts the property to an unqualified use	n/a - funding not required; scalable as landowner education can increase participation in preferential assessment programs	Authorized by state legislation and typically enforced by county board of assessors	High - There are four main preferential assessment programs that provide property tax relief: Farmland Assessment, Illinois Forestry Development Act, Illinois Conservation Stewardship Program, Conservation Easement Preferential Assessment	High - Classified Forest and Wildlands Program for enrolled landowners with 10+ acres; Brownfield sites can seek local property tax reduction on waiver	High - Agricultural use assessments reduce property tax	Reconsidering Preferential Assessment of Rural Land, Lincoln Institute of Land Policy
Federal Grants, Acquisitions and Loans								
Department of Defense - Readiness and Environmental Protection Integration	Federal grants/acquisitions	The REPI Program protects military missions by helping remove or avoid land-use conflicts near installations and addressing regulatory restrictions that inhibit military activities. The REPI Program is administered by the Office of the Secretary of Defense (OSD). Sentinel Landscapes Program (est. 2013) is a collaboration among DOD, USFWS and USDA to focus conservation efforts.	Small - \$75M appropriated nationally in FY2016; helps access federal conservation funding from other agencies	Presence of military bases; congressional appropriation	Low - no REPI transactions in IL to date	Low - no REPI transactions in IN to date	High - \$22.4M in REPI expenditures in SC since program inception. Two significant REPI projects in SC (one in the Lowcountry)	REPI State Profile - South Carolina
Department of Transportation - Congestion Mitigation and Air Quality Improvement Program	Federal grants	Federally-funded reimbursement program that supports surface transportation improvements that 1) mitigate congestion and 2) improve air quality. It is one of four major programs of the Federal-aid Highway Program (FAHP). Proposed projects must meet the following three requirements: Have a transportation focus, Reduce air emissions, Be located in or benefit a nonattainment or maintenance area.	Large - \$2.3 - \$2.5B per year	Congressional appropriation via transportation bill; Eligible activities that may be of interest include bicycle and pedestrian improvements and public transportation improvements (as a means for creating habitat buffers and/or corridors)	High - each state is apportioned funding. Investigate further whether IL can access amidst budget crisis	High - each state is apportioned funding	High - each state is apportioned funding	
EPA - Brownfields Funding	Federal grants and loans	EPA's Brownfields Program provides funds to empower states, communities, tribes, and nonprofits to prevent, inventory, assess, clean up, and reuse brownfield sites. EPA provides brownfields funding for three types of grants: Brownfields Assessment Grants, Brownfields Revolving Loan Fund (RLF) Grants, and Brownfields Cleanup Grants.	Small - \$50M nationally for all three grant programs in FY17	Congressional appropriation; state environmental remediation loan programs; contaminated sites	High - nonprofits, local governments and states are eligible to apply for grants; many contaminated sites.	High - nonprofits, local governments and states are eligible to apply for grants; many contaminated sites	High - nonprofits, local governments and states are eligible to apply for grants; many contaminated sites	EPA Brownfields Grant Guidelines
EPA - Great Lakes Restoration Initiative (GLRI)	Federal grants/acquisitions	GLRI was launched in 2010 to accelerate efforts to protect and restore the Great Lakes. Interagency effort focused on improving water quality, protecting and restoring native habitats and species, preventing and controlling invasive species. Includes funding for Great Lakes Shoreline Cities Grants - small program (\$2M per year) for green infrastructure	Moderate - \$300M estimated for FY17; funded in budget bill that just passed	Congressional appropriation	High - Multiple projects funded in IL	High - Multiple projects funded in IN	Not applicable - not in the Great Lakes region	
EPA - Nonpoint Source Implementation Grants (319 Program)	Federal grants	Established by the federal Clean Water Act 319, these funds are for the implementation of State non point source pollution control programs. Each State passes through a portion of these funds to other entities for implementing specific NPS management practices. State water quality agencies are the lead agencies for these grant programs.	Moderate - \$167.9M nationally iin 2017	40% non-federal match on grant to State. Project match varies by State; Communities can apply for a Section 319 grant if the project is consistent with an approved Watershed Plan (must meet EPA's required 9 elements)	High - The State of Illinois typically awards 10-20 grants per year state-wide with project amounts ranging usually between \$80K-\$150K.	High - program in place	High - program in place	National Nonpoint Source Program Report
FEMA Hazard Mitigation Assistance Grants	Federal grants	Following a Presidential Major Disaster Declaration, opportunity to access 75% FEMA cost share with 25% local match for structure removal and conservation in flood-prone areas	Large - \$600M federal funds est for FY2017	Presidential Major Disaster Declaration; 25% local match	High - disaster declarations; strong local funding	Moderate - disaster declarations; local match problematic to date	Moderate - multiple disaster declarations; local match problematic to date; good example in Waccamaw Refuge where FEMA \$ was used to buy back inholdings	New Jersey Blue Acres
Fish and Wildlife Service - Migratory Bird Conservation Fund	Federal acquisitions	The Fund provides the Department of the Interior with financing for the acquisition of migratory bird habitat. Funds land acquisition for USFWS National Wildlife Refuges.	Small - \$76M nationally in FY16	National Wildlife Refuge boundary expansion or infill acquisitions	High - Hackmatack NWR, Kankakee NRW, Upper Mississippi NWR	Not applicable - no national wildlife refuges in IN Chicago Wilderness area	High - Lowcountry Refuge Complex	USFWS Migratory Bird Conservation Commission
Fish and Wildlife Service - National Coastal Wetlands Conservation Grant Program	Federal grants	Administered by USFWS and funded through the Sport Fish Restoration and Boating Trust Fund, which is supported by excise taxes on fishing equipment and motorboat fuel	Small - \$17M allocated per year nationally	Coastal wetland ecosystems; 25-50% non-federal match requirement; priority given to states with dedicated funding for programs to acquire coastal wetlands, natural areas and open spaces and land located in maritime forests on coastal barrier islands	Low - IL is eligible b/c borders Lake Michigan, but limited funding in the past	Low - IN is eligible b/c borders Lake Michigan, but limited funding in the past	High - intact coastal wetlands and maritime forests	National Coastal Wetlands Conservation Grant Program

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Funding Tool/Strategy	Framework Category	Description	Funding and Scalability	Enabling Conditions and Eligibility Requirements	Applicability to IL	Applicability to IN	Applicability to SC Lowcountry	Examples and Resources
Fish and Wildlife Service - North American Wetland Conservation Funds	Federal grants	The NAWCA program provides matching grants to wetlands conservation projects in the United States, Canada, and Mexico. There is a Standard and a Small Grants Program. Both are competitive grants programs and require that grant requests be matched by partner contributions at no less than a 1-to-1 ratio.	Small - \$50M nationally in FY16	Important wetlands and bird habitat; 50% non-federal match	Moderate - Ducks Unlimited and other partners are actively using this funding source to leverage other conservation funding	Moderate - Ducks Unlimited and other partners are actively using this funding source to leverage other conservation funding	High - Ducks Unlimited and other partners are actively using this funding source to leverage other conservation funding (SC among the states with highest NAWCA funding)	NAWCA 2014-15 Progress Report
Fish and Wildlife Service - Wildlife and Sport Fish Restoration Program (includes Pittman-Robertson funds)	Federal grants	Funding from tax on firearms and amunition and boating/fishing and allocated to states by formula based on population with hunting and fishing licences; "flow through" funding that reimburses states for expenditures; primarily used for state fish and wildlife agency operating budgets but can fund conservation	Large - States received \$780M in FY 2017 for wildlife restoration; states received \$349M for sport fish restoration	State appropriations toward wildlife and fish restoration are reimbursed - "flow through" funding; Approved state wildlife action plan	Low - IL budget impasse has meant that IDNR is not authorized to spend and seek reimbursements	High - IN regularly accesses this funding and has a current state wildlife action plan	High - SC regularly accesses this funding and has a current state wildlife action plan	Ducks Unlimited Summary of Pittman-Robertson Act
Forest Service - Forest Legacy Program	Federal grants/acquisitions	Landowners may participate in the Forest Legacy Program by either selling their property outright or by retaining ownership and selling only a portion of the property's development rights; both are held by state agencies or another unit of government. Funded by LWCF	Small - \$62M funded in FY2017; relies on LWCF funding - highly uncertain	Congressional appropriation (see LWCF); land has to be within a state's designated Forest Legacy Program area	Low - Northern IL does not have designated Forest Legacy Program (FLP) area;	Low - NW Indiana has a small portion of land designated as FLP area.	High - OSI should evaluate map for overlap between FLP program areas and Lowcountry	Quabbin to Wachusett - Multiple landowners aggregated for large Forest Legacy Project
Forest Service - other cooperative forestry programs	Federal grants	USFS has several programs for stewardship and conservation of private forests. The programs are relatively small and include elements of technical assistance and financial assistance.	Small - Recent annual funding of \$28M for Urban and Community Forestry; \$23M for Forest Stewardship; \$14M for Landscape Scale Restoration; \$2M for Community Forest Program	Varies by program	Moderate - varies by program. Best fit is Urban and Community Forestry	Moderate - varies by program. Best fit is Urban and Community Forestry	High - given prevalence of forest cover, many programs are applicable	USFS Urban and Community Forestry Program
Land and Water Conservation Fund (LWCF) Federal Side	Federal acquisitions	The Federal portion of the Land and Water Conservation Fund is used to acquire lands, waters, and interests therein necessary to achieve the natural, cultural, wildlife, and recreation management objectives of the federal land management agencies. Funded with earnings from offshore oil and gas leasing	Moderate - \$246M appropriated in FY2016	Congressional appropriation - poised for small increase in new budget but not reauthorized yet; expansion of federally-managed land; non-federal matching funds	Low - little federal land in IL Chicago Wilderness (Midewin National Tallgrass Prairie)	Low - little federal land in IN Chicago Wilderness area	High - Lowcountry Refuge Complex, National Forest	LWCF Case Studies
Land and Water Conservation Fund (LWCF) State Side	Federal grants	The State portion provides matching grants to states including the District of Columbia and U.S. territories for recreation planning, acquisition of lands and waters, and facility development.	Moderate - \$110M appropriated in FY2016	Congressional appropriation - poised for small increase in new budget but not reauthorized yet; non-federal matching funds	High - many projects fit LWCF criteria, but chronic uncertainty and underfunding makes this a difficult funding source to use	High - many projects fit LWCF criteria, but chronic uncertainty and underfunding makes this a difficult funding source to use	High - many projects fit LWCF criteria, but chronic uncertainty and underfunding makes this a difficult funding source to use	LWCF Case Studies
NOAA Coastal Zone Management Grants	Federal grants	Voluntary partnership between the federal government and U.S. coastal and Great Lakes states and territories; states agree to strengthen and improve their federally approved coastal management programs in one or more of nine areas including: Wetlands, Coastal hazards, Public access, Marine debris, Cumulative and secondary impacts, Special area management plans, Great Lakes resources, Energy and government facility siting and Aquaculture.	Small - \$70M federal funding in FY2017	Congressional appropriation; States must join the National Coastal Zone Management Program (NCZMP) and regularly assess and report on implementation	High - IL joined the NCZMP in 2012 (\$2.3M allocation in FY2017)	High - IN joined the NCZMP in 2002 (\$1.0M allocation in FY2017)	High - SC joined the NCZMP in 1990 (\$2.5M allocation in FY2017)	NOAA Coastal Zone Enhancement Program
NRCS - Agricultural Easement Program (ACEP) - Agricultural Land Easements and Wetland Reserve Easements	Federal grants	NRCS provides financial assistance to eligible partners for purchasing Agricultural Land Easements that protect the agricultural use and conservation values of eligible land. Program also encompasses wetland protection. Federal funding ranges from 100% to 50% depending on program. Multiple NRCS programs now consolidated under ACEP as of 2014 Farm Bill	Moderate - \$250M available nationwide in FY18	Funding through new Farm Bill; active state NRCS offices; non-federal matching funds; willing landowners	High - large % of rural land in Chicago Wilderness is agricultural land	High - large % of rural land in Chicago Wilderness is agricultural land	Moderate - Although only10% of lowcountry is agricultural land, there are good opportunities to improve conservation strategies on this land base.	Agricultural Reserve Easement Program
NRCS - Financial Assistance Programs (Conservation Reserve Program, Conservation Stewardship Program, Environmental Quality Incentives Program)	Federal grants	NRCS offers voluntary programs to eligible landowners and agricultural producers to provide financial and technical assistance to help manage natural resources in a sustainable manner. Through these programs the agency approves contracts to provide financial assistance to help plan and implement conservation practices that address natural resource concerns or opportunities to help save energy, improve soil, water, plant, air, animal and related resources on agricultural lands and non-industrial private forest land. Recent emphasis on practices that improve pollinator habitat.	Large - EQUIP nationwide is \$1.75 B for FY18, CRP is \$2B for FY17 but short-term contracts with producers, restoration/stewardship - not long-term conservation	Funding through new Farm Bill; active state NRCS offices; willing landowners	High - large % of rural land in Chicago Wilderness is agricultural land	High - large % of rural land in Chicago Wilderness is agricultural land	Moderate - Although only10% of lowcountry is agricultural land, there are good opportunities to improve conservation strategies on this land base.	NRCS Financial Assistance Programs
NRCS - Regional Conservation Partnership Program	Federal grants/acquisitions	Partners leverage USDA NRCS funding in order to help producers implement conservation practices in project areas; can include funding for conservation easements	Moderate - Maximum award is \$10M; \$225M allocated nationwide in 2016	Funding through new Farm Bill (uncertain); strong local/regional/state partnerships; non-federal matching funds; willing landowners/producers	Moderate - RCPP Critical Conservation Area (Mississippi River Basin); 7 RCPPs in IL since 2014	Moderate - RCPP Critical Conservation Area (Mississippi River Basin)	High - RCPP Critical Conservation Area (Longleaf Pine Range); Many farms and forests; 3 RCPPs in SC since 2014	Coastal Headwaters Project in Alabama
US Army Corps of Engineers - Section 206 and Section 1135	Federal grants	USACE can carry out aquatic ecosystem restoration and environmental improvement projects, which generally include manipulation of hydrology in and along bodies of water, including wetlands and riparian areas.	Moderate - \$50M annual federal program limit for Section 206; \$40M annual federal program limit for Section 1135	Congressional appropriation; Projects require 35% non-federal match. Per project limit is \$5M federal contribution	High - given the aquatic resources in the Chicago Wilderness area, Corps programs are active there (research further)	High - given the aquatic resources in the Chicago Wilderness area, Corps programs are active there (research further)	High - given the aquatic resources in the SC Lowcountry, Corps programs are active there (research further)	Army Corps of Engineers: Water Resource Authorizations, Appropriations, and Activities
US Endowment for Forestry and Communities - Healthy Watersheds Consortium Grants	Federal grants	Grants focused on three categories: 1) short-term funding to leverage larger financing for targeted watershed protection; 2) funds to help build the capacity of local organizations for sustainable, long-term watershed protection; and 3) new techniques or approaches that advance the state of practice for watershed protection and that can be replicated across the country.	Small - \$3M in 2016; grants are typically \$150K - \$200K	Congressional appropriation to EPA and NRCS	High - all states are eligible	High - all states are eligible	High - all states are eligible	Healthy Watersheds Consortium
US Endowment for Forestry and Communities - Sustainable Forestry and African American Land Retention	Federal grants	From 2016 to 2019, the U.S. Department of Agriculture's Natural Resources Conservation Service (NRCS) and Forest Service (USFS), and the U. S. Endowment for Forestry and Communities will invest more than \$4 million to stabilize African American forestland ownership across generations and enhance family wealth by increasing income and land asset value through sustainable forestry.	Small - \$4M from 2016-2019	Continued support for existing projects in NC, SC, and AL. The Endowment seeks new county regions with significant African American populations in rural AR, FL, GA, LA, MI, western TN, TX and VA.	Not applicable - IL not in grant focus area	Not applicable - IN not in grant focus area	High - SC Center for Heirs Property Preservation is a leading example	US Endowment for Forestry and Communities: Sustainable Forestry and African American Land Retention
National Fish and Wildlife Foundation (multiple programs)	Federal grants	Quasi-public agency established by Congress in 1984 to work with the public and private sectors to protect and restore the nation's fish, wildlife, plants and habitats for current and future generations.	Moderate - In FY 2017, awarded \$111.1 million in federal funds, \$0.28M in other public funds and \$33.9 million in private contributions.	Funded primarily by fines and settlements to remediate environmental damage; grant seekers must match specific program requirements	High - many grant programs applicable to IL. Chi-Cal Rivers Fund, for example. Five Star and Urban Waters; Sustain Our Great Lakes	High - many grant programs applicable to IL. Chi-Cal Rivers Fund, for example. Five Star and Urban Waters; Sustain Our Great Lakes	High - many grant programs applicable to SC; Five Star and Urban Waters	National Fish and Wildlife Foundation Conservation Programs
State Grants, Acquisitions and Loans								
State general appropriations	State grants/acquisitions	States may appropriate funds for the acquisition and/or stewardship of open space. May appropriate directly or through repayment of bonds.	Low - general appropriations toward conservation are currently modest in IL, IN and SC; balanced budget requirements make this politically challenging	Political will to spend state funds on conservation; state fiscal health	Low - Funding for the Conservation 2000, Hunting Heritage, and Open Lands Trust, now largely inactive, were funded through authorization from the General Assembly.	Low - Indiana Heritage Trust funded by token General Assembly appropriations plus approx \$1M from environmental license plate sales	Moderate - SC does not currently appropriate funds for conservation. However, it appears that the Land Bank fund (described below) may shift to a \$10M annual appropriation. This is a step in the wrong direction, unfortunately.	Washington Wildlife Recreation Program has received consistent appropriations

Attachment 8: Conservation Funding and Financing Matrix

Funding Tool/Strategy	Framework Category	Description	Funding and Scalability	Enabling Conditions and Eligibility Requirements	Applicability to IL	Applicability to IN	Applicability to SC Lowcountry	Examples and Resources
State dedicated funding	State grants/acquisitions	States may designate a special tax or other revenue source expressly for the purpose of open space conservation and/or stewardship. Examples include: sales tax, deed recording fee, real estate transfer tax and state lottery. May fund directly or through repayment of bonds.	Moderate - although IL, IN and SC haven't made large conservation allocations via dedicated funds in recent years, the large state tax base can allow for significant funding if dedicated funds are established	Political will to spend state funds on conservation; state fiscal health; strong credit rating for bonds	Low - Open Space Lands Acquisition and Development (OSLAD) and Illinois Natural Areas Acquisition Fund both supported by state real estate transfer tax. 2015 spending freeze dramatically reduced funding. Vehicle fee generates \$18-\$20M/year for IL DNR infrastructure and facilities.	Low - IN does not have a significant dedicated revenue source for conservation (state license plate explained below)	Low - In 2015, the Legislature approved a projected \$15 million for the Conservation Bank Act through a portion of the real estate transfer tax. According to the SC Conservation Database, this has been an important source of conservation funding	Minnesota Clean Water, Land and Legacy Amendment allocates a portion of the state sales tax to conservation - \$317 million in 2016
Clean Water and Drinking Water State Revolving Funds	State loans (originate with federal \$, but controlled by the state)	Public finance that is typically used to finance grey infrastructure water treatment systems can be used to fund land protection and/or restoration that reduces pollutant load on water quality systems. Capitalized with federal grants and state matching funds and leveraged with bonds. The CWSRF can finance both wastewater treatment system improvements and nonpoint source projects; however, many nonpoint source projects lack a revenue stream, which makes it difficult to repay a CWSRF loan. Sponsorship lending addresses this repayment issue for nonpoint source projects, allowing critical water quality projects to move forward.	Large - \$800M available in IL CWSRF; \$278M available in SC CWSRF	Capital projects; must link to water conservation, water security or other program area under the Clean Water Act; Conservation program that can identify sources of revenue to pay back the loan; State lending agencies willing to consider this somewhat novel approach	Moderate - Although IL has a Green Project Reserve, fund administrators in IL have been unwilling to use these funds for green infrastructure to date	Moderate - IN has a Green Project Reserve sustainability incentive that provides an interest rate break of up to 0.5% for projects that abate or prevent NPS pollution. Up to 20% of loan allotment can be used for GPR.	Moderate - The Green Project Reserve (GPR) in SC requires at least 10% of the FY15 CWSRF loan allotment must be used for green infrastructure to the extent there are projects. To date, no projects have been undertaken with GPR funds.	Sponsorship Lending and the Clean Water State Revolving Fund
Local and Regional Grants, Acquisitions and Loans								
Taxes and Bonds for Open Space	Local grants/acquisitions	Municipalities, counties, conservation districts, and park districts levy taxes for parks and open space. Revenues may be used directly or to pay back bonds.	Large - In IL since 1992 voters approved 60 measures in 43 jurisdictions authorizing over \$1.46 B for land conservation; SC counties have approved significant funding in recent years; no IN localities have approved conservation funding	Enabling legislation to allow municipalities, water districts and/or park districts to raise revenue for conservation; voter willingness to pay for conservation; strong credit ratings for bond issuances	High - large source of public conservation funding in IL; Northeastern Illinois region is particularly fortunate because all 7 counties have a well-established forest preserve or conservation district.	Low - No local conservation finance measures have been approved by voters in Indiana.	Moderate - Several counties have passed large conservation spending measures in recent years (2016 - Charleston County approved \$210M conservation spending; 2014 Beaufort County approved \$20M conservation spending measure)	Landvote.org includes a database of all recent conservation ballot measures
Water utilities and/or watershed improvement districts pay for ecosystem services	Local grants/acquisitions	Options range from utilizing existing revenues from water authorities, to simple fees on municipal bill, to a full utility structure. Funds can be used for activities that enhance or protect water supply and/or control stormwater runoff. Some states have watershed improvement districts - special purpose districts that can impose taxes, user fees, or both	Large - public water agencies capable of raising dedicated, stable funding.	Political will to spend tax \$ on green infrastructure that competes with grey infrastructure and other needs	High - The Metropolitan Water Reclamation District (MWRD) of Chicago is large and has resources for innovation. There is new leadership and new consent decrees that will prompt action.	Moderate - IN has mostly small municipal utilities, many of which buy water from Gary, which could have capacity for a special fee	High - Savannah River Water Fund - dedicated \$ from five different water utilities in SC and GA	Denver Water Forests to Faucets partnership
Environmental impact bonds and other "pay for performance" models (can also be implemented at state level)	Local \$ that provides public financing for grants/acquisitions	Environmental impact bond is a debt instrument used to raise capital for environmental projects. Uses a financing structure where repayment is dependent in part on project performance; may be other opportunities to utilize "pay for performance" model without a bond	Moderate - "pay for performance" models are still quite new and requirement to model and prove performance can be difficult to meet	Viable payment scheme to pay back the bond; outcome can be reliably modeled in advance and performance can be proven with data	High - Retrofit Chicago covers all public/private investments within city limits and could facilitate. MWRD could also be an issuer - AAA rating	Low - Bonds require large scale; may be applicable in Gary	Moderate - South Carolina localities don't seem to have the scale for this approach (further discussion with Quantified Ventures would be helpful); state has a AAA bond rating - potential there?	DC Water Environmental Impact Bond
Municipal/regional land banks	Local acquisitions	Governmental or nonprofit entities that acquire, hold, and manage surplus land (often foreclosed or abandoned). Enabled by state legislation and enacted by local ordinances. Land banks are governmental entities or nonprofit corporations that are focused on the conversion of vacant, abandoned, and tax delinquent properties into productive use.	Low - funded with local government allocations or revenue from operations; can be an inverse relationship between number of foreclosed or abandoned properties and revenue available to administer land banks	Surplus land (high levels of foreclosed or abandoned property); State enabling legislation; local ordinances; ability to obtain clear title on abandoned or foreclosed properties	High - IL law allows this model; Examples include the Cook County Land Bank Authority (CCLBA) and the South Suburban Land Bank Development Authority (SSLBDA)	Moderate - IN law does not strictly allow, however land bank like entities have been created	Low - Low levels of foreclosed or abandoned properties?	HUD: Revitalizing Foreclosed Properties through Land Banking
Private Funding Generated from Compliance Requirements								
Compensatory Mitigation - Mitigation Banks	Private funding generated from compliance requirements	Law requires developers to avoid and minimize their environmental impacts on-site and then to compensate for unavoidable impacts through the protection, restoration or enhancement of nearby lands. A permit applicant may obtain credits from a mitigation bank. A mitigation bank is a wetland, stream or other aquatic resource area that has been restored, established, enhanced, or preserved. This resource area is then set aside to compensate for future impacts to aquatic resources resulting from permitted activities.	Large - \$2-3.4B US market, but highly fragmented; increased need for infrastructure will increase demand for mitigation	Federal regulatory framework already exists for wetlands (Clean Water Act) and endangered species (Endangered Species Act); mitigation banks must complete rigorous permitting process for an approved bank	High - mitigation bank developers active in IL	High - mitigation bank developers active in IN	High - mitigation bank developers active in SC	Primer on Mitigation Banking and Forest Carbon
Compensatory Mitigation - In-Lieu Fee	Private funding generated from compliance requirements	A permit applicant may make a payment to an in-lieu fee program that will conduct wetland, stream or other aquatic resource restoration, creation, enhancement, or preservation activities. In-lieu fee programs are generally administered by government agencies or non-profit organizations that have established an agreement with the regulatory agencies to use in-lieu fee payments collected from permit applicants.	Large - \$2-3.4B US market, but highly fragmented; increased need for infrastructure will increase demand for mitigation	Federal regulatory framework already exists for wetlands (Clean Water Act) and endangered species (Endangered Species Act); In-lieu Fee (ILF) programs must complete approval process with Corps and administer program well for it to succeed	Moderate - There is currently no approved In-Lieu Fee Mitigation in the Chicago District, but land trusts see this as a good opportunity and would like to work on it	High - IN is in the final stages of gaining approval for an in-lieu fee program	High - Conservation groups active - SC Audubon; in-lieu fees are a bit of a relic - moving more toward mitigation banks	Developing a Sustainable Program for In-Lieu Fee Wetland Mitigation
Compensatory Mitigation - Permittee Responsible	Private funding generated from compliance requirements	A permittee may be required to provide compensatory mitigation through an aquatic resource restoration, establishment, enhancement and/or preservation activity. This compensatory mitigation may be provided at or adjacent the impact site (i.e., on-site mitigation) or at another location, usually within the same watershed as the permitted impact (i.e., off-site mitigation). The permittee retains responsibility for the implementation and success of the mitigation project.	Large - \$2-3.4B US market, but highly fragmented; increased need for infrastructure will increase demand for mitigation	Federal regulatory framework already exists for wetlands (Clean Water Act) and endangered species (Endangered Species Act); The 2008 mitigation rule states preference and/or consideration is to be given to mitigation banks and in-lieu fee (ILF) arrangements over PRMs. PRMs are typically used when no feasible banking or ILF options are available.	Moderate - this is the least preferred option of the regulator, but there could be opportunities to partner with permittees	Moderate - this is the least preferred option of the regulator, but there could be opportunities to partner with permittees	Moderate - this is the least preferred option of the regulator, but there could be opportunities to partner with permittees	USACE Compensatory Mitigation Rule
Fines and settlements	Private funding generated from compliance requirements	Funding resulting from an agreement between a government and a company that has caused unforeseen environmental damage	Moderate - funding is unpredictable and varies widely by project; Large settlements (Deepwater Horizon, for example) typically take many years to plan, prioritize and spend	Strong regulatory framework and enforcement; active environmental litigation	High - Natural Resources Restoration Trust Fund in place to receive money from fines and settlements	High - NiSource mitigation project, pending	High - \$5M pot for Lynch's \$ from Hale Gold Mine (steering committee with multiple nonprofits that were party to the lawsuit), potential for other projects	NiSource Habitat Conservation Plan
Conservation stewardship transfer fees	Private funding generated from compliance requirements	Provisions written into a conservation easement deed or a fee deed with restrictive conservation covenants requiring the payment of a small percentage, or a specific pecuniary (i.e. dollar) amount, from the proceeds of any sale of the real estate encumbered by the easement to the easement holder.	Small - Private transfer fees present significant legal challenges at the federal and state level	In 2012 the Federal Housing Finance Agency (FHFA) prohibited Fannie Mae, Freddie Mac and Federal Home Loan Banks from investing in residential mortgages on properties subject to certain private transfer fee covenants.	Low - In addition to FHFA prohibitions, IL statutes further ban deed-based transfer fees	Low - In addition to FHFA prohibitions, IN statutes further ban deed-based transfer fees	Low - In addition to FHFA prohibitions, SC statutes further ban deed-based transfer fees	Deed-Based Transfer Fee Bans by State

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Funding Tool/Strategy	Framework Category	Description	Funding and Scalability	Enabling Conditions and Eligibility Requirements	Applicability to IL	Applicability to IN	Applicability to SC Lowcountry	Examples and Resources
Water Quality Trading	Private funding generated from compliance requirements	Credit trading system in which a regulated entity meets its pollution reduction mandate by purchasing reduction credits generated by a landowner who achieves commensurate pollutant reduction in another location. EPA's policy supports trading of nutrients (e.g., total phosphorus, total nitrogen) and sediment load reductions.	Moderate - credit trading relies on existing revenues from regulated entities, which already spend significant funds on compliance; trading will be appropriate for a subset of those funds	Strong regulatory framework and enforcement capacity (EPA authorized water quality trading in 2003); willingness to adopt a cap and trade approach to compliance; credit supply and demand	High - Some NPDES permits in Illinois are beginning to contemplate the use of WQT programs.	High - Ohio River Basin Nutrient Trading Program includes Indiana, Michigan, and Ohio. It is currently the only multi- state water quality trading program in the US.	High - SC currently has a trading program for phosphorus in the Saluda River arm of Lake Greenwood.	Medford Water Quality Trading Program, Oregon
Stormwater Credit Trading	Private funding generated from compliance requirements	Credit trading system in which landowners or collaborating third parties install detention capacity or volume control at supply sites, receive certification for stormwater detention or volume control value, and sell the bonus capacity as credits to developers on demand sites proven eligible to go "offsite" with their stormwater controls, buying credits from another location.	Moderate - credit trading relies on existing revenues from regulated entities, which already spend significant funds on compliance; trading will be appropriate for a subset of those funds	Strong regulatory framework and enforcement capacity (EPA authorized water quality trading in 2003); willingness to adopt a cap and trade approach to compliance; credit supply and demand	High - policy frameworks seem amenable (more research needed)	High - policy frameworks seem amenable (more research needed)	High - policy frameworks seem amenable (more research needed)	NRDC: - How To: Stormwater Credit Trading
Water Funds (compliance and voluntary)	Private funding generated from compliance requirements and voluntary contributions	Coordinate the financing and prioritization of conservation projects; Requires pooling and transferring funds between public and private entities; aggregates business or investment activities that will generate water quality outcomes that will motivate investors to capitalize the Fund and that will complement or catalyze new or scaled-up restoration activity.	Moderate - Among the water funds created in the last few years, practitioners can point to \$200M of additional investment	Regulatory drivers motivating downstream communities to participate; revenues from downstream users to replenish funds; documented pollution reduction; upstream projects to reduce pollution (BMPs, easements, etc)	Moderate - would rely heavily on MWRD participation and engagement; unclear about their level of interest	Moderate - would rely heavily on City of Gary participation and engagement; unclear about their level of interest	Moderate - One pilot effort already up and running; difficult to scale	Brandywine Christina Healthy Water Fund
Purchase of forest Carbon Offsets (compliance and voluntary)	Private funding generated from compliance requirements and voluntary contributions	Uses funding from compliance and voluntary carbon reduction programs to fund land protection and forest stewardship from fees paid by emitters. Offsets are calculated as the difference between the project and a modeled baseline scenario of carbon stocks in the project absence.	Moderate - \$74.5M forest carbon offset sales in North America in 2015 - \$63.2 compliance/\$11.3M voluntary	Compliance programs (California) and/or voluntary programs; Large projects 5,000 acres+ to justify high cost of verification; commitment to long-term land management change	Moderate - requires large forested blocks. There may be an opportunity to explore carbon sales in forest preserves.	Low - requires large forested blocks.	High - large forested blocks; carbon developers already active in the state; good projects out of bottomland hardwoods; Could be opportunities for aggregation	Beidler Forest Carbon Sale
Private Revenue Generated from Voluntary Actions								
Traditional philanthropy	Donations	Individual donors, foundations, businesses, and corporations provide capital to assist with acquisition or funding to support capacity building, technical assistance, planning and other efforts that underpin landscape scale conservation	Large - \$10B directed toward the environment and animals in US philanthropy (2015)	Conservation focused giving	High - many foundations and individuals focus on environmental sustainability and conservation in the Chicago Wilderness region	High - many foundations and individuals focus on environmental sustainability and conservation in the Chicago Wilderness region	High - many foundations and individuals focus on environmental sustainability and conservation in the South Carolina lowcountry	
Voluntary offsets and other corporate sustainability initiatives	Donations	Partnership with corporate sustainability initiatives, which can help companies offset their environmental footprint while achieving land protection and/or improvements in sustainable natural resource management; could increase utilization of existing programs like LEED certification points for open space protection	Moderate - This represents a niche segment of corporate philanthropy. Last year, all corporate philanthropy for all causes in the US was \$18.6B	Large corporations with capital for corporate responsibility programs; consumer demand for sustainable supply chain	High - A number of large companies in the study region; IL Clean Energy Community Foundation endowed by Commonwealth Edison example of current program; corporate campuses also present an opportunity for conservation	High - A number of large companies in the study region; IL Clean Energy Community Foundation endowed by Commonwealth Edison example of current program; corporate campuses also present an opportunity for conservation	High - A number of large companies operating in the region, including Boeing and Volvo; iconic landscapes that could be of interest to corporations outside the region	Apple Sustainable Fiber Production - Reed Forest, Maine
Purchase of Soil Carbon Offsets	Donations	Uses funding from voluntary carbon reduction programs to fund land protection and stewardship change from fees paid by emitters. Offsets are calculated as the difference between the project and a modeled baseline scenario of carbon stocks in the project absence.	Small - Agriculture is a relatively young sector in the carbon markets and new methodologies are being approved on an on-going basis.	Carbon markets that recognize soil carbon offsets; large farmland tracts; farmers willing to make long-term commitments to land management change	Low - not currently programs to incentivize farmers in Illinois to adopt practices that improve soil health and enhance soil carbon.	Low - not currently programs to incentivize farmers in Illinois to adopt practices that improve soil health and enhance soil carbon.	Low - not currently programs to incentivize farmers in South Carolina to adopt practices that improve soil health and enhance soil carbon; freshwater marshes could be an interesting area to explore	Road Map for U.S. Soil Health
Utility and transportation rights of way as habitat and public access	Donations	RoWs are of particular interest for pollinator habitat because they constitute large land acreage on a cumulative basis, are generally maintained in sunny areas with low vegetation height (ideal pollinator habitat), and often extend for considerable distances, thereby potentially acting as corridors for species movement and adaptation to climate change.	Small - relies on utilities redirecting or increasing funds in ways that may not always align with short term business interests	Utilities and transportation managers willing to accommodate habitat and public access needs on their land; mapping and other support from conservation NGOs and allies	High - ComEd owns 40,000 acres under power lines called "right of ways."	High - utility and transportation corridors throughout the IN portion of Chicago Willdneress	High - utility and transportation corridors throughout the SC lowcountry	Rights of Way as Habitat Working Group
Insurance Payments for Environmental Risk Mitigation	Donations	An insurance company would pay to decrease environmental risk. For example, by funding land conservation and/or restoration that increases climate resiliency; Alternatively, insurers could lower premiums to reward conservation planning or actions. For example, communities participating in the FEMA Community Rating System program can take advantage of protected open space within the floodplain to lower insurance rates, thus incentivizing additional local investment in open space protection	Moderate - Although it's a large industry, it's difficult to assess the potential for funding that would be directed toward conservation as a result	Insurance companies need to see direct benefits proven in a data-driven manner; conservation activities closely tied to insurance company service area; for FEMA program, communities need to participate in FEMA Community Rating System	High - multiple IL communities are certified by FEMA Community Ratings System, but there are opportunities to improve rankings and increase certifications	High - multiple IN communities are certified by FEMA Community Ratings System, but there are opportunities to improve rankings and increase certifications	High - Charleston County has one of the highest ratings in the country; Horry County complited a new application in 2016 and recieved ~\$60 reduction per individual paying flood insurance in the county.	GA Sea Grant Program
Voluntary Surcharges	Donations	Places an added charge onto a retail, hospitality or lodging customer's final bill that goes toward conservation.The customer can opt out.	Small - exact figures aren't known, but retail margins are slim and under pressure from online retailers	Nature-tourism economy; clear and professional fund collection and disbursement; durable and symbiotic relationships with business community	Low - limited nature-tourism economy in and around Chicago Wilderness	Low - limited nature-tourism economy in and around Chicago Wilderness	Moderate - good nature-tourism economy in lowcountry, but still relatively small	Case Study on Voluntary Surcharges
Internal revolving loan funds	Investments	A fund established within a land trust to buy or otherwise support the acquisition of land or conservation easements; provides liquidity to purchase land and easements	Small - relies on philanthropic capacity directed toward one non-profit organization and long-term capacity to pay off debt (which depends largely on publicly-funded programs and philanthropic \$)	Philanthropic capacity; take-out financing is available	High - many foundations and individuals focus on environmental sustainability and conservation in the Chicago Wilderness region	High - many foundations and individuals focus on environmental sustainability and conservation in the Chicago Wilderness region	High - many foundations and individuals focus on environmental sustainability and conservation in the South Carolina lowcountry	
External revolving loan funds (can be capitalized with grants or PRIs)	Investments	Dedicated pools of capital held by nonprofit organizations specifically to provide short-term (often low-interest) loans for land conservation to multiple organizations with a shared geographic focus or overlapping conservation goals.	Moderate - relies on philanthropic capacity for loans and long-term capacity to pay off debt (which depends largely on publicly funded programs and philanthropic \$); recent low-interest rate environment has supressed demand	Philanthropic capacity; land conservation organizations have interest and capacity to borrow funds; take-out financing is available	High - Great Lakes Revolving Loan Fund and others	High - Great Lakes Revolving Loan Fund and others	High - already being deployed in SC through the Lowcountry Conservation Loan Fund	External Revolving Loan Funds
Conservation lenders/guarantors	Investments	Individual donors, foundations, businesses, and corporations can provide debt for individual transactions	Small - relies on efforts by land trust staff to seek lenders for individual transactions, which is difficult to scale	Lender interest and capacity; take-out financing is available	High - many foundations and individuals focus on environmental sustainability and conservation in the Chicago Wilderness region	High - many foundations and individuals focus on environmental sustainability and conservation in the Chicago Wilderness region	High - many foundations and individuals focus on environmental sustainability and conservation in the South Carolina lowcountry	
Seller financing	Investments	A loan from the seller that allows the purchaser to pay in installments over time; Can benefit sellers that want to avoid a large capital gains tax payment	Small - almost no opportunities to scale	Lender interest and capacity; take-out financing is available	High - seller financing is flexible and can be used in any market	High - seller financing is flexible and can be used in any market	High - seller financing is flexible and can be used in any market	Conservation Finance Network - Seller Financing
Commercial bank lending	Investments	Loans at commercial rates, or sometimes better (often with incentives from Community Reinvestment Act requirements), from commercial banks established to lend to businesses, institutions, and individuals and to offer many other financial services	Moderate - commercial banks have large loan capacity, but may be too expensive or seeking different risk profile than that offered by conservation projects	Lender interest and capacity; take-out financing is available	High - can be used in any market	High - can be used in any market	High - can be used in any market	

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Funding Tool/Strategy	Framework Category	Description	Funding and Scalability	Enabling Conditions and Eligibility Requirements	Applicability to IL	Applicability to IN	Applicability to SC Lowcountry	Examples and Resources
Program Related Investments	Investments	A PRI is a loan, equity investment, or guaranty, made by a foundation in pursuit of its charitable mission rather than to generate income. The recipient can be a nonprofit organization or a for-profit business enterprise. The US Internal Revenue Code treats PRIs similarly to grants. In contrast to ordinary investments from their endowments, foundations do not expect PRIs to produce market-rate returns.	Small - PRIs comprise a small fraction of all private foundation charitable distributions and of overall charitable giving. Complexity of using PRIs likely to limit widespread adoption	Investment must meet US Internal Revenue Code definition of a PRI; evaluating charitability can be challenging and many foundations obtain a legal opinion from a tax attorney for each transasction	High - many foundations focus on environmental sustainability and conservation in the Chicago Wilderness region and could make PRIs	High - many foundations focus on environmental sustainability and conservation in the Chicago Wilderness region and could make PRIs	High - many foundations focus on environmental sustainability and conservation in the South Carolina lowcountry and could make PRIs	How Foundations can use PRIs to Address Water-Related Challenges
Mission Related Investments	Investments	Risk-adjusted, market-rate impact investments made from the foundation's endowment. MRIs are not an official IRS designation and are often distinguished from other investments by their alignment with the foundation's mission and programmatic goals. Opportunities for MRIs exist across all asset classes and issue areas.	Large - \$10B directed toward the environment and animals in US philanthropy (2015). MRIs come from an organization's corpus, so capacity is significant	Risk-adjusted, market-rate investment opportunitis that align with the foundation's mission and programmatic goals; no official IRS designation	High - many foundations focus on environmental sustainability and conservation in the Chicago Wilderness region and could make MRIs	High - many foundations focus on environmental sustainability and conservation in the Chicago Wilderness region and could make MRIs	High - many foundations focus on environmental sustainability and conservation in the South Carolina lowcountry and could make MRIs	Mission Investors Exchange - About Impact Investing
Conservation Investors - Sustainable timberland	Investments	"Investable timberlands" - privately owned acres managed to maximize wood volume and cash flows, comprise approximately 11% of all U.S. forests. Some of these forests also have significant conservation value. There are timberland investors and nonprofits that specifically seek to acquire and manage these high conservation value forests	Moderate - niche strategy within private timberland investing	Large forested landscapes; conservation funding or other incentives for sustainable management	Not applicable - private timberland investment requires large forested parcels (>20,000 acres)	Not applicable - private timberland investment requires large forested parcels (>20,000 acres)	High - SC has industrial scale forests that could be attractive investments for conservation oriented timberland investments	Lyme Florida Timberlands
Conservation Investors - Sustainable agriculture	Investments	Sustainable agriculture investments typically involve the purchase and management of agricultural operations (e.g., farms and ranches) and/or other actors in the broader agricultural value chain (e.g., processors and seed companies) that incorporate sustainability as a basis to generate return.	Large - In the US alone, it is estimated that there is roughly \$300-500 billion of traded investable agriculture	Private investors interested in sustainable food and agriculture systems; farmers and other producers willing to implement environmental best practices	High - large % of rural land in Chicago Wilderness is agricultural land	High - large % of rural land in Chicago Wilderness is agricultural land	Moderate - Although only10% of lowcountry is agricultural land, there are good opportunities to improve conservation strategies on this land base.	Delta Institute Iroquois Valley Farms Case Study
Conservation Investors - Limited development	Investments	Conservation development projects combine real-estate development with conservation of land and other natural resources. Thousands of such projects have been conducted in the United States and other countries through the involvement of private developers, landowners, land trusts, and government agencies.	Large - Researchers estimate conservation development projects account for a significant amount of private-land conservation activity nationwide (may be a high as 25%); highly disaggregated; difficult to scale	Growth pressure; Local officials willing to consider alternative planning designs are required in some cases	High - history of conservation development projects, including Prairie Crossing	High - Couldn't find examples, but I assume they are out there	High - strong history of conservation development projects, including relatively recent large ones like East Edisto which significantly limits development on more than 53,000 acres	Protecting Land through Limited Development