

Great Lakes of Opportunity

A Playbook to Accelerate the Region's Conservation Finance Project Pipeline

Prepared by

The Conservation Finance Network for the
Great Lakes Impact Investment Platform

THE CONSERVATION
FINANCE NETWORK



GREAT LAKES IMPACT
INVESTMENT PLATFORM

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About Us

About the Conservation Finance Network

Since 2012, the Conservation Finance Network (CFN) has advanced land and resource conservation by expanding the use of innovative and effective funding and financing strategies. By supporting a growing network of public, private, and nonprofit professionals through practitioner convenings, intensive trainings, and information dissemination, CFN helps to increase the financial resources deployed for conservation. For more information, please visit our resource hub at: www.conservationfinancenetwork.org.

About the Conference of Great Lakes and St. Lawrence Governors and Premiers

The Conference of Great Lakes and St. Lawrence Governors and Premiers (GSGP) unites the chief executives from Illinois, Indiana, Michigan, Minnesota, New York, Ohio, Ontario, Pennsylvania, Québec and Wisconsin. The Governors and Premiers work as equal partners to grow the region's \$6 trillion economy and protect the world's largest system of surface fresh water. For more information please visit: <https://gsgp.org/>

About the Great Lakes Impact Investment Platform

The Great Lakes Impact Investment Platform aims to position the Great Lakes region as a global destination for investments that reduce emissions and create other environmental benefits. The Platform showcases projects aiming to deliver demonstrable environmental improvements and financial returns in the Great Lakes St. Lawrence states and provinces. Projects fall under four themes – agriculture, forestry, energy, and water – and use a variety of innovative financing tools like green bonds and pay-for-success models. By highlighting these projects, the Platform seeks to attract more impact investment in the region and encourage the development of other similar projects. For more information please visit: <https://greatlakesimpactinvestmentplatform.org/>

Disclosures

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Nothing presented herein is intended to constitute investment advice, and no investment decision should be made based on any information provided herein. The information in this report is for informational purposes only.

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Preface

Impact investment holds great potential to provide financial returns to investors as well as environmental and social benefits for the Great Lakes St. Lawrence region. It similarly holds great potential to augment the significant investments that our States and Provinces are making and help fill gaps to overcome some of our region's long-term challenges. Meeting long-term environmental goals will clearly require attracting new sources of capital.

The Conference of Great Lakes St. Lawrence Governors and Premiers developed the Great Lakes Impact Investment Platform as a new model to catalyze environmentally focused impact investing in the region. The Platform is working to help our region become a powerhouse for natural climate solutions and innovative finance. Despite the Platform's successes, barriers and challenges have prevented our region from fully taking advantage of this opportunity.

This collaboration with the Conservation Finance Network is focused on identifying gaps and barriers along with needed actions to drive greater investment in our region. This playbook is therefore both an analysis of our region's state of play and a call to action. Its insights and recommendations aim to help government, philanthropy, nonprofits, investors, project developers and individuals grow investment opportunities in our region's natural systems.

We thank the Conservation Finance Network team for their tireless work to bring this playbook from idea to reality. We also thank the many practitioners who shared their knowledge and experiences.

Our hope is that this playbook can be the seed that ultimately helps grow hundreds of new deals that benefit our environment and our people. In coming months, we look forward to working with our partners toward this goal.

David Naftzger

Executive Director

Conference of Great Lakes St. Lawrence Governors and Premiers



Executive Summary

This playbook translates practitioner insight into a set of strategies and potential actions to help advance conservation project development opportunities in the Great Lakes and St. Lawrence region. It is meant to capture, distill, and disseminate the experience of investment fund managers, project developers, intermediaries, and nonprofits either currently engaged in conservation finance project work or actively searching for projects and investment opportunities in the region. It is intended to help organizations and individuals take action, create a better support ecosystem, and increase the project pipeline to address the region's most pressing social and environmental goals.

There is a wide range of project types and investment theses envisioned in this playbook, from natural climate solutions to regenerative agriculture, sustainable forestry, recreation, human health, green infrastructure, and environmental justice and equity. This playbook is neither comprehensive nor a detailed description of how to spur transactions. It is intended to spark follow-on conversations with regional funders, local, state, and federal agencies, non-profit leaders, project developers, intermediaries, investment fund managers, and investors.

The playbook organizes insight into two categories of strategies and actions, both meant to strengthen the region's attractiveness to investors:

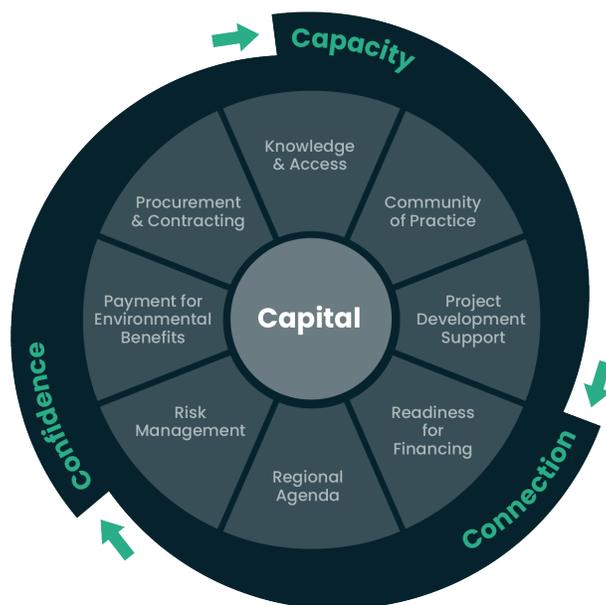
Strategies for Coordination and Collaboration

- A. Make Specialized Knowledge & Relationships More Accessible
- B. Build a Regional Community of Practice Around Project Development
- C. Invest in Project and Partnership Development (and Pre-Development) Support
- D. Vet Readiness for Project Origination and Financing

Strategies for Systemic Change

- E. Set A Regional Agenda and Drive Incentives Around It
- F. Prioritize Risk Management Over Returns

- G. Reward Parties for Social and Environmental Benefits
- H. Innovate with Procurement, Contracting, and Related Policy



Potential Actions to Spur Coordination and Collaboration

- A. Great Lakes Concierge Service and Resource Hub
- B. Great Lakes & St. Lawrence Conservation Finance Roundtable
- C. Project Development Facility or Funding Program
- D. Project and Offset Supply Facility

Potential Actions to Spur Systemic Change

- E. Streamlined Regional Agenda Reinforced by Funding & Incentives
- F. Pooled Catalytic Capital or Credit Enhancement Fund
- G. Connect Regional Project Outcomes with Regional Offtakers
- H. Demonstrate Success Working Through Friction for Procurement and Contracting

While each investment thesis and project will require specific considerations based on the underlying context (e.g., practices, geography, regulatory environment) and market conditions, this playbook aggregates collective wisdom on common enabling conditions. By understanding where coordination, collaboration, and systemic change are needed and tying that insight to potential actions, proponents can build a better support ecosystem for a broad range of project origination and market development to occur across the Great Lakes and St. Lawrence region.



Introduction

Context

Conservation finance efforts around the world have played a critical role in accelerating positive outcomes for people and nature. Still, there remains an urgent funding gap of up to \$824 billion USD per year in what is needed to reverse the global decline of biodiversity by 2030.¹ Similar funding gaps exist for climate resilience, watershed protection, environmental justice, sustainable forestry, regenerative agriculture, and other social and environmental needs.

Today, conservation finance sits at a precipice of new opportunities with both public and private investors increasingly interested in more sustainable investment projects. At COP26, financial institutions pledged more than \$130 trillion USD to support the net zero transition and align commitments with the Paris Agreement. Meanwhile, there is a once-in-a-generation public investment from the U.S. federal government, many state governments and an explosion of interest from private sector actors in real asset impact investing for projects that produce financial returns alongside positive outcomes for climate, regenerative agriculture, and water quality and quantity. Conservation practitioners must meet this moment to close the funding gap and secure a more resilient and equitable future.

Innovative, landscape-level approaches require leadership and strong collaboration to help unlock funding and financing opportunities and strengthen

Market catalysts are all those working to increase the application of innovative and effective models for funding and financing social and environmental resilience. These stakeholders may include policymakers, public agency staff, nonprofit personnel, foundation and philanthropic professionals, intermediaries, practitioner-oriented academic centers and institutes, community stakeholders, and more.

¹ The Nature Conservancy, "Closing the Nature Funding Gap: A Finance Plan for the Planet," last accessed June 24, 2022, <https://www.nature.org/en-us/what-we-do/our-insights/perspectives/closing-nature-funding-gap-global-biodiversity-finance>.

life-sustaining ecosystems along with the services that they provide. The Great Lakes and St. Lawrence region holds 20% of the world’s surface freshwater² and supports thriving communities and commerce through commercial and sport fishing, agriculture, recreation, tourism, manufacturing, and shipping.³ The region is also highly vulnerable to the impacts of climate change and degradation from invasive species, pollution, and habitat destruction. Efforts to strengthen cross-sector cooperation across the vast Great Lakes and St. Lawrence River watersheds are necessary to support greater investment in this critically important ecosystem.

The purpose of this playbook was to gain insight into the set of actions or enabling conditions that could grow the number of deals that seek to generate positive environmental impacts in the Great Lakes and St. Lawrence region alongside financial returns for investors. This report is meant to provide ideas for project developers, market catalysts, and investors to speed and scale project origination and market development that advances the social and ecological goals of the Great Lakes region.

Our Approach

The report objective was to test assumptions about project origination from an investor’s perspective. The Conservation Finance Network (CFN) and the Great Lakes Impact Investment Platform (Platform), managed by the Conference of Great Lakes St. Lawrence Governors and Premiers (GSGP), tested assumptions about how project investors and intermediaries make decisions to better understand the enabling conditions for investments. Through a series of interviews and focus groups, the factors that influence how projects are identified and developed were vetted by real asset impact investors, intermediaries, project developers, and other market proponents. The exploration helped to determine what types of actions regional stakeholders might take to better incentivize, blend, or leverage private capital to achieve social and ecological benefit.

This exploration was broadly focused across conservation finance project types, including natural climate solutions, regenerative agriculture, sustainable forestry, and human health and equity. The overarching findings attempt to encompass this insight broadly across project types. Where insight was specific to a certain market or subset of investment activity, it is noted.

The basis for report findings builds from two prior framework reports, the Market Development Framework ([Conservation Finance for Working Lands: The Market Development Framework](#)), and the Arch Framework ([The Arch Framework: Building Conservation Projects for Success](#)).

Conservation finance is defined here as a range of strategies that generate, manage, and deploy financial resources and align incentives to achieve leveraged conservation outcomes using public, private, philanthropic, and/or blended sources of capital.

2 The Great Lakes Impact Investment Platform, last accessed June 24, 2022, <https://greatlakesimpactinvestmentplatform.org>.
3 National Oceanic and Atmospheric Administration, “Great Lakes ecoregion,” last accessed June 24, 2022, <https://www.noaa.gov/education/resource-collections/freshwater/great-lakes-ecoregion>.



Findings – What We Learned

Across findings, investment fund managers reinforced the fundamentals of how they generate returns across asset classes, or their underlying investment strategies. By better understanding the process, objectives, and requirements of how investment fund managers place capital, market proponents can better anticipate the types of interventions that could responsibly speed or scale project origination and investment.

At its most basic, an investor's total return is the summation of net income and any gains or losses realized, generated by owning or financing an asset or practice (e.g., a property, company, or business improvement) that generates an income stream (e.g., sale or rent) ideally from known buyers at known prices. Alternatively, positive returns can be generated from owning or financing an asset expected to increase in value.⁴

Fund managers and project developers similarly articulated the basic process for project origination, as detailed in Figure 1. Investors have an underlying investment strategy, or thesis, based on how they aim to generate returns. Then, they aggressively source potential opportunities and home in on the deals that best fit their evaluation criteria. The most promising opportunities undergo a rigorous due diligence process to ensure fit with the investment strategy and risk adjusted return expectations. From there, the relevant parties negotiate the details, structure the investment terms, and close the project or deal. After close, the investor implements their management strategy and sees the project through to fruition.

4 Chris Larson, US Climate Alliance Webinar Series. March 1, 2022.

Figure 1: Process Steps for Project Origination & Investment

Stages of Project Origination & Investment



Investment professionals are beholden to risk adjusted return, or the balance of total return and the risk profile of a given project or product. Enabling conditions in a given market or landscape can support deal pipeline by increasing returns or decreasing risk. For example, assurances, even general assurances, from a state or provincial agency may give an investor the certainty they need to move forward trusting that their thesis will remain viable in future years.

In a basic “buy-protect-sell” transaction model, a parcel of land is bought, permanently protected, and eventually sold to an entity that will be required to manage the property with the restrictions in place. In order to execute their thesis effectively, a conservation-oriented investor will need relative confidence that funding will be available for a conservation easement, i.e., a voluntary legal agreement that permanently protects the conservation attributes of the property. Otherwise, it is unlikely the investor's acquisition strategy for the parcel would be financially viable and the project would not pass the due diligence process.

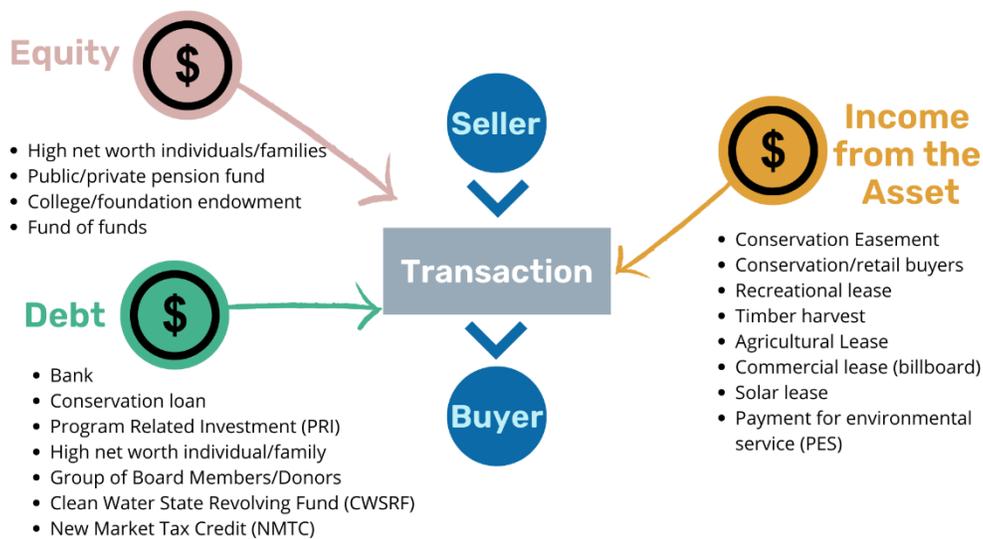
Having relative confidence that easement funding will be made available in the near term may also enable creative deal structuring opportunities, as when a conservation partner executes an option agreement with the investment partner. This option agreement buys the conservation partner time for the easement funding to come through while compensating the landowner for managing the land as if the conservation easement restrictions were already in place.

The Lyme Timber Company, a private timberland investment management company, recently acquired 677,000 acres of timberland in the Upper Peninsula of Michigan and adjacent Wisconsin as part of a buy-protect-sell transaction model. The acquisition strategy for the land, now the Lyme Great Lakes Timberlands, was motivated by the unique conservation opportunities due to the parcel's scale and its values related to public recreation, climate resilience, water quality, and biodiversity.

Lyme made use of The Nature Conservancy’s Resilient Mapping Tool to better understand the parcel’s climate resilience attributes. The acreage had significant connectivity with existing state and federal public lands and encompassed approximately 35 miles of the North Country National Scenic Trail. There were nearly 200 miles of snowmobile and ATV trails that crossed the property, with public access for funding and fishing through Michigan’s Commercial Forest Act. The land also contained habitat for wide ranging wildlife species like wolf and moose.

Knowledge of these and other public agency priorities associated with the parcel gave Lyme confidence that money would be available for a conservation easement in the near term, i.e., over a two-to-three-year time period. Indeed, Lyme is currently pursuing conservation strategies including working with the Michigan Department of Natural Resources on large-scale working forest conservation easements and the National Park Service on easements to protect and buffer the North Country Scenic Trail.

Figure 2: The Buy-Protect-Sell Transaction Model



Meaningful Differences Across Asset Classes

The playbook strategies are not differentiated across asset classes. However, market conditions are highly variable depending on a range of factors, including underlying natural resource type, project type, payor type, the level of regulatory control (i.e., highly regulated vs. lightly regulated), and the broader supply chains and logistics infrastructure necessary for each strategy or market.

Though this playbook is focused across asset class and project type, interviews provided additional insight on constraints and considerations specific to certain segments of market activity. The market context driving a carbon offset project is notably different from a more heavily regulated municipal stormwater infrastructure investment. The following table shares a glimpse into these considerations. It represents a selection of this guidance and is organized thematically.

Table 1: Project Constraints Across Asset Class

Market Activity	Select Insight from Interviews
Carbon	<ul style="list-style-type: none">• The current price of carbon does not reflect a project’s true restriction or maintenance requirements.• Project vetting could help to manage risk associated with offset generation.• There ought to be price incentives for high-integrity projects (i.e., those that address permanence, additionality, and leakage).
Water Quality and Quantity	<ul style="list-style-type: none">• Private equity in wetland and stream mitigation banking is limited to larger projects with the potential for repeat transactions where it is possible to gain efficiency in the costs per credit generated.• One-off project sites, small scale or small credit quantity projects usually do not net out.• A champion is needed—someone who wants to see or requires the offset. Most times regulatory, can be political.
Sustainable Forestry	<ul style="list-style-type: none">• Private equity limited to large transactions with high certainty of working forest conservation easements.• Income from sustainable timber management relies on local forest products markets, a strong contractor base, and forestry professionals in rural places which can sometimes be a challenge.
Regenerative Agriculture	<ul style="list-style-type: none">• Individual producer incentives are insufficient to pay for the transition to regenerative agricultural practices.• Incentives must often be aligned and coupled to create an economic model that can compete with conventional practices.
Recreation	<ul style="list-style-type: none">• Significant upfront costs to develop recreation assets with limited upfront funding opportunities.
Green Infrastructure	<ul style="list-style-type: none">• Can require considerable engineering, monitoring, and verification, especially when undertaken for regulatory compliance.• Significant opportunities related to public procurement, municipal finance innovation.



A Playbook to Drive Regional Conservation Investment

The following eight strategies are based on reflections from investors and market catalysts across asset classes. These are listed in no particular order but organized into two groups. The first group represents a set of actions that could be taken to strengthen the region's attractiveness to investors by enhancing knowledge and increasing coordination and collaboration. The second group are strategies aimed at more systemic change which could also strengthen the region's attractiveness. The insights are paired with examples and actions to help spur project origination and market development in the Great Lakes and St. Lawrence region.

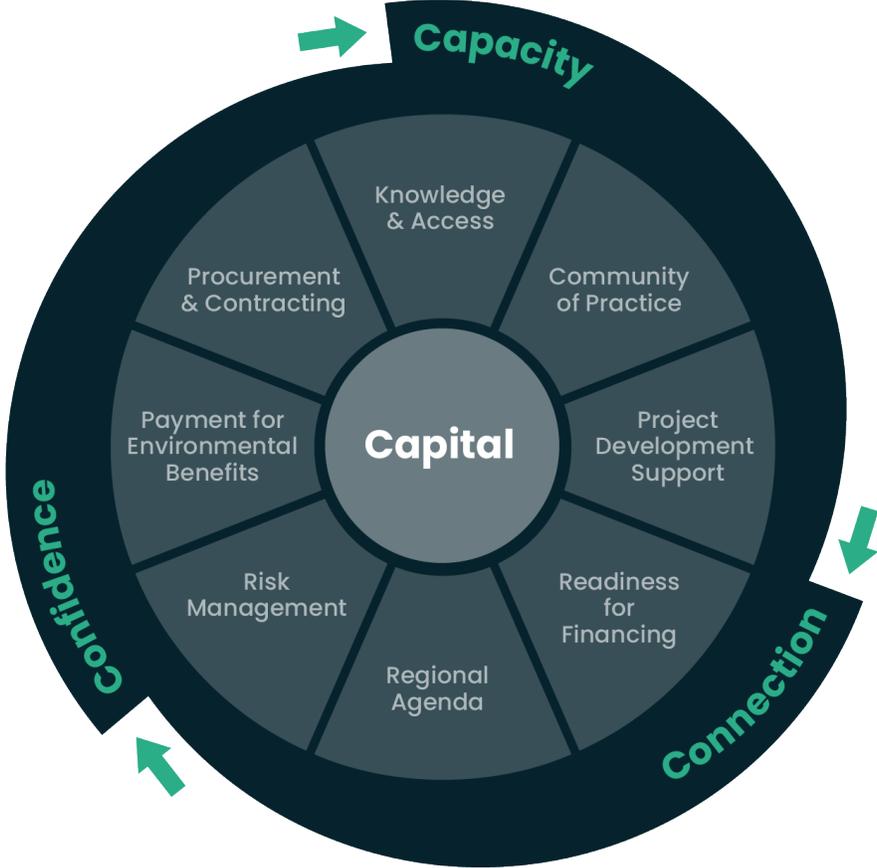
Coordination and Collaboration

- A. Make Specialized Knowledge & Relationships More Accessible
- B. Build a Regional Community of Practice Around Project Development
- C. Invest in Project and Partnership Development (and Pre-Development) Support
- D. Vet Readiness for Project Origination and Financing

Systemic Change

- E. Set A Regional Agenda and Align Incentives Around It
- F. Prioritize Risk Management Over Returns
- G. Reward Parties for Social and Environmental Benefits
- H. Innovate with Procurement, Contracting, and Related Policy

Visualization of the playbook:





Coordination and Collaboration

A. Make Specialized Knowledge & Relationships More Accessible

Even when funding and incentives are available and aligned, most real asset impact investors have limited awareness or capacity to pursue them. It can be time consuming and expensive to secure alternative forms of capital.

Investors cited a number of ways public and private funding opportunities are challenging to access from a deal making perspective, including onerous and short-trigger proposal processes, procurement limitations, burdensome grant management requirements, and the generally opaque and disaggregated nature of public support. Take for instance a six-week request for proposal (RFP) submission process with many detailed requirements for project structure, partnership coalitions, and matching funds. In such instances, the award may go to the best prepared or well-connected project developer that anticipated the RFP, rather than the most impactful project.

A high level of complexity and a lack of transparency reward the firms with existing relationships who are able to understand that complexity and access early intel. As with the Lyme Great Lakes Timberlands example, land transactions may require specialized knowledge of state wildlife action plans to access conservation easement funding through a state department of natural resources. Very few investors have teams with deep relationships across geographies and regional or ecologically specialized expertise who are prospecting for deals. Such approaches require the investor to be able to design a conservation strategy associated with the investment, anticipate state, provincial, or federal funding opportunities, and understand characteristics like connectivity to climate and wildlife habitat corridors, scenic trails, and other specialized knowledge that provides relative certainty that funding will be available to monetize a conservation easement in the first few years of the deal. Only a small number of mostly boutique firms or nonprofit project developers or land trusts have staff with this reach and specialized knowledge, e.g., The Trust for Public Land, Nature Conservancy of Canada, The Nature Conservancy, Open Space Institute, and The Conservation Fund.

Notably, analytic tools and technology are making it cheaper and easier to aggregate data,

share specialized knowledge, and quantify impact. Increased analytical capabilities can also help market proponents narrow in on social and ecological targets, better prioritize the use of finite funding, and create new tools and models to address them.

Example: [The Pasture Project](#), An initiative of the Wallace Center at Winrock International, “works with farmers, land managers, public agencies, and farm organizations to build resources, provide technical assistance, and remove barriers for expanding the use of regenerative practices that yield win-win outcomes for farmers, communities, and the environment.” They came to a similar realization that a centralized hub was needed to align farmers with climate smart practices.

The Nature Conservancy of Canada (NCC) has also launched a [Nature + Climate Projects Accelerator](#) to increase the range of investable, scalable projects in Canada. Beginning with carbon offsets, this internal conservation finance center is a central hub of NCC experience and knowledge meant to scale existing models, pilot new approaches, assess the potential of new ESG market mechanisms or protocols, and explore new technological tools and applications.⁵ NCC is also creating public-access tools to help prioritize where biodiversity co-benefits best align with carbon offset project development opportunities.

Potential Action: Great Lakes Concierge Service and Resource Hub

Create a centralized concierge service and basin-wide hub of timely and actionable technical assistance, resources, and information.

- Support small, under-resourced, or historically underserved organizations and practitioners with identifying public and philanthropic funding opportunities and assisting with proposal development. Technical assistance should include resources to help practitioners more easily find and build the partnerships required for complex, collaborative transactions.
- Create or customize a web-based analytic tool that aggregates specialized knowledge of incentive programs and actionable information resources, including science-based NGO databases like The Nature Conservancy’s Resilient Land Mapping Tool,⁶ the Trust for Public Land’s Conservation Carbon Map,⁷ NCC’s forthcoming tool, and others. Include centralized and open-access state natural resource priority information and geospatial data like state wildlife action corridors, existing consent decrees, and basin management action plans like in Florida (BMAPs).⁸

“You don’t really have conservation finance until you have conservation funding that is well organized.”

– Tim Wigington, The Freshwater Trust

5 Nature Conservancy of Canada, “Nature + Climate,” last accessed June 24, 2022, <https://www.natureconservancy.ca/en/what-we-do/nature-and-climate/>.

6 The Nature Conservancy, “Resilient Land Mapping Tool,” last accessed June 24, 2022, <https://maps.tnc.org/resilientland/>.

7 Trust for Public Land, “Conservation Carbon Map,” last accessed June 24, 2022, <https://web.tplgis.org/carbonmap/>. The Conservation Carbon Map helps users find areas with high potential for protecting stored forest carbon and increasing carbon uptake.

8 A basin management action plan (BMAP) is a framework for water quality restoration that contains local and state commitments to reduce pollutant loading through current and future projects and strategies.

B. Build a Regional Community of Practice Around Project Development

Alignment between public, private, and philanthropic market catalysts and investors supports all of the enabling conditions for increased deal flow. Connecting investors, market catalysts, project developers, local organizations, communities, and other stakeholders at a regional level could be very valuable so that when funding opportunities arise it won't be the first time regional stakeholders have talked to each other.

It takes time to build trust, grow relationships, and establish common understandings across a diverse cross-sector community of practice. The CFN report "[Connect and Mobilize: A Guide to Conservation Finance Convenings](#)" was produced to collate a set of common elements and guidance meant to speed and streamline this process. A regional series of convenings (or complement to existing convenings) could service multiple goals, including the following:

- Introduce, exchange, and mobilize key players to collaborate, share knowledge, and execute projects or initiatives with one another.
- Progressively build capacity by providing training and technical assistance.
- Use principles and examples to educate or influence national, regional, or local governments and financial sectors.
- Develop, workshop, and/or disseminate new and emerging innovations.
- Adapt, replicate, and deploy tools and approaches across new landscapes and regions.
- Build momentum for recurring engagement and ongoing collaboration.⁹

Example: In 2015, the Conservation Finance Network (CFN), with support from a wide range of partners, was awarded an NRCS Conservation Innovation Grant (CIG) to accelerate the use of private investment in working lands conservation by hosting Conservation Finance Roundtable meetings. The "Roundtable" was modeled after a similar forum led by the Coalition for Agricultural Greenhouse Gases (C-AGG), which helped carbon and environmental market stakeholders learn from one another to develop projects, tools, and technologies to more rapidly achieve success and scale.¹⁰

The Roundtable built a community of practice that continues to support the efforts of practitioners implementing conservation finance approaches. These events and ensuing relationships help the community better understand what investors "look for" and better structure projects to attract private capital. Since 2016, Roundtable convenings have spurred the origination of numerous projects, with 79% of survey respondents noting that their engagement in the Roundtable led to direct outcomes for their work. In the words of one participant, "Through one presentation I was able to have a side meeting regarding a particular project, which led to an additional set of ideas about a potential new type of private investment opportunity. I was able to work with this particular presenter, connect them to an investor, and that project is actually moving forward."¹¹

Potential Action: Great Lakes & St. Lawrence Conservation Finance Roundtable

Create a regional roundtable that meets regularly to build a community of practice centered around market and project development opportunities. Incorporate live deal flow and project

9 The Conservation Finance Network, 2021. [Connect and Mobilize: A Guide to Conservation Finance Convenings](#)

10 Coalition for Agricultural Greenhouse Gases, "C-AGG Annual Report: July 2016 – June 2017." https://www.c-agg.org/wp-content/uploads/C-AGG_Annual_Report_2016.2017.pdf

11 Conservation Finance Network. *The Conservation Finance Roundtable: Impact Report 2015-2020*. https://www.conservationfinancenetwork.org/sites/default/files/2020-08/CFN%20Roundtable_CIG%20Impact%20Report_FINAL%20.pdf

pitches to help catalyze project outcomes and new relationships between project developers, funders, and investors. Intentionally recruit project developers and investors looking to expand their strategy or source projects from the region.

“All the things that make the gears of a deal move—they don’t exist. What’s the glue that gets the gears to touch? Convening.”

– Bill Schleizer, CEO, Delta Institute

“At Dirt Capital, the best projects allow for us to get creative with blended finance and low-cost sources from philanthropy and government funds. We need to have everyone at the table from a financing standpoint.”

– Dominick Grant, Dirt Capital

C. Invest in Project and Partnership Development (and Pre-Development) Support

Market and project development requires time and capital resources, especially for new and emerging approaches. The limited availability of project pre-development and development support has created a difficult, resource-scarce environment for project sourcing and pipeline development. These pre-market dollars are critical to project viability, maturity, and scale.

There remains a great need for project and market research and development, pilot projects, and scaling support for early market activity. These projects and approaches need funding or risk capital to help prove the efficacy of the underlying model. Work at these stages of market development may—or may not—generate a financial return, as the science must be built, demand must be established, protocols must be developed, cash flow strategies must be proven, and feasibility must be tested.¹² Though there is a need to move quickly in the face of the Great Lakes and St. Lawrence region’s many climate, biodiversity, water resource, and human health and equity challenges, there is also significant risk of moving too quickly and failing to deliver on expectations. Additional funding for project and market development support in the region could help to responsibly speed project implementation and market solutions.

The funding available for project pre-development, piloting, and scaling can also be less effective if too rigid. Many project development funding programs limit implementation to under three years—sometimes limiting implementation to only one year. There is a need for more flexible project development support. For instance, market catalysts need to be able to make long-term project investments or create durable programs and partnerships for producers to trust that payments will be there over time. This could help project developers to get beyond one-off pilots and better establish long term commitments to projects.

Even with the necessary pre-conditions to support projects, their development requires diligent structuring to ensure effective, durable outcomes. Project proponents must identify a significant problem to be solved and the presence of payors willing and able to pay to address the problem. They need to use effective and implementable practices, and co-create

¹² For more on market development, please see “Private Capital for Working Lands Conservation: A Market Development Framework.” https://www.conservationfinancenetwork.org/sites/default/files/Private_Capital_for_Working_Lands_Conservation.pdf

with core constituents, i.e., key stakeholders or those most critical to the outcomes. Project structures must align with legal, policy, and regulatory conditions, and have a viable strategy for data management and measurement. And finally, they must assemble the right set of partners to advance the work moves from concept to reality to scale.¹³

Example: In 2015, the United States Department of Agriculture (USDA) Natural Resources Conservation Service (NRCS) launched a conservation finance award category through the Conservation Innovation Grant (CIG) program, with the goal of supporting the early-stage development of innovative conservation finance activities on working lands.¹⁴ These awards have greatly supported project and market research and development, pilots, and attempts to scale early market activity. NRCS has invested nearly \$25 million into conservation finance CIGs, from pay-for-success programs for water and nutrient management to organic farm mortgage products, from green bonds to soil carbon protocols and pilot projects for the avoided conversion of grasslands. These awards have also supported the creation of “public goods” like scientific research, market protocols, and policy frameworks that enable investable transactions to occur.



Similar in size to CIG funding for conservation finance projects, the Natural Environment Investment Readiness Fund also makes competitive grant funding available for project development related to environmental outcomes and investment models. See case study example on page 31.

Potential Action: Project Development Facility or Funding Program

Project proponents—whether start-ups, lean project development entities, smaller NGOs, new or less traditional conservation stakeholders, or community groups—often lack the funding and analytics to effectively develop projects from the conceptual phase to become ready for investment. A facility or funding program could be directed at project pre-development, development, and scaling. Funding of this nature can help unlock new ideas and innovation, and enable the Great Lakes region to become more nationally competitive for investment and also to increase the ability for more diverse groups to access funds. A facility could also produce or support market analytics, identifying projects and their relative costs and benefits to understand the scale of capital needed to achieve a target, what types of projects are most cost effective, and which funders, investors, or payors are most likely to provide project funds.

For such a funding program, success could be measured by how much outside investment was eventually leveraged. For example, showing how a small amount of support (e.g., \$1 million) was provided to develop a project which landed an additional \$10 million in public and private investment.

¹³ For more on effective project development, please see “The Arch Framework: Building Conservation Projects for Success.” <https://gordianknotstrategies.com/enduring-arches/>

¹⁴ United States Department of Agriculture Natural Resources Conservation Service, “Conservation Finance at NRCS,” last accessed June 24, 2022, <https://www.nrcs.usda.gov/wps/portal/nrcs/detail/national/technical/emkts/?cid=nrcseprd1396025>.

D. Vet Readiness for Project Origination and Financing

Investors look voraciously for deal flow and are selective about the projects they pursue. Many project approaches, especially within more mature environmental markets for carbon and mitigation banking, have underlying “readiness” conditions that must be met for financing to flow. It may be possible to foster market stability and spur project origination and pipeline creation by helping to support and vet whether these underlying conditions have been met.

In carbon markets, for example, project developers are operating around two key variables, price and quantity. Project vetting can provide a developer increased assurances on the quantity of credits a certain project may produce. Given the unlikelihood of price support on carbon, increased certainty on the credit quantity may speed and grow project origination.

Take, for instance, carbon offset markets. If market catalysts wanted to see the proliferation of certain project types or protocols in a given state, they could build a relationship with a small subset of investors and enter into a partnership to understand their needs and help those entities navigate through project development, committing to overcoming the inevitable hurdles that will arise. If done the other way around—if market catalysts work to develop or enable a project and then look for partners to take up the mantle, the idea may be too specific, small, or low margin to align with many potential partners’ investment theses.

Example: California’s Low Carbon Fuel Standard has driven biogas project development on dairy farms in the Midwest. For example, the carbon development firm 3Degrees has developed six dairy farm biogas projects in Wisconsin. This is largely due to pricing—biogas from dairy has a lower carbon intensity than almost any other form of fossil fuel gas, meaning it produces the highest value credits—up to \$150. However, 3Degrees and its competitors are actively searching for other project development opportunities in forestry and agriculture in the region. Direct engagement to understand key transaction needs could help to spur further market development.

“There is a lack of supply of opportunities [in carbon markets] that have been vetted through some pre-development process.”

– Peter Weisberg, 3Degrees

Potential Action: Project and Offset Supply Facility

Those interested in spurring certain project types in specific areas could create a program, facility, bank, or partnership structure that works to expand the supply of transactable assets. Such a facility might function to vet early indicators of project viability, liaise with and potentially secure option contracts with landowners for high priority projects, cultivate the supply chain to bring practices to market, streamline relationship building, aggregate or screen opportunities, or otherwise flatten and shorten the on-ramp for effective project development.

Proponents could work with investors and project developers to identify needed market intelligence and specific types of deals being sought. For example, the facility could produce spatial analysis of high carbon stocks and indicate where overlap exists with a density of willing landowners whose acreage or land condition made it appropriate for project development under a given protocol. The project developer would remain responsible for pulling the project together, but the role of the partner would be to increase certainty, decrease risk, and make the project more economically viable. This could help to address

two key components—the data and information needed to build market activity and local trust brokers who can help to bridge landowners with vetted carbon developers. If this project development infrastructure were structured specifically for carbon projects, the facility could provide strong data and build relationships through local entities to focus a project developer’s project sourcing where it best aligns with spatial priorities.



Systemic Change

E. Set A Regional Agenda and Drive Incentives Around It

Investors interviewed for this report cited competing priorities and the lack of a clear regional agenda as one factor limiting deal origination and replication. They suggested that if stronger signals were sent and backed up by commitments from regional funders, investors and project developers could better understand opportunities to source projects.

Spatial priorities are often set by public agencies and private philanthropy. The investment theses of private investors often do not include an explicit regional focus unless there is a geographically defined market with high potential for repeat transactions. Where investors seem to be targeting a specific geography, it is likely they are deploying their capital where funding and incentives are most aligned and/or where markets are most mature.

Conservation-oriented real asset investors often look for opportunities created by strong public sector agendas and incentives. Such is the current case in the western U.S. around wildfire mitigation and drought. For example, because of the increased incidence of catastrophic wildfire, California policymakers have expanded investment at an unprecedented scale, including increasing the California Department of Forestry and Fire Prevention budget to an estimated \$3.7 billion in 2021-2022 paired with comprehensive goals and strategies meant to address the crisis. An example from another part of the United States is in Florida where public policy agendas and state funds are being organized and mobilized for flood control and water resource management. Executive Order 19-12 was one of Governor DeSantis's first actions as governor, with a \$2.5 billion pledge to protect, restore and improve the quality of Florida's water resources over the next four years. Both of these state-driven enabling frameworks and commensurate funding have led to the proliferation of private sector project exploration.

While these are public sector examples, please see page 30 for an example from the philanthropic sector with the Mott Foundation's creation of the Great Lakes Revolving Fund.

“We look everywhere across the country. We need to be able to look at something, and see an opportunity to be helpful with our dollars.”

– Kyle Graham, Ecosystem Investment Partners

Potential Action: Streamlined Regional Agenda Reinforced by Funding & Incentives

Create, refine, and reinforce a regional agenda which helps investors understand how to explore and prioritize opportunities. Secure commitments from regional funders in support of the agenda. For example, the Great Lakes Governors’ goal to reduce nutrient runoff to western Lake Erie creates a strong market signal around future governmental action. This could take many different forms.

Together with this regional agenda, stakeholders could develop or improve public and philanthropic decision support tools for the use of incentives, which would entail criteria and analysis to support funders and decision makers with prioritizing the best, most cost-effective solutions relative to the region’s social and environmental goals. This process and decision support could underscore priorities for geography, scale, project type (e.g., climate resilience), or key impact metrics relative to social and environmental benefits. This decision support tool could support decision makers in the allocation of funding and incentives, while the Great Lakes Concierge Service and Resource Hub proposed above could support project development to meet those priorities and objectives.

F. Prioritize Risk Management Over Returns

Most conservation investments have modest or uncertain returns. Even a stack of incentives might not be enough for a transaction to move forward. As heard from investors, it is one thing to have incentives, grants, or subsidies in place to help an investor meet their return target. But there is often an unrealistic understanding of the cost of capital and how it factors into what an investment manager can or cannot do.

One assumption often made by public and nonprofit partners is that bringing cheaper capital to the table will support returns and unlock opportunities for private finance. That may be the case in some deals, but from an investor’s perspective that cheaper capital is often being mobilized for a project that will take longer or carry more risk. Even if market catalysts are able to mobilize grants and subsidies, the investors must be convinced early on in the process that those incentives are worth it for a transaction that might take years longer than other opportunities. If an investor’s cost of capital is high, their options may be limited.

Catalytic capital and credit enhancement tools that reduce risk, like loan guarantees, may help investors working to underwrite bespoke deals with modest returns that carry high development costs, transaction costs, prolonged timelines, or perceived risk. Capital is “catalytic” if it is patient, risk-tolerant, concessionary, and flexible in such a way that it helps to unlock investment and impact. Credit enhancement includes any number of tools that increase the likelihood that a project will be able to repay its financing. This is most critical at early stages of project and market formation, where projects face many sources of risk including delivery risk, market risk, and policy risk. Where the risk is too high for the relatively modest returns, market catalysts might bring credit enhancement tools to make project execution viable for investors.

See Appendix A: Credit Enhancement Tools.

Example: There are many types and sources of catalytic capital that enable transactions to move forward. A straightforward example is low-cost bridge financing, like the David and Lucile Packard Foundation’s long-running Program Related Investment (PRI) portfolio. These PRIs are often used as bridge financing to support a conservation acquisition project that may take longer than a commercial real estate transaction. For example, see [Packard’s PRI investment in EcoTrust’s Sustainable Forest Program](#).

In recognition of a need, The John D. and Catherine T. MacArthur Foundation partnered with The Rockefeller Foundation and Omidyar Network to launch the Catalytic Capital Consortium (C3), an investment, learning, and market development initiative created to spur projects and investments that would not otherwise occur. The C3 aims to “inform and inspire the use of catalytic capital globally to help enterprises and funds access the financing they need to innovate, scale, and sustain high-impact strategies that further the UN Sustainable Development Goals.”¹⁵ The C3 was also designed to support field-building efforts that advance learning and market development.

Example: State revolving loan funds (SRFs), are state-owned infrastructure banks that use an allocation of federal funds to provide flexible low-cost financing. Lending occurs through either a state’s Clean Water State Revolving Fund (CWSRF) or Drinking Water State Revolving Fund (DWSRF), which finance water quality projects or safe drinking water systems respectively. While CWSRFs were traditionally used to finance “gray” infrastructure projects that address water quality issues, these funds are increasingly being used for “green” infrastructure projects that address water quality and nonpoint source pollution, including land conservation and watershed protection projects. With \$48.1 billion dollars of federal investment into CWSRFs, it has been said that these banks have the potential to be one of the largest conservation impact investors in the U.S. These loans are often low interest with long term lengths and flexible financing. Some states further incorporate loan forgiveness or even grant-like programs through a process called “sponsorship.” See Appendix B for a list of Great Lakes State Revolving Fund programs. State green banks similarly help secure low-cost capital. While financing has historically been for clean energy projects, green banks are increasingly considering natural climate solutions and green infrastructure. See the Connecticut Green Bank example on page 25 and a list of Great Lakes green banks in Appendix C.

The Soil and Water Outcomes Fund (SWOF) detailed on page 31 received a \$7.5 million loan from the Iowa Finance Authority, Iowa’s SRF administrator, as seed capital. Access to debt enables the SWOF to pay farmers at the beginning of the growing season to implement carbon and water quality beneficial practices. Once the benefits of those practices are sold to buyers interested in project outcomes, revenues are used to repay debt, including interest to the Iowa Finance Authority, as well as to expand the program. Of note, the SWOF’s debt is collateralized by multi-year offtake agreements for project outcomes.¹⁶

Potential Action: Pooled Catalytic Capital or Credit Enhancement Fund

A foundation or governmental funding program could be the source of concessionary loans, upfront funding, or risk mitigation that could come into a project when needed. The fund could either focus on a particular theme or project type (e.g., carbon, water quality and quantity, sustainable forestry, regenerative agriculture, recreation asset development, and green

15 Catalytic Capital Consortium. (n.d.). MacArthur Foundation. Retrieved June 5, 2022, from <https://www.macfound.org/programs/catalytic-capital-consortium/>

16 Green Finance Institute HIVE, “Iowa Soil and Water Outcomes Fund,” last accessed June 26, 2022, <https://www.greenfinanceinstitute.co.uk/gfihive/case-studies/soil-and-water-outcomes-fund/>

infrastructure) or across all asset classes and project types. Proposals could request grants, concessionary finance, risk mitigation, or a combination of the tools this fund would be able to offer. Flexibility in the structure of this program (project type, repayment timeline, type of financing, etc.) will enable the greatest chance for project or investment success.

Explicit criteria for receiving funding or financing would be determined by the project's ability to spur market activity and delivery on priority social and environmental outcomes. Depending on the structure, it is possible the debt could revolve or that the fund could share in the potential upside of deal execution.

Partnerships with existing lenders and financial intermediaries such as Community Development Financial Institutions (CDFIs) could support similar outcomes, providing capital and technical assistance to project developers.

G. Reward Parties for Social and Environmental Benefits

To change behavior, landowners and real asset impact investors alike must be compensated for the environmental outcomes achieved or management costs incurred. Timber investment management organizations (TIMOs) and real estate investment trusts (REITS) usually require compensation for conservation outcomes produced, or conservation outcomes may tie into a cost-saving strategy. On the other hand, ecosystem market investors in carbon and water must keep the unit cost of producing an environmental outcome low or secure guaranteed offtake to create a margin.



Investors noted limitations in their ability to capture the full suite of social and environmental benefits generated by their investments in conservation and nature-based infrastructure. Whether for timber or agriculture, it is difficult for landowners to monetize a greater value from conservation outcomes than conventional management practices. For example, in timberland, low carbon prices limit a number of investment theses from producing greater benefits. Some carbon development opportunities are constrained by the real trade-off between the encumbrance of the land—via foregone development rights—and the cash flow reduction from land management activities, as determined by the protocol being applied. In the absence of higher carbon prices, public grant money for additional conservation benefits (e.g., land protection, watershed protection, habitat, etc.) would enable carbon revenue to cover carbon development, not forest certification and management restrictions.

Apart from public and philanthropic grants to help compensate landowners, project developers, and investors for social and environmental benefits may be able to “stack” ecosystem service credits under certain conditions without “double dipping,” or getting paid twice for a single ecosystem benefit. Stacking has the potential benefit of enabling multiple revenue streams for additional ecosystem benefits, which could go further to cover project costs or to generate sufficient margin to secure investment. That said, the ability to capture value from co-benefits is generally determined by market conditions and the ability to account for and verify additional outcomes. Based on current market conditions and accounting challenges, there are few approaches where payments from co-benefits factor into the primary investment thesis.

One exception to this is the [Soil and Water Outcomes Fund](#) (SWOF), a partnership between Quantified Ventures (through its subsidiary ReHarvest Partners) and the Iowa Soybean Association (through its subsidiary AgOutcomes). The SWOF has designed its carbon credit program to make it stackable with other incentive programs. The SWOF is a market-based innovation to meet demand for co-benefits created by regulation. It aggregates farmers who are willing to do additional practices on their land and conducts monitoring, aggregation, and verification of these credits. The SWOF is specifically focused on scope three “inset” carbon credits, or credits created within a company’s supply chain. Their approach to credit stacking was developed in response to the low prices that companies are currently paying for offsets, which is not enough to cover the expense of a producer’s change in practice. Typically, this model relies on stacking water quality or other incentives to ensure additionality and high-quality credits, as with water quality outcomes purchased by a water utility under a consent decree to reduce nutrient runoff.

Example: See the Regenerative Agriculture Finance Fund on page 32 for an example of a credit facility pilot program created to reward farmers who implement sustainable farming practices. See also the example of a 10-year offtake agreement between the Michigan Department of Natural Resources and DTE Energy with the State of Michigan Forest Carbon on page 32.

Potential Action: Connect Regional Project Outcomes with Regional Offtakers

Market catalysts could liaise with corporate sustainability offices, public entities, and other prospective off-takers across the region to identify and quantify market demand for certain environmental attributes, whether from carbon, water efficiency, or other desired outcomes. The market catalysts can aggregate and signal demand to the market and help connect regional offtake buyers with regional project outcomes. This could be done in conjunction with the Great Lakes Impact Investment Platform’s metrics and reporting framework, developed in partnership with The Nature Conservancy, which could expand and track co-benefits for potential offtake.

“Carbon can be a catalyst for permanent conservation if the numbers work and an incentive piece can be bridged.”

– Sarah Kitz, The Lyme Timber Company

H. Innovate with Procurement, Contracting, and Related Policy

Public agencies are increasingly soliciting and procuring desired project outcomes (e.g., ecosystem services) as a more efficient approach where the implementing partner bears the performance risk. Whether for climate resilience, farm production practices, green infrastructure, recreation, or water quality and quantity, this approach shifts the performance risk from the public agency to the implementing partner. This approach tends to work well when goals and funding are clearly defined but with flexibility in how project partners produce the intended outcomes.

However, most government procurement codes and processes were designed to budget for and purchase conventional goods and services. These procurement codes and processes were not designed to purchase ecosystem services and project outcomes, and have not kept up with the innovation occurring in environmental infrastructure. Changes to public procurement could open up larger and broader opportunities for the private sector to be

brought in as a delivery partner in producing environmental outcomes.

Example: Ongoing work in Ontario seeks to develop a multi-year, integrated invasive species management program focused on both prevention and eradication enabled by a collaborative, outcomes-based financing structure. Outcomes-based financing can have certain advantages over traditional finance models including access to new sources of capital, transfer of performance risk to investors, and engagement with diverse and new stakeholders benefiting from projects. See the case study for this project on page 30.

Example: State agencies in California, Nevada, Maryland, and Louisiana already allow for more effective forms of contracting to procure environmental outcomes, as with Pay for Success approaches. In each state, the government aims to enlist faster, more cost-effective and efficient private sector partners to help deliver projects against established public conservation goals.¹⁷

Specifically, in Prince George's County, Maryland, county officials created the Clean Water Partnership (CWP), a community-based public-private partnership, with Corvias to more efficiently achieve regulatory compliance requirements for stormwater management. The contract included an economic incentive payment for Corvias tied to the number of local certified small, minority and women-owned businesses recruited for service delivery. According to a 2019 Progress Report, the CWP has completed the initial pilot, which retrofitted 2,000 acres using greater than 87% local minority and target class County businesses and saved the County over 40% compared to traditional procurements.¹⁸

Policy change to create enabling environments for public procurement is also possible, as proven with the recent passage of the Maryland Conservation Finance Act (House Bill 653; Senate Bill 348).¹⁹ This first of its kind law was specifically written to clarify state procurement code, and allows but does not obligate state agencies to buy completed environmental outcomes, meaning the state does not have to pay when restoration fails. A Watershed Results Act is also progressing at the federal level, which was designed to support outcomes-based purchasing at the watershed level. The proposed legislation would also streamline many aspects of outcomes procurement.²⁰

In addition, the state of Connecticut recently expanded policy authority to create an enabling environment for project development and procurement. The recent passage of House Bill 6441 expanded the Connecticut Green Bank's mission and finance authority to include environmental infrastructure, broadly defined to include structures, facilities, systems, services, and improvement projects related to water, waste and recycling, climate adaptation and resilience, agriculture, land conservation, parks and recreation, and environmental markets such as carbon offsets and ecosystem services.²¹



17 Environmental Policy Innovation Center, 2017. "Nature, Paid on Delivery: Leadership by Louisiana, California, Maryland and Nevada in creating outcome-based opportunities for private investment in natural resource restoration and protection." https://sandcountyfoundation.org/uploads/SCF_2017_EPIC_DOC_SMFL-NEW-TITLE2.pdf

18 Corvias, 2018. "Clean Water Partnership Progress Report." <https://thecleanwaterpartnership.com/annual-report/>

19 Maryland's Conservation Finance Act (2022), <https://mgaleg.maryland.gov/mgawebsite/Legislation/Details/ HB0653?ys=2022RS>

20 Senate Bill 2807 - Watershed Results Act (2021), <https://www.congress.gov/bill/117th-congress/senate-bill/2807?s=1&r=9>

21 State of Connecticut House Bill 6441 (2021), <https://www.cga.ct.gov/2021/TOB/H/PDF/2021HB-06441-R00-HB.PDF>

If changes to public procurement are less feasible, there are still many ways to use funding and contract innovation to enable private sector partners to produce environmental outcomes. This will generally require a public champion, comparables for the private partner so that the public entity knows they are getting a good deal, and data to make sure targets are defined and evaluate whether they are met.

Potential Action: Demonstrate Success Working Through Friction for Procurement and Contracting

Identify barriers and points of friction in procuring or contracting for outcomes, and commit sustained resources to work through the enabling conditions to ramp up project origination in a given geography. Consider pathways, whether through state or provincial public policy, agency guidance, contractual innovation, county-level pilots, or other means to create opportunities for public-private partnerships to produce environmental benefits, reducing the bureaucratic burden on private groups seeking to partner with government agencies for conservation projects.

“To do more in the Great Lakes, it must be tied to revenue sources and willingness. We really just need a design-build contract with lump sum payments on milestones. That’s what we need on procurement. Most of the time no, we don’t need changes to state procurement.”

- Kyle Graham, Ecosystem Investment Partners



Select Case Studies in Innovation

Great Lakes Revolving Loan Fund

In 2002, The Conservation Fund launched its [Great Lakes Revolving Loan Fund](#) with a \$7.3 million grant from the Charles Stewart Mott Foundation. The establishment of the Great Lakes Revolving Loan Fund helped address the critical need of land trusts and public agencies to respond quickly to land or conservation easement purchase opportunities with ready funding. Using capital from this resource, the Fund provides technical assistance and bridge financing to nonprofit land trusts working to preserve resources within the Great Lakes Basin. Short-term loans are made to public agencies and nonprofit land trusts for the conservation of coastal and freshwater sites of high ecological significance.

Funding is available for two primary types of transactions: direct loans to land trusts and advance purchase of land on behalf of public agencies and/or nonprofits. With the repayment of loans, the Fund supports more conservation projects throughout the Great Lakes region. Since its inception, the Fund has catalyzed 60 projects totaling 125,000 acres and valued at \$163 million. The revolving fund structure could be replicated to support development of conservation finance projects in the Great Lakes region. A targeted fund for a specific project type (e.g., carbon projects) could be created as a proof of concept.

Outcomes-based financing for invasive species management

Phragmites, an invasive plant, is established across the Great Lakes St. Lawrence region, with significant concentration in Ontario. Phragmites populations have wreaked damage on ecosystems, infrastructure and property. Due to the pervasive spread of this species, regions without established populations remain at risk into the future.

The Conference of Great Lakes and St. Lawrence Governors and Premiers (GSGP), in collaboration with Quantified Ventures, the Invasive Species Centre of Ontario (ISC), and Nature Conservancy of Canada, evaluated several invasive species to target through an outcomes-based financing approach. Phragmites was selected as the focus species for

several reasons: increasing efforts to manage the species; new analyses on the cost-benefit of Phragmites eradication and prevention; and engagement on the Phragmites issue from key municipal and Provincial government stakeholders in Ontario.

An outcomes-based financing structure can have certain advantages over traditional finance models including access to new sources of capital; transfer of performance risk to investors; engagement with diverse and new stakeholders benefiting from projects.

The project vision:

- Develop a multi-year, integrated Phragmites management program focused on both prevention and eradication enabled by a collaborative, outcomes-based financing structure.
- Beneficiaries of Phragmites management efforts pay based on the outcomes they care about.
- May include federal, local and Provincial governments in addition to private sector stakeholders, homeowners' and cottagers' associations, and others.
- Involving multiple stakeholders ensures the financial burden does not fall on any one entity alone and facilitates a better-coordinated, more efficient and larger-scale effort.

Initial cost-benefit analysis leveraged the findings of the Green Shovels project led by ISC, which helped develop an improved strategic and coordinated approach for the prevention and management of Phragmites in Ontario. The initial findings of this work are compelling. At a Provincial scale, an initial cost of C\$117.9M is expected to yield at least C\$1.4B in benefits over 10 years. Continuing work will evaluate outcomes-based financing opportunities for Phragmites and other invasive species elsewhere in the Great Lakes St. Lawrence region. While this project is still in development, three potential financing approaches were identified:

- Ontario Phragmites Management Revolving Fund – capitalized by Provincial appropriations and/or bond proceeds.
- Green bond issuance to partially capitalize a revolving fund.
- Green bond issuance to support a management and control program.

Natural Environment Investment Readiness Fund

In England, the [Natural Environment Investment Readiness Fund](#) (NEIRF) aims to stimulate private investment and market-based mechanisms that improve and safeguard the natural environment by helping projects prepare for investment. The NEIRF is an innovative public program specifically intended to create a pipeline of projects for private sector investment, and to develop new funding models that can be replicated elsewhere. The NEIRF is a potentially transferable model to support project development and drive more deal flow in the Great Lakes region.

Launched in 2021, the NEIRF is a competitive £10 million grants program, funded by the UK Environmental Agency, providing annual grants of between £10,000 and £100,000 to support the development of environmental projects in England that:

- Help achieve one or more natural environmental outcomes from the [25-year environment plan](#)
- Produce revenue from ecosystem services to attract and repay investment
- Create an investment model that can be scaled and replicated

Projects should focus on generating revenue from ecosystem services, rather than goods or commodities. Examples of ecosystem services that could produce revenue include selling:

- Carbon credits from woodland creation or peatland restoration
- Biodiversity units from a habitat bank
- 'Catchment services' (such as improved water quality and natural flood management benefits) resulting from natural environment improvements

NEIRF seeks to support a diversity of ecosystem service and investment models, including ones which consider interactions between ecosystem services or focus on more specific or complex elements of existing codes or metrics. The grants are intended to help project developers:

- Receive support from professional advisors to develop the project, address barriers to investment and present an attractive case for potential investors
- Build capability to attract financial investment into natural environment projects
- develop a market for ecosystem services (such as investment or trading platforms, codes for verifying benefits, aggregator vehicles)



Regenerative Agriculture Finance Fund

The Regenerative Agriculture Finance Fund (RAFF) offers discounted operating loans to farmers who meet certain standards for metrics like soil health and nitrogen use efficiency. [Farmers Business Network](#) (FBN) and [Environmental Defense Fund](#) (EDF) created this credit facility to reward farmers who implement sustainable farming practices. The \$25 million pilot fund is extending one-year lines of credit of up to \$5 million to about 40 corn, soybean, and wheat growers in the US. Enrolled farmers who meet EDF's soil health and nitrogen efficiency standards will gain access to a 0.5% discount on the base rate of a one-year line of credit. RAFF will originate loans from a diversity of farmers, including FBN's network of more than 33,000 members, and provide underwriting and monitoring for the portfolio at a discounted rate. Farmers accepted into RAFF will have one year to harvest their crops and begin loan repayment. After loans are fully repaid, EDF will measure their environmental effects and determine whether farmers qualify for the rebate.

State of Michigan Forest Carbon

The [Big Wild Forest Carbon Project](#) in Michigan is the first carbon credit project on state forest land in the United States. This pilot project, taking place on over 100,000 acres of the Pigeon River Country State Forest known as "The Big Wild," will develop a portfolio of carbon offset credits generated from sustainable forest management activities. The Michigan Department of Natural Resources (DNR) partnered with Bluesource, a private carbon project developer, to bring this project to market.

The carbon credit sale is expected to generate about \$10 million for the state. Funds from the sale of carbon credits will be re-invested into the Forest Development Fund and other

DNR funds, which support activities such as additional forest management, wildlife habitat improvement, stand stocking, infrastructure, recreation projects, and tree planting activities. The Big Wild carbon project is a model for other state and local government agencies to generate revenue from public forest lands.

One carbon credit equals one metric ton of carbon dioxide emission. In this case, state forests absorb carbon as trees grow, locking it into wood and durable forest products manufactured from harvesting trees. Carbon offset credits represent measured and modeled carbon maintained in the forest and durable wood products. Companies that produce carbon emissions during their regular operations can offset this negative impact to the environment by purchasing carbon credits from entities that reduce carbon dioxide and other greenhouse gases. DTE Energy committed to purchase offset credits generated from the first 10 years of the Big Wild project. DTE Energy will offer these offsets to its larger industrial natural gas clients seeking to reduce the impact of carbon emissions through DTE's voluntary Natural Gas Balance program.



Questions for Further Exploration

- What other challenges—or opportunities—exist to project origination in the Great Lakes Region?
- What forms of collaboration are necessary to overcome these challenges? How might centralized capacity be structured to help?
- What are the different roles and responsibilities of foundations, public agencies, nonprofit partners, project developers, investors, and other market catalysts to speed and scale project origination?
- What do project developers need in terms of technical assistance and resources?
- How to most effectively help a small land trust or public entity that is lacking in funding and capacity?
- What policies and guidance are needed at a local, state, or regional level to help catalyze investment?



Conclusion

Developing, originating, and scaling new projects and approaches across the Great Lakes and St. Lawrence region will require significant leadership and collaboration alongside investments of time, effort, and capital resources. Project and market proponents must work quickly to mobilize these resources to support social, environmental, and economic resilience in the face of climate change, water quality and quantity issues, land fragmentation, habitat loss, and environmental injustice and inequity.

The playbook of strategies, actions, and case studies provides guidance on how proponents can better coordinate, collaborate, and advance systemic change for project origination and market development to occur across asset classes and project types. Though each project and investment thesis will have unique contextual considerations (e.g., market conditions, practices, geography, regulatory environment, etc.), there is great potential to address common barriers with field building and market infrastructure.

This report captures and distills the collective wisdom of pioneering project and market proponents, including those who are actively developing projects and placing capital in the region and those who aspire to deploy approaches and resources from other geographies. The synthesis of insight from interviews and focus groups is meant to help spur actions and enabling conditions to grow the quantity and scale of conservation finance projects and investment opportunities. It is meant to provide pathways for all market proponents, from project developers to investment fund managers to conservation nonprofits, commodity associations, foundations, and public agencies to take an active role in speeding and scaling project origination and market development to advance the social and ecological goals of the Great Lakes and St. Lawrence region.

Appendices

Appendix A: Credit Enhancement Tools

Table X: Credit Enhancement Tools²²

Catalytic first-loss capital describes a range of credit enhancement tools which help to improve the recipient's risk-return profile by identifying a provider who will bear the first loss. The provider is often motivated by social and/or environmental outcomes or wants to demonstrate the commercial viability of investing into a new market. The capital is catalytic in that it enables the participation of investors that would otherwise not be able to participate. It includes instruments like grants, equity, and subordinated debt.²³

A **credit rating** is a formal evaluation of an entity's credit history and ability to pay back a loan or meet other financial obligations.

A **letter of credit** is a letter from a bank, foundation, or other entity that guarantees payment on behalf of a borrower up to a stated amount for a specific time period.

A **loan guarantee** is an agreement that a provider takes responsibility for paying back a loan if the borrower cannot. This is somewhat like obtaining a co-signer.

Over-collateralization is a process where a borrower puts up more collateral than is necessary to obtain or secure financing. These assets are used to absorb losses if cash repayment falls through.²⁴

Insurance mechanisms include any approach where the cost of potential loss is transferred to another entity in exchange for monetary compensation, or the premium.

Buyer-of-last-resort mechanisms include put options and any approach where an entity agrees to purchase the credits or benefits of a project, often at an established minimum price, in the event that no other buyer can be identified.

A **reserve account** is similar to a savings account. They are often provided in the form of grants and serve as a first-stop for any losses incurred.

This table is reproduced from Private Capital for Working Lands: A Market Development Framework.²⁵

22 Unless otherwise noted, references in this table are drawn from: John Downes and Jordan Elliot Goodman, *Dictionary of Finance and Investment Terms*, 9th ed., Hauppauge, NY: Barron's Educational Series, 2014.

23 Bouri, *Catalytic First-Loss Capital*, 5.

24 Scott Mason, "Credit FAQ: The Basics Of Credit Enhancement In Securitizations," *Standard & Poor* (2008): 2.

25 Conservation Finance Network, 2017, p. 24, "Private Capital for Working Lands Conservation: A Market Development Framework." https://www.conservationfinancenetwork.org/sites/default/files/Private_Capital_for_Working_Lands_Conservation.pdf

Appendix B: Great Lakes State Revolving Funds

State	Revolving Fund(s)	Program(s)	Priorities
IN	State of Indiana State Revolving Fund (SRF)	Indiana Drinking Water State Revolving Fund (DWSRF) Loan Program; Green Project Reserve Sustainability Incentive Program; IFA Environmental Programs Brownfield Incentive Program	Gray infrastructure projects; green projects within existing projects
IL	State of Illinois Wastewater and Drinking Water State Revolving Fund (SRF)	Water Pollution Control Loan Program (WPCLP); Public Water Supply Loan Program (PWSLP); Green Infrastructure Grant Opportunities (GIGO)	Wastewater and stormwater projects (WPCLP); drinking water projects (PWSLP); green infrastructure projects (GIGO)
MI	Michigan's Drinking Water State Revolving Fund (DWSRF)	Green Project Reserve (GPR)	Clean drinking water projects; green infrastructure projects; water or energy efficiency improvements; other environmentally innovative activities
WI	Wisconsin Environmental Improvement Fund (EIF)	Clean Water Fund Program (CWFP); Safe Drinking Water Loan Program (SDWLP)	Wastewater projects; water-quality-related stormwater, and drinking water infrastructure projects
OH	Water Pollution Control Loan Fund (WPCLF); Water Supply Revolving Loan Account (WSRLA)	Water Resource Restoration Sponsor Program (WRRSP)	The WRRSP provides funding for projects that specifically target the protection and restoration of high-quality streams and wetlands, along with drinking water infrastructure; wastewater infrastructure; aquatic habitat restoration; home sewage treatment system; stormwater improvements

NY	Clean Water State Revolving Fund (CWSRF); Drinking Water State Revolving Fund (DWSRF)	Green Innovation Grant Program (GIGP)	Green stormwater Infrastructure; energy efficiency; water efficiency
PA	Infrastructure Investment Authority (PENNVEST) US EPA Clean Water and Drinking Water State Revolving Loan Fund Programs		Wastewater projects; supply, treatment, storage or distribution of drinking water; control of pollution associated with stormwater runoff or other innovative stormwater management techniques
MN	Minnesota Clean Water Revolving Fund (CWRF)	Green Projects Reserve	Drinking water; green infrastructure, water; energy efficiency

Appendix C: Great Lakes Green Banks

State	Green Bank	Est.	Website
Michigan	Michigan Saves	2009	https://michigansaves.org/
New York	NY Green Bank	2013	https://greenbank.ny.gov/
Minnesota	Minnesota Green Bank	2021	<i>Proposed</i>
<i>Illinois</i>	Illinois Green Bank	2021	<i>Legislation approved</i>

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