Great Lakes Protection Fund

2024 Annual Report

Background

In 1989, the governors of the Great Lakes states created the Protection Fund to help them protect and restore their shared natural resources. The Fund is the first private endowment created to benefit a specific ecosystem. It is designed to support the creative work of collaborative teams that test new ideas, take risks, and share what they have learned. It is a source of financial support for groups that value innovation and entrepreneurship, focus on tangible benefits for the Great Lakes ecosystem, and learn by doing. Seven Great Lakes states contributed $81.0 million to the Fund's permanent endowment.

The Fund does three things. First, it invests the endowment to produce income. This income supports regional projects, member states' individual Great Lakes priorities, and operations. Second, it designs and finances regional projects. These projects identify, demonstrate, and promote regional action to enhance the health of the Great Lakes ecosystem. Third, it monitors those regional projects to ensure that they are successful, modified when necessary, or terminated if they are not creating value for the ecosystem.

From its inception through December 2024, the Fund has made a total of 324 grants and program-related investments, representing a $106.3 million commitment to protecting and restoring the ecological health of the Great Lakes ecosystem. Additionally, the Fund has paid $59.8 million directly to its seven member states to support their individual Great Lakes priorities. Over the course of the past 35 years, the Great Lakes ecosystem has benefited from the States' initial investment of $81.0 million with an overall commitment of $166.1 million.

Governors' Ongoing Priorities

From time to time the governors establish, modify and renew their ongoing Great Lakes priorities. Currently, the Fund's goals are responsive to the governors' stated priorities including the following:

- Ensure the sustainable use of our water resources while confirming that the States retain authority over water use and diversions of Great Lakes waters.

- Promote programs to protect human health against adverse effects of pollution in the Great Lakes ecosystem.

- Control pollution from diffuse sources into water, land and air.

- Continue to reduce the introduction of persistent bioaccumulative toxics into the Great Lakes ecosystem.

- Stop the introduction and spread of non-native aquatic invasive species.

- Enhance fish and wildlife by restoring and protecting coastal wetlands, fish and wildlife habitats.

- Restore to environmental health the Areas of Concern identified by the International Joint Commission as needing remediation.

- Standardize and enhance the methods by which information is collected, recorded and shared within the region.

- Adopt sustainable use practices that protect environmental resources and may enhance the recreational and commercial value of our Great Lakes.

Activities During 2024

In the past year, the Fund realized nearly $6.5 million in investment income from the endowment. The Fund returned $1.5 million to its member states to support their individual Great Lakes priorities. The Fund paid over $3.6 million to support regional projects. Audited financial statements can be found in Appendix 1.

The Fund entered 2024 with 19 active projects that represented an investment by the Fund of nearly $17 million. Over the course of the year, work was completed on 5 of the active projects. These completed projects are identified in Appendix 2. All projects generated new and valuable tools that will ultimately improve the health of the Great Lakes ecosystem and provided a unique and positive mission-related return on the Fund's investment. During 2024, the Fund built, vetted and financed 5 new projects representing an investment of nearly $3.0 million. The complete portfolio of supported work, including new projects awarded in 2024, can be found in Appendix 3.

In 2024, the Fund began to implement a new 5-year strategic plan focused on the following priorities: reimagining urban water systems, creating healthy waters in working landscapes, and expanding sustainable and regenerative uses of Great Lakes Water Resources. Over the next five years, the Fund will explore new ways to drive impact; encourage new types and sizes of awards to target large investments; and more deeply engage the Great Lakes community, fellow funders and the innovation community. For more on our strategic plan for 2024-2028, please visit https://glpf.org/for-innovators/strategic-priorities/.

In a new development in 2024, the Fund entered into a loan agreement with a nonprofit lending organization to establish a pre-development loan fund of up to $1.0 million that provides low-cost financing to small and under-resourced communities to implement water infrastructure improvements in the Great Lakes region. The goal of this unique loan agreement is to enable communities with fewer financial resources to afford the early planning and design work needed before they can access larger pools of federal and state funding for infrastructure improvements.

In other activities, the Fund welcomed Kimberly Wright as its new Executive Assistant and Nora Grasse as the new Program Associate.

Evaluation of the Corporation's Performance

The Fund successfully accomplished its objectives during 2024. Most notably, the Fund's endowment ended the year with a market value of $161.9 million. State shares, paid in the spring of 2025 following our independent audit of financial statements, totaled $1.5 million for the year 2024; and $59.8 million since inception. These funds are available to member states to address their highest Great Lakes priorities.

We ended the year financially secure and with a portfolio of active projects of $15.7 million. Fund staff worked with all our project teams to be sure they were on track, helped them spot opportunities, adjusted work plans as needed, and worked with them to grow their innovations.

Emerging Trends and Future Needs

The Governors have identified their priorities for Great Lakes Basin ecosystem protection and restoration. The Fund will continue its multi-year support agenda in support of these priorities by executing against our strategic plan.

Members of the Corporation in 2024

Governor of Illinois

J.B. Pritzker

Governor of Michigan

Gretchen Whitmer

Governor of Minnesota

Tim Walz

Governor of New York

Kathy Hochul

Governor of Ohio

Mike DeWine

Governor of Pennsylvania

Josh Shapiro

Governor of Wisconsin

Tony Evers

Board of Directors in 2024

Kate Bartter (Columbus, OH)

Timothy Bruno (Erie, PA)

Erin Deeley (Madison, WI)

Joanne So Young Dill (Barrington, IL)

Judy Drabicki (Dexter, NY)

Tim Eder (Chelsea, MI)

Richard Hylant (Ottawa Hills, OH)

Howard Learner (Chicago, IL)

Jill Jedlicka (Lancaster, NY)

Andrew McElwaine (Pittsburgh, PA)

Don Ness (Duluth, MN)

Laura Rubin (Ann Arbor, MI)

Demetria Smith (Milwaukee, WI)

Rebecca St. George (Duluth, MN)

Great Lakes Protection Fund Staff

Shannon Donley – Senior Program Lead

Nora Grasse – Program Associate, joined September 2024

Collin Knauss – Project Development Manager

Erin McCarville – Vice President of Programs

Drew Pfeifer – Vice President of Operations

David Rankin – Executive Director

Kimberly Wright – Executive Assistant, joined February 2024

Appendix 1

2024 Audited Financial Statements

Great Lakes
Protection Fund

Financial Report
December 31, 2024

Contents

Independent Auditor's Report

Board of Directors
Great Lakes Protection Fund

Opinion
We have audited the financial statements of Great Lakes Protection Fund (the Fund), which comprise the statements of financial position as of December 31, 2024 and 2023, the related statements of activities, and cash flows for the years then ended, and the related notes to the financial statements.

In our opinion, the accompanying financial statements present fairly, in all material respects, the financial position of the Fund as of December 31, 2024 and 2023, and the changes in its net assets and its cash flows for the years then ended in accordance with accounting principles generally accepted in the United States of America.

Basis for Opinion
We conducted our audits in accordance with auditing standards generally accepted in the United States of America (GAAS). Our responsibilities under those standards are further described in the Auditor's Responsibilities for the Audit of the Financial Statements section of our report. We are required to be independent of the Fund and to meet our other ethical responsibilities, in accordance with the relevant ethical requirements relating to our audits. We believe that the audit evidence we have obtained is sufficient and appropriate to provide a basis for our audit opinion.

Responsibilities of Management for the Financial Statements
Management is responsible for the preparation and fair presentation of the financial statements in accordance with accounting principles generally accepted in the United States of America, and for the design, implementation, and maintenance of internal control relevant to the preparation and fair presentation of financial statements that are free from material misstatement, whether due to fraud or error.

In preparing the financial statements, management is required to evaluate whether there are conditions or events, considered in the aggregate, that raise substantial doubt about the Fund's ability to continue as a going concern within one year after the date that the financial statements are issued or available to be issued.

Auditor's Responsibilities for the Audit of the Financial Statements
Our objectives are to obtain reasonable assurance about whether the financial statements as a whole are free from material misstatement, whether due to fraud or error, and to issue an auditor's report that includes our opinion. Reasonable assurance is a high level of assurance but is not absolute assurance and therefore is not a guarantee that an audit conducted in accordance with GAAS will always detect a material misstatement when it exists. The risk of not detecting a material misstatement resulting from fraud is higher than for one resulting from error, as fraud may involve collusion, forgery, intentional omissions, misrepresentations, or the override of internal control. Misstatements are considered material if there is a substantial likelihood that, individually or in the aggregate, they would influence the judgment made by a reasonable user based on the financial statements.

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In performing an audit in accordance with GAAS, we:

- Exercise professional judgment and maintain professional skepticism throughout the audit.

- Identify and assess the risks of material misstatement of the financial statements, whether due to fraud or error, and design and perform audit procedures responsive to those risks. Such procedures include examining, on a test basis, evidence regarding the amounts and disclosures in the financial statements.

- Obtain an understanding of internal control relevant to the audit in order to design audit procedures that are appropriate in the circumstances, but not for the purpose of expressing an opinion on the effectiveness of the Fund's internal control. Accordingly, no such opinion is expressed.

- Evaluate the appropriateness of accounting policies used and the reasonableness of significant accounting estimates made by management, as well as evaluate the overall presentation of the financial statements.

- Conclude whether, in our judgment, there are conditions or events, considered in the aggregate, that raise substantial doubt about the Fund's ability to continue as a going concern for a reasonable period of time.

We are required to communicate with those charged with governance regarding, among other matters, the planned scope and timing of the audit, significant audit findings and certain internal control-related matters that we identified during the audit.

RSM US LLP

Chicago, Illinois
March 14, 2025

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Great Lakes Protection Fund

Statements of Financial Position
December 31, 2024 and 2023

	2024	2023
Assets		
Cash and cash equivalents	$ 12,816,894	$ 12,740,013
Investments	148,847,646	136,904,997
Receivable for security sold	-	460,000
Accrued interest	88,946	61,864
Other assets	62,302	54,352
Loan receivable, net of discount of $57,427 and $0 in 2024 and 2023, respectively	192,573	-
Operating lease right-of-use asset	1,695,804	341,851
Furniture, equipment and leasehold improvements, net of accumulated depreciation of $68,662 and $70,570 in 2024 and 2023, respectively	9,818	11,332
	$ 163,713,983	$ 150,574,409
Liabilities and Net Assets		
Liabilities:		
State shares payable	$ 1,504,930	$ 1,352,744
Payable for security purchased	-	460,000
Accrued expenses	187,740	172,257
Operating lease liability	1,716,344	362,154
	3,409,014	2,347,155
Net assets:		
Without donor restrictions	9,200,317	8,791,717
With donor restrictions	151,104,652	139,435,537
	160,304,969	148,227,254
	$ 163,713,983	$ 150,574,409

See notes to financial statements.

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Great Lakes Protection Fund

Statements of Activities
Year Ended December 31, 2024

	Without Donor Restrictions	With Donor Restrictions	Total
Income:			
Realized investment income and gains, net	$ 363,493	$ 6,109,735	$ 6,473,228
Miscellaneous revenue	-	1,000	1,000
Net assets released from restrictions	7,152,669	(7,152,669)	-
	7,516,162	(1,041,934)	6,474,228
Expenses:			
Mission:			
Regional grant payments	3,692,824	-	3,692,824
State shares	1,504,930	-	1,504,930
Salaries and benefits	784,619	-	784,619
Facilities	110,782	-	110,782
Other mission expenses	180,194	-	180,194
	6,273,349	-	6,273,349
Management and general:			
Salaries and benefits	535,144	-	535,144
Facilities	91,841	-	91,841
Other management and general expenses	252,333	-	252,333
	879,318	-	879,318
Total expenses	7,152,667	-	7,152,667
Increase (decrease) in net assets before other items	363,495	(1,041,934)	(678,439)
Unrealized gains	45,105	12,711,049	12,756,154
Increase in net assets	408,600	11,669,115	12,077,715
Net assets:			
Beginning of year	8,791,717	139,435,537	148,227,254
End of year	$ 9,200,317	$ 151,104,652	$ 160,304,969

See notes to financial statements.

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Great Lakes Protection Fund

Statements of Activities
Year Ended December 31, 2023

	Without Donor Restrictions	With Donor Restrictions	Total
Income:			
Realized investment income and gains, net	$ 218,234	$ 5,844,038	$ 6,062,272
Miscellaneous revenue	-	1,509	1,509
Net assets released from restrictions	7,095,630	(7,095,630)	-
	7,313,864	(1,250,083)	6,063,781
Expenses:			
Mission:			
Regional grant payments	3,741,398	-	3,741,398
State shares	1,352,744	-	1,352,744
Salaries and benefits	754,141	-	754,141
Facilities	114,968	-	114,968
Other mission expenses	174,335	-	174,335
	6,137,586	-	6,137,586
Management and general:			
Salaries and benefits	571,430	-	571,430
Facilities	109,853	-	109,853
Other management and general expenses	276,761	-	276,761
	958,044	-	958,044
Total expenses	7,095,630	-	7,095,630
Increase (decrease) in net assets before other items	218,234	(1,250,083)	(1,031,849)
Unrealized gains	180,182	15,044,416	15,224,598
Increase in net assets	398,416	13,794,333	14,192,749
Net assets:			
Beginning of year	8,393,301	125,641,204	134,034,505
End of year	$ 8,791,717	$ 139,435,537	$ 148,227,254

See notes to financial statements.

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Great Lakes Protection Fund

Statements of Cash Flows
Years Ended December 31, 2024 and 2023

	2024	2023
Cash flows from operating activities:		
Cash provided by dividends, interest and miscellaneous	$ 4,843,205	$ 4,276,574
Cash payments for:		
Grants	(3,630,876)	(3,741,398)
State shares	(1,352,744)	(1,332,157)
Salaries and benefits	(1,380,039)	(1,399,818)
Facilities	(206,011)	(234,800)
Investment management and advisory fees	(172,815)	(112,970)
Other operating expenses	(412,013)	(486,587)
Net cash used in operating activities	**(2,311,293)**	(3,031,156)
Cash flows from investing activities:		
Purchases of investments	(2,831,460)	(7,917,367)
Proceeds from sales of investments	5,475,000	14,234,696
Issuance of loan receivable	(250,000)	-
Purchases of furniture, equipment and leasehold improvements	(5,366)	(11,868)
Net cash provided by investing activities	**2,388,174**	6,305,461
Increase in cash and cash equivalents	**76,881**	3,274,305
Cash and cash equivalents:		
Beginning of year	12,740,013	9,465,708
End of year	$ 12,816,894	$ 12,740,013

See notes to financial statements.

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Great Lakes Protection Fund

Notes to Financial Statements

Note 1. Nature of Activities and Significant Accounting Policies

Great Lakes Protection Fund (the Fund) is a nonprofit organization designed to have as its members the governors of the eight states bordering on the Great Lakes. Seven of the states have joined the Fund and have made contributions, as specified in the Fund's articles of incorporation, to establish their membership in the Fund. Income earned on the contributions is used to provide grants which finance projects advancing the health of the ecosystem of the Great Lakes Basin.

Basis of accounting: Under accounting principles generally accepted in the United States of America (U.S. GAAP), nonprofit organizations report net assets in two classes: net assets with donor restrictions or net assets without donor restrictions, based on the existence or absence of donor-imposed restrictions.

Cash and cash equivalents: For purposes of the financial statements, the Fund considers money market funds to be cash equivalents.

The Fund maintains cash accounts at financial institutions, which at times may exceed $250,000. A significant portion of cash equivalents is invested in interest-bearing money market accounts. Such amounts are insured by the Federal Deposit Insurance Corporation (FDIC) up to $250,000 per taxpayer ID number. The Fund has not experienced any losses in such accounts. Management believes that the Fund is not exposed to any significant credit risk on cash and cash equivalents.

Investments: Investments are reflected at fair value based on quoted market prices. Realized gains on the sale of mutual funds are computed using the specific identification method. Realized gains on the sale of other investments are computed using the first-in, first-out method (FIFO). Purchases and sales of investments are recorded on a trade date basis. Interest is recorded on the accrual basis. Dividend income is recorded on the ex-dividend date. Endowment fund investment income or loss (including gains and losses on investments, interest and dividends) is recorded as increases or decreases in net assets with donor restrictions until appropriated for expenditure by the Fund. Other investment income or loss is included in the statements of activities as increases or decreases in net assets without donor restrictions unless the income or loss is restricted by donor or law. Changes in fair value are recorded as unrealized gains/losses in the statements of activities.

The Fund invests in various investments. Such investments are exposed to various risks such as interest rate, market and credit risk. Due to the level of risk associated with certain investments, it is at least reasonably possible that changes in the values of investments will occur in the near term and that such changes could materially affect the amounts reported in the statements of financial position.

Loans Receivable: The Fund entered into a loan agreement with a nonprofit lending organization in June 2024 as part of a commitment to establish a predevelopment loan fund for providing low-cost financing to communities for implementing water infrastructure improvements in the Great Lakes Region. As the contractual rate is lower than the market rate, the difference between the cash transferred to the borrower and the present value of the contractual payments for the loan at the effective interest rate is recognized within Regional Grant Payments on the Statement of Activities. In determining whether an allowance for credit losses is necessary, the Fund considers the borrower's operations and ability to make loan payments. No allowance for credit losses was recognized as of December 31, 2024, given the credit quality of the borrower. Once subloans begin being made, the Fund will then reassess the credit quality of loans and the need for an allowance for credit losses.

Furniture, equipment and leasehold improvements: Furniture, equipment and leasehold improvements are stated at cost. Depreciation is recorded on a straight-line basis over the estimated useful lives of the assets ranging from three to seven years. Leasehold improvements are amortized over the lesser of useful life or lease term.

Great Lakes Protection Fund

Notes to Financial Statements

Note 1.   Nature of Activities and Significant Accounting Policies (Continued)

Leases: The Fund follows the lease accounting guidance in FASB ASC Topic 842. The Fund determines if an arrangement is a lease at the inception of the contract. Under Topic 842, a lease is a contract, or part of a contract, that conveys the right to control the use of identified property or equipment (i.e., an identified asset) for a period of time in exchange for consideration. The Fund's contracts determined to be or contain a lease include explicitly or implicitly identified assets where the Fund has the right to obtain substantially all of the economic benefits of the asset and has the ability to direct how and for what purpose the assets are used during the lease term.

Leases are classified as either operating or financing. For operating leases, the Fund recognizes a lease liability equal to the present value of the remaining lease payments, and a right of use asset equal to the lease liability, subject to adjustments, such as for prepaid rent. The lease term may include options to extend or terminate the lease when it is reasonably certain that the Fund will exercise the option. The Fund has elected to use a risk-free rate as the discount rate.

Grant commitments: Payment of grants beyond the initial installments is contingent on the satisfaction by the recipients of agreed-upon requirements. Unpaid amounts are accrued only if the conditions have been met. Most grants cover a three to five year period.

State shares: In accordance with the articles of incorporation, the Fund is required to disburse to the member states one-third of its realized income after deducting operating expenses, excluding grants. Amounts paid to the states are to be used for the furtherance of the Fund's activities and are allocated on the basis of the state's respective contribution.

Functional expenses: The costs of providing the Fund's mission and other activities have been summarized on a functional basis in the statements of activities. Accordingly, certain costs have been allocated among mission and management and general expenses.

The financial statements report certain categories of expenses that are attributed to more than one function. Therefore, expenses require allocation on a reasonable basis that is consistently applied. The expenses that are allocated include salaries and benefits, which are allocated on the basis of estimates of time and effort, as well as facilities, which are allocated on a square footage basis.

Use of estimates: The preparation of financial statements in conformity with U.S. GAAP requires management to make estimates and assumptions affecting the reported amounts of assets and liabilities and disclosures of contingent assets and liabilities at the date of the financial statements, as well as the reported amounts of revenue and expenses during the reporting period. Actual results could differ from the estimates.

Income taxes: The Fund is exempt from income taxes under Section 115(1) of the Internal Revenue Code (IRC) and applicable state law.

The Fund follows the accounting guidance related to accounting for uncertainty in income taxes, which addresses the determination of whether tax benefits claimed or expected to be claimed on a tax return should be recorded in the financial statements. Under this guidance, the Fund may recognize the tax benefit from an uncertain tax position only if it is more likely than not that the tax position will be sustained on examination by taxing authorities, based on the technical merits of the position. Examples of tax positions include the tax-exempt status of the Fund and various positions related to the potential sources of unrelated business taxable income. The tax benefits recognized in the financial statements from such a position are measured based on the largest benefit that has a greater than 50% likelihood of being realized upon ultimate settlement. At December 31, 2024 and 2023, there were no unrecognized tax benefits identified or recorded as liabilities.

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Great Lakes Protection Fund

Notes to Financial Statements

Note 1.   Nature of Activities and Significant Accounting Policies (Continued)

Subsequent events: The Fund has evaluated subsequent events for potential recognition and/or disclosure through March 14, 2025, the date the financial statements were available to be issued.

Note 2.   Liquidity and Availability

The Fund regularly monitors liquidity to meet its grant payments, operating needs and the annual state share payments (general expenditures). The Fund relies on investment income and available financial assets to meet general expenditures over the next 12 months.

The tables below present information related to financial assets available for general expenditures within one year at December 31, 2024 and 2023:

	2024	2023
Financial assets at year-end:		
Cash and cash equivalents	$ 12,816,894	$ 12,740,013
Investments	148,847,646	136,904,997
Receivable for security sold	-	460,000
Accrued interest	88,946	61,864
Loan receivable	192,573	-
	$161,946,059	$150,166,874
Financial assets not available for general expenditures within one year:		
Donor-restricted endowment	$ 81,000,000	$ 81,000,000
Donor-restricted earnings on endowment, less future year estimated appropriations of $7,452,000 and $7,379,000, respectively	62,652,652	51,056,537
Loan receivable	192,573	-
	$143,845,225	$132,056,537
Financial assets available for general expenditures within one year	$ 18,100,834	$ 18,110,337

Cash and cash equivalents are available on demand. All investments at year-end can be converted to cash within three days of a sale.

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Great Lakes Protection Fund

Notes to Financial Statements

Note 3.   Investments

Investments consist of the following:

	2024	
	Cost	Fair Value
Exchange-traded funds:		
Global equity:		
Global equity index	$ 3,820,495	$ 7,592,950
International equity:		
Developed markets index	5,250,014	5,601,255
Mutual funds:		
Domestic equity:		
Large cap index	14,719,288	64,148,332
Mid cap index	3,776,677	8,216,747
Small cap index	3,784,624	7,863,577
International equity:		
Emerging markets	7,007,858	7,738,727
Small cap	2,237,851	2,255,910
Developed markets index	4,401,657	5,271,243
Global equity:		
Global impact	1,000,000	1,250,500
Fixed income:		
Core plus	12,715,049	11,219,078
Core impact	500,000	473,769
Core	6,600,000	5,727,518
Strategic income	8,901,380	8,329,559
Short-term treasury	4,150,000	4,048,283
Intermediate-term government	4,066,667	3,638,439
U.S. government securities	5,457,645	5,471,759
	$ 88,389,205	$148,847,646

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Great Lakes Protection Fund

Notes to Financial Statements

Note 3.   Investments (Continued)

	2023	
	Cost	Fair Value
Exchange-traded funds:		
Global equity:		
Global equity index	$ 3,820,495	$ 6,576,464
International equity:		
Developed markets index	5,250,000	5,530,880
Mutual funds:		
Domestic equity:		
Large cap index	15,238,311	54,564,881
Mid cap index	3,910,881	7,498,899
Small cap index	3,918,055	7,224,577
International equity:		
Emerging markets	7,007,858	7,449,522
Small cap	2,237,851	2,286,308
Developed markets index	4,401,584	5,250,176
Global equity:		
Global impact	1,000,000	1,203,307
Fixed income:		
Core plus	12,715,049	11,512,098
Core impact	500,000	482,334
Core	6,600,000	5,852,158
Strategic income	8,936,055	8,294,376
Short-term treasury	4,150,000	4,036,318
Intermediate-term government	4,066,667	3,723,785
U.S. government securities	5,449,904	5,418,914
	$ 89,202,710	$136,904,997

Note 4.   Fair Value Disclosures

The accounting guidance on fair value provides a framework for measuring fair value and defines fair value as the price that would be received to sell an asset or paid to transfer a liability in an orderly transaction between market participants on the measurement date. That framework provides a fair value hierarchy that prioritizes the inputs to valuation techniques used to measure fair value. The hierarchy gives the highest priority to unadjusted quoted prices in active markets for identical assets or liabilities (Level 1 measurements) and the lowest priority to unobservable inputs (Level 3 measurements).

Financial assets and liabilities carried at fair value will be classified and disclosed in one of the following three categories:

Level 1: Valuations for assets and liabilities traded in active exchange markets, such as the New York Stock Exchange (NYSE). Level 1 assets primarily include listed equities, money market funds, government securities, mutual funds and exchange-traded funds. Valuations are obtained from readily available pricing sources for market transactions involving identical assets or liabilities.

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Note 4.   Fair Value Disclosures (Continued)

Level 2: Valuations for assets and liabilities traded in less active dealer or broker markets. Valuations are obtained from third-party pricing services for identical or similar assets or liabilities. Level 2 assets primarily include equities traded in over-the-counter markets.

Level 3: Valuations for assets and liabilities that are derived from other valuation methodologies, including option pricing models, discounted cash flow models and similar techniques, and not based on market exchange, dealer, or broker-traded transactions. Level 3 valuations incorporate certain assumptions and projections in determining the fair value assigned to such assets or liabilities.

In certain cases, the inputs used to measure fair value may fall into different levels of the fair value hierarchy. In such cases, an investment's level within the fair value hierarchy is based on the lowest level of input that is significant to the fair value measurement. The Fund's assessment of the significance of a particular input to the fair value measurement in its entirety requires judgment, and considers factors specific to the investment.

For the years ended December 31, 2024 and 2023, the application or valuation techniques applied to similar assets and liabilities have been consistent. The following is a description of the valuation methodology used for assets measured at fair value:

Investments in securities traded on a national securities exchange, or reported on the NASDAQ national market, are stated at the last reported sales price on the day of valuation. These financial instruments are classified as Level 1 in the fair value hierarchy.

The Fund assesses levels of the investments at each measurement date, and transfers between levels are recognized on the actual date of an event or change in circumstances that caused the transfer. For the years ended December 31, 2024 and 2023, there were no such instances.

All of the Fund's investments are classified as Level 1 as of December 31, 2024 and 2023.

Note 5.   Loan Receivables

The Fund's loan receivable consists of a program-related loan made to a nonprofit lending organization who will make below-market rate loans to communities for implementing water infrastructure improvements in the Great Lakes Region. The loan agreement provides a loan ceiling of $1,000,000 and the borrower may borrow, prepay, and reborrow, providing the outstanding balance does not exceed the loan ceiling. During the year, the Fund loaned $250,000 to the borrower. The loan receivable balance at December 31, 2024 was $192,573, which represents the $250,000 principal balance, net of a present value discount of $57,427. The stated interest rate on the loan is 1%, which represents a below-market rate. The Fund calculated an inherent contribution expense based on the difference between the cash provided and the present value of the contractual payments at an imputed market interest rate, determined to be 5.92%. Based on the calculation, the Fund recognized contribution expense of $61,948 during the year ended December 31, 2024, which is recorded in Regional Grant Payments on the Statements of Activities. This discount is amortized as interest income over the life of the loan. $5,633 of interest income was recognized during the year ended December 31, 2024 related to this loan.

The principal balance of the loan is due in full on the maturity date, June 28, 2030. At December, 31, 2024, the Fund has determined that no allowance for credit losses is required, based on the credit quality of the borrower. The Fund may forgive certain amounts due by the borrower when the subloans made by the borrower are forgiven by the borrower due to meeting certain criteria. During the current year, no amounts were forgiven under the loan agreement.

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Great Lakes Protection Fund

Notes to Financial Statements

Note 6.   Grants Activity

Grants activity for 2024 and 2023 is as follows:

	Grants Approved	Grants Paid	Grants Payable
2024	$ 2,975,000	$ 3,630,876	$ -
2023	4,670,000	3,741,398	-

As of December 31, 2024, total grants approved since the Fund's inception amounted to approximately $106.3 million. At December 31, 2024 and 2023, the Fund had approved approximately $6.5 million and $8.4 million of grants, respectively, for which the conditions, which generally represent project goals and objectives, have not yet been met and therefore, grant expenses have not yet been recognized. Upon satisfaction of the conditions by the recipients, the Fund will recognize the grant expenses and disburse the remaining payments. The terms of most grants cover a three-to-five-year period.

Note 7.   Net Assets

Net assets without donor restrictions: Net assets that are not subject to donor-imposed restrictions and may be expended for any purpose in performing the primary objectives of the Fund. Certain net assets without donor restrictions have been designated by the Board of Directors as a Sequestration Fund and a Temporary Reserve Fund. Combined, the Sequestration Fund and the Temporary Reserve Fund represent an estimate of amounts sufficient to provide for 18 months of expenses so the Fund can continue to pursue its mission in the event of long-term economic downturn. The balances of $9,200,317 and $8,791,717 in net assets without donor restrictions for 2024 and 2023, respectively, represents the combined unspent portion of the Sequestration Fund and Temporary Reserve Fund of $8,000,000, plus any interest earned.

Net assets with donor restrictions: Net assets subject to stipulations imposed by donors and grantors. Some donor restrictions are temporary in nature; those restrictions will be met by actions of the Fund or by the passage of time. Other donor restrictions are perpetual in nature, where the donor has stipulated the funds be maintained in perpetuity.

Net assets with donor restrictions were as follows for the years ended December 31, 2024 and 2023:

	2024	2023
Original donor-restricted endowment contribution amount and amounts required to be retained by donor:		
Illinois	$ 15,000,000	$ 15,000,000
Michigan	25,000,000	25,000,000
Minnesota	1,500,000	1,500,000
New York	12,000,000	12,000,000
Ohio	14,000,000	14,000,000
Pennsylvania	1,500,000	1,500,000
Wisconsin	12,000,000	12,000,000
	81,000,000	81,000,000
Accumulated investment gains on endowment funds, which, once appropriated, are expendable to support the activities of the Fund	70,104,652	58,435,537
Total net assets with donor restrictions	$151,104,652	$139,435,537

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Great Lakes Protection Fund

Notes to Financial Statements

Note 7. Net Assets (Continued)

Donor-restricted endowment contributions represent the contributions received from member states in accordance with the Fund's articles of incorporation. These amounts cannot be expended.

With the exception of Indiana, all states have made their required contributions. There is no due date for the contribution payable by Indiana, which has not yet joined the Fund.

Note 8. Endowment Net Assets

The Fund's endowment net assets are comprised of restricted contributions made by the member states, as well as the net effect of the realized and unrealized investment returns and losses on those investments and the operating expenses of the Fund. As the original contributions were made for the purpose of establishing a fund of assets to provide income for the Fund, the Fund's net assets are considered an endowment, as defined by accounting guidance related to financial statement presentation for nonprofit organizations.

Interpretation of relevant law: The Fund has interpreted the Illinois Uniform Prudent Management of Institutional Funds Act (UPMIFA) as requiring the preservation of the fair value of the original contribution as of the contribution date of the donor-restricted endowment funds absent explicit donor stipulations to the contrary. As a result of this interpretation, the Fund classifies as net assets with donor restrictions (a) the original value of contributions donated to the permanent endowment, (b) the original value of subsequent contributions to the permanent endowment and (c) accumulations to the permanent endowment made in accordance with the direction of the applicable donor contribution instrument at the time the accumulation is added to the Fund. In accordance with UPMIFA, the Fund considers the following factors in making a determination to appropriate or accumulate earnings on donor-restricted endowment funds:

1. The duration and preservation of the Fund
2. The purpose of the Fund and the donor-restricted endowment fund
3. General economic conditions
4. The possible effect of inflation and deflation
5. The expected total return from income and the appreciation of investments
6. Other resources of the Fund
7. The investment policies of the Fund

The changes in endowment net assets for the Fund were as follows for 2024 and 2023:

	2024 With Donor Restrictions	2023 With Donor Restrictions
Endowment net assets, beginning of year	$139,435,537	$125,641,204
Realized income and gains, net	6,109,735	5,844,038
Miscellaneous revenue	1,000	1,509
Unrealized gain on investments	12,711,049	15,044,416
Amounts appropriated for expenditure	(7,152,669)	(7,095,630)
Endowment net assets, end of year	$151,104,652	$139,435,537

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Great Lakes Protection Fund

Notes to Financial Statements

Note 8.   Endowment Net Assets (Continued)

Return objectives and risk parameters: The Fund has adopted endowment investment and spending policies that attempt to provide a predictable stream of funding to its programs while ensuring that the original value of the endowment contributions is preserved. Assets are invested in a manner intended to achieve an annualized nominal return of 5% to 8%. Actual returns in any given year may vary from this amount.

Strategies employed for achieving objectives: To satisfy its long-term rate-of-return objectives, the Fund relies on a total return strategy in which returns are achieved through both capital appreciation (realized and unrealized) and current yield (interest and dividends). The Fund targets a diversified asset allocation that places a greater emphasis on equity-based investments to achieve its long-term return objectives within prudent risk constraints.

Spending policy and how the investment objectives relate to spending policy: The Fund has a policy of appropriating an estimate of expenditures each year as part of a formal, annual budget. Adjustments to appropriations are also approved during the year as unexpected changes arise.

Note 9.   Lease Obligation

The Fund leases office space under a lease classified as an operating lease. In July 2024, an amendment was executed to extend the term of the lease until November 2035, with an option to extend the lease for an additional five-year period. The five-year extension option is not recognized as part of the Funds' right-to-use asset and lease liability as it is not reasonably certain the option will be exercised. There is a termination option effective for October 2032 if the Fund provides nine months' notice and pays a corresponding fee, however it is not reasonably certain the option will be exercised. As the Fund's lease agreement does not provide an implicit rate, the risk-free rate at the modification date when the lease was amended and representative of the extended term of the lease was determined to be appropriate. The Fund elected to use a discount rate of 4.48% as of July 2024. Lease related information for the years ended December 31, 2024 and 2023, is as follows:

	2024	2023
Operating lease cost	$ 191,095	$ 184,053
Cash paid for amounts included in the measurement of lease liabilitie $ 190,857 $ 190,831		
Operating cash flows from operating leases		
Weighted-average remaining lease term—operating leases	10.9 years	1.9 years
Weighted-average discount rate—operating leases	4.48%	3.25%

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Great Lakes Protection Fund

Notes to Financial Statements

Note 9. Lease Obligation (Continued)

Minimum payments required under the lease are as follows:

2025	$	163,798
2026		192,173
2027		194,752
2028		197,332
2029		199,911
Thereafter		1,235,581
		2,183,547
Less amounts representing interest		(467,203)
Total obligation	$	1,716,344

Note 10. Retirement Plan

The Fund maintains a retirement plan under the provisions of Section 401(a) of the IRC applicable to governmental retirement plans. The Fund makes contributions under two provisions in the plan:

1. Contributions equal to 10% of each employee's compensation. All employees must participate upon commencement of employment.

2. Discretionary matching contributions in the amount of 100% of the employee's deferral contributions to the Fund's 457(b) deferred compensation plan (Note 10). The Fund's discretionary matching contributions are limited to 6% of the employee's compensation for the year. All employees contributing to the Fund's 457(b) deferred compensation plan are eligible to participate.

All Fund contributions on behalf of employees are 100% vested when made. The Fund contributed $171,437 and $172,998 to the retirement plan for 2024 and 2023, respectively.

Note 11. Deferred Compensation Plan

The Fund maintains a deferred compensation plan under the provisions of Section 457(b) of the IRC. All employees are eligible to voluntarily participate upon commencement of employment. Participants can elect to participate in the deferred compensation to the extent permitted by applicable contribution limits under Section 457(b) of the IRC.

The Fund makes discretionary matching contributions to the retirement plan (Note 9) in the amount of 100% of the employee's deferral contributions to the Fund's 457(b) deferred compensation plan. The Fund's discretionary matching contributions are limited to 6% of the employee's compensation for the year. Only employee contributions were made to the deferred compensation plan for 2024 and 2023.

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Appendix 2

Projects Completed in 2024

Team composition described includes both paid and unpaid collaborators.

Transition Financing for Regenerative Agriculture Systems ($1,187,000)

The original goal of this project was to accelerate the adoption of regenerative agriculture practices across the Great Lakes basin by designing transition loan products and supporting services that would facilitate farmers' transition away from conventional agriculture. Farmers face many obstacles – e.g., financial uncertainty, knowledge gaps, increased time commitment, and the need for new equipment - that discourage them from adopting regenerative farming practices. The new loan products were expected to de-risk this transition and encourage the long-term behavioral change needed among farmers to scale regenerative agriculture systems. The team planned to develop standardized transition loan products and pilot them in the Lake Ontario watershed in New York state, a region with diverse farming operations representative of farms across the Great Lakes basin.

After extensive stakeholder input and experiencing challenges related to COVID-19, the team pivoted to expanding and testing the Soil and Water Outcomes Fund (SWOF) in the Lake Ontario region of New York. SWOF is a pay-for-performance platform developed by Quantified Ventures that was already in use across the Midwest. The SWOF pays farmers to use cover crops and reduced-till and no-till practices on conventional corn and soybean fields.

The first-ever launch of the SWOF in New York was a success. In 2023, Cornell Atkinson Center for Sustainability partnered with the New York Corn and Soybean Growers Association, Cornell Cooperative Extension, and the SWOF to pilot the NYOF (the New York version of the SWOF). Cargill, impressed by the strong farmer interest, offered an additional $500,000 to scale the pilot from its original 1,000-acre goal to 10,000 acres for water quality and carbon reduction outcomes.

Team Composition:
Cornell University (Fiscal Agent)
Cornell Atkinson Center for Sustainability
Soil and Water Outcomes Fund
New York Corn and Soybean Association
Cargill
Evidn

RISC Network Support ($50,000)

This money supported the transition of the RISC Network to the Green Infrastructure Leadership Exchange. RISC, Resilient Infrastructure Sustainable Communities, is a network of professionals committed to scaling green stormwater infrastructure in the Great Lakes basin. RISC was formed in a prior Fund-supported project that closed in 2023.

Team Composition:
Green Infrastructure Leadership Exchange
Global Philanthropy Partnership (Fiscal Agent)

Commercialize an Innovative Phosphorous Capture Product ($105,000)

Th team developed a business plan to commercialize an innovative agricultural phosphorus filtering product (the CAPTure™ system). This product removes dissolved phosphorus from runoff in agricultural tile drains. It is designed to exceed the Great Lakes Water Quality Agreement's 40% phosphorus reduction target; 2022 pilot testing in Wisconsin has demonstrated over 85% phosphorus capture. The product was developed and successfully tested with Fund support, and the Fund has filed a patent application for it.

Kieser & Associates worked with team members Cimbria Consulting and Global Water Advisors to identify the market size, establish revenue projections, and develop the value proposition for potential investors and customers. They also expanded on the operating side of the business, including manufacturing, distribution, installation, and service of the CAPTure™ systems. The team developed a range of options for future business development.

Team Composition:
Kieser & Associates, LLC (Fiscal Agent)
Global Water Advisors, Inc.
Cimbria Consulting

Smart Management of Microplastic Pollution in the Great Lakes ($929,000)

This project empowered a new set of regional leaders focused on reducing the amount of microplastics that enter the Great Lakes each year. The team worked with municipal leaders and local groups to pilot a plastic reduction campaign and mitigation initiative in Williamston and Pontiac, MI. To support this campaign, the team designed and built a first-of-its-kind, portable optical sensor that they used as a monitoring tool for microplastics.

The sensor the team developed is a breakthrough technology for real-time microplastic detection in aquatic environments. There are currently no commercially available microplastic sensors for environmental monitoring in the field. The team's sensor has innovations including water sampling, sample processing, sample imaging using a high-resolution camera, Raman detection using a Raman laser, and data analysis using software powered with a machine learning algorithm. Currently, there is no sensor that can do all these things in one package. This will significantly reduce time, labor, and cost for microplastic analysis, making monitoring much easier.

The team created a robust microplastics communications campaign and resource library to support leaders working on reducing plastic pollution. They also tested the effectiveness of two very different mitigation strategies: one strategy to reduce plastic fibers coming off clothing in the wash; the second to reduce large plastics entering the stormwater system by installing green infrastructure to capture trash during large rain events. By developing a microplastics mitigation toolbox (a communications campaign and tested mitigation strategies supported by new sensor technology), this team developed solutions that communities can adopt throughout the basin to reduce microplastics.

Team Composition:
Wayne State University (Fiscal Agent)
Ingham Conservation District
City of Williamston
Tri County Regional Planning Commission
Michigan Association of Conservation Districts

Clinton River Watershed Council
OHM Environmental Advisors
Nymbus Systems Corporation
Great Lakes Water Authority
Sierra Club Michigan Chapter
Great Lakes Environmental Research Laboratory, NOAA

Harnessing Automated Demand Response to Reduce Great Lakes Mercury Emissions ($1,006,000)

The objective of this project was to establish clear market-based incentives for reducing mercury emissions from coal plants. The project was built around technology – developed and tested with early Fund support in a prior project - that will reduce mercury and other air pollutants in the Great Lakes by giving customers the power to choose clean energy over dirty. Automated Emissions Reduction, or AER, sends real-time clean energy data straight to internet-connected smart devices such as energy management systems for large buildings, residential thermostats, refrigerators, etc. and allows these devices to shift the timing of electricity use to work at times when the grid is supplied by clean energy sources.

The team pursued two different pilots to achieve their objective: one pilot for residential customers and a second pilot for commercial building customers. The team's theory was that if these two pilots were successful, it would enable AER to achieve direct emission reductions from devices choosing cleaner electricity on a large scale.

Residential Pilot – This pilot focused on residential electricity customers to demonstrate to Demand Response (DR) aggregators (those responsible for recruiting customers to participate in DR programs) and their utility customers the market advantages of adding AER to DR programs. DR programs provide financial incentives for electricity users to conserve energy during high-demand times (e.g. a hot summer day) to reduce the strain on the electric grid. The team worked closely with DR aggregators to demonstrate that more customers will be drawn to DR programs with the addition of AER, and that both aggregators and utilities will see higher profits as well.

Commercial Building Pilot – This pilot focused on large commercial building customers in order to expand AER's compatibility with more complex and higher energy-consuming systems. The team piloted the AER technology on the HVAC system at the Schreiber Center, a 127,000 sq. ft (11 floors) building at Loyola University's downtown Chicago campus.

AER technology has scaled throughout the Great Lakes region and around the globe, in large part because of the Fund's very early support of AER in a prior project and this project, which enabled WattTime to successfully test novel applications of AER in two very different pilots. When this project closed, there were about 39 million consumer smart devices actively using AER in the Great Lakes region, with an annual 128 million MWh in the region AER compatible, heavily driven by the expansion into commercial HVAC systems, which was enabled by this project.

Team Composition:

WattTime (Fiscal Agent)
Rocky Mountain Institute
OhmConnect
Brainbox AI
UC Berkeley Center for the Built Environment

Appendix 3

Portfolio of Projects as of December, 2024

Team composition described includes both paid and unpaid collaborators.

Empowering Water Managers with Digital Tools ($1,300,000)

The goal of this project is to trigger a watershed-scale shift in water management practices across the Great Lakes region by developing scalable tools that empower a network of up to 1,500 stormwater operators in Great Lakes counties and midsized cities to approach their jobs differently. The team will build an open source, AI-driven Digital Operator Toolbox, designed to help stormwater operators transition from reactive to proactive stormwater management. The toolbox will equip operators with real-time, predictive tools to help reduce errors that lead to nutrient runoff, sediment loss, and overflow events.

This project will bring together stormwater operators, county officials, and industry experts from four Great Lakes counties (Oakleaf, MI; Branch, MI; Kosciusko, IN; and Bayfield, WI) and four mid-sized cities (Dearborn, MI; Toledo, OH; Syracuse, NY; and Fort Wayne, IN) to co-develop and pilot the toolbox. The toolbox will leverage existing user knowledge, human-centered design, AI, and local and regional data sources to create an interactive interface that allows operators to query their system, view forecast projections, and model changes in real-time. The purpose is to help operators understand and prepare for problems before storm events happen. This will allow operators to proactively optimize water flow rather than reactively addressing issues.

Ultimately, the team will lay the groundwork for a regional network of operators and stakeholders, fostering wider collaboration and supporting the adoption of this open-source platform across the basin.

Team Composition:
HyFi, LLC (Fiscal Agent)
University of Michigan
Wisconsin Department of Natural Resources
Jacobs
Great Lakes Water Authority
Water Environment Research Foundation
City of Fort Wayne, IN
City of Dearborn, MI
Oakland County
City of Toledo, OH
Onondaga County
Kosciusko County
Fahey Schultz Burzych Rhodes
Civil Engineers, Inc.
Corvias Solutions
Verizon

Building the Foundation for a Grass-fed Dairy Standard for Managed Grazing ($160,000)

In this design project, this team will lay the groundwork to create a new and accessible "Grass-Fed Dairy Standard" designed to increase the adoption of managed grazing systems across the Great Lakes Basin. This project will address barriers posed by existing certifications, which often create challenges for producers, and set the stage for a scalable alternative that improves water quality, soil health, and ecosystem sustainability.

Managed grazing of perennial pastures offers significant benefits: it reduces agricultural runoff, enhances soil health, and improves farm profitability. However, current certifications frequently require rigid adherence to 100% grass-fed or organic practices, which can be impractical for many dairy producers. The goal of this new standard is to provide a more inclusive and realistic pathway for diverse dairy operations, while maintaining both environmental integrity and market credibility.

During this phase, the Dairy Grazing Alliance will collaborate with dairy producers, scientific advisors, brand leaders, and other stakeholders to map out the process for creating the standard. Through workshops, interviews, and facilitated discussions, the team will ensure the framework aligns with market needs, delivers environmental benefits, and is practical for widespread adoption.

Team Composition:
Dairy Grazing Alliance (Fiscal Agent)
Winrock International
University of Wisconsin
Water and Land Solutions, LLC
Colorado State University
Grow Well Consulting
Institute of Food Technologists
Food Finance Institute
Fonterra
University of Missouri

Event Support 2024-2026 ($275,000)

These funds are designated to support Great Lakes and water innovation events over two years. Support will target regional and national events and include: meeting and organizing expenses, support for funder coordination and field-building activities, and allow the Fund to organize its own events.

Great Lakes Wastewater Discharge Inventory ($50,000)

This discretionary award inventories sources of storm and wastewater discharged in the Great Lakes basin. This inventory will support our "Reimaging Urban Water Systems" strategic priority and help target our programming at gaps in the current scheme to control releases of conventional, toxic, pathogens and nutrient pollution in line with our strategic plan.

Team Composition:
Great Lakes Commission (Fiscal Agent)

Mobilizing a Great Lakes Microplastic Action Network ($1,190,000)

This team will create a Great Lakes-focused microplastic action network that will use proven reduction strategies and new analytic tools, including a new open-source analytic engine, or "Library," for identifying environmental microplastics. The Library will analyze environmental microplastics to infer the likely source, fate, and transport of

microplastic samples, empowering communities to identify local pollution sources for the first time and offering new opportunities for microplastic pollution mitigation at a local level.

The team – including communities in Ohio, New York, and Michigan, will develop and pilot-test the AI-powered Library. Pilot communities will be able to target source-specific strategies and learn from their actions. Using data generated from the new Library, communities will take actions to reduce microplastics in their local context, such as: piloting wastewater filtration to address point sources, preventing nurdles released in the supply chain, targeting single-use plastics through public awareness campaigns, and supporting restaurant associations in identifying alternatives to plastic containers.

Ultimately, the team – supported by the technology – will establish a growing network of over 200 basin communities who will help one another more effectively execute control programs. This network will act as a hub for exchanging strategies, achievements, and learning, improving the collective ability of communities across the region to tackle microplastic pollution

Team Composition:
Wayne State University Winrock International (Fiscal Agent)
Buffalo Niagara Waterkeeper
Cleveland Water Alliance
Huron River Watershed Council
Resource Recycling Systems
Ohio State University
University of Delaware
USGS Geological Survey
University of Western Ontario
Tip of the Mitt Watershed Council
Enwave Optronics
Chemung County, NY
National Institute of Standards and Technology

Improving the Health of the Great Lakes through Profitable Low Overhead Dairy Grazing ($1,560,000)

This project will demonstrate how low-overhead dairy grazing could revitalize the dairy sector by offering a scalable solution for farmers, the environment, and Great Lakes communities. Low-overhead dairy grazing (LODG) is an approach to dairy farming that keeps perennial pasture on the landscape without tillage and with minimal synthetic inputs, reducing sediment and nutrient loss from land and improving water quality.

The US dairy industry is a significant contributor to phosphorus pollution in the Great Lakes basin. At the same time, small and medium-sized dairy farms in the Great Lakes basin face unprecedented economic pressure and often are pushed to exit the industry. Due to these challenging economics, there is great potential in the dairy industry for innovations that increase profitability and reduce nutrient runoff. LODG is both an economical option and has significantly less environmental impact.

The team will design and pilot a hub-based model that more easily provides a scalable and competitive solution for dairy farms transitioning to regenerative LODG. Hubs will serve as central entities that manage common needs across a group of dairy farms, including training, human resources, purchasing, research, and supply chain logistics.

Team Composition:
Winrock International (Fiscal Agent)
Compeer Financial
Michigan State University
Dairy Grazing Apprenticeship
Food System 6
Michigan Agricultural Advancement
Michigan Food and Farming Systems
University of Wisconsin – Madison
Wisconsin Office of Rural Prosperity
Wisconsin State Innovation Exchange

Expand Disadvantaged Communities' Access to State Revolving Funds ($1,650,000)

This team will launch a predevelopment loan fund (with $1 million of initial financing) that supports small and under-resourced communities that typically don't apply to their state's clean water revolving fund (SRF) because the process is expensive, complex, and requires upfront investments in planning. Sharply increased funding to SRFs from the 2021 Infrastructure Investment and Jobs Act (IIJA) makes money available to these communities to improve their water systems. However, smaller communities with fewer financial resources are unable to pay for the technical assistance needed to create applications for SRF programs and may not be able to access these funds.

This project will identify and engage disadvantaged communities and provide them with loans to pay for the required technical assistance support. These loans will be repaid from the SRF grant or loan. The team expects to make 20 to 30 loans from the fund's initial capitalization, delivering up to $100 million in SRF support to needy communities. The program's success will attract additional capital and support its expansion to all Great Lakes states.

Team Composition:
Environmental Policy Innovation Center (Fiscal Agent)
Greenprint Partners
Clean Wisconsin
Moonshot Missions
Bowman Environmental Consulting
Illinois Facilities Fund

Performance-Based Financing Models for Sustainable Agriculture in the Great Lakes Basin ($600,000)

This team will create a new class of agriculture investment products for institutional ESG investors that are measured by the carbon footprint of fertilizer used in crop production. These investment products will have preferred (lower) interest rates based on their performance in delivering environmental benefits by reducing nutrients applied to the land or lost to the water system.

This project is part of a multi-phase strategy that reduces nutrient use in the region by expressing them as reduced carbon emissions. This aligns improved nutrient management on farms with ESG investors' climate

change strategies. Corporations and institutional investors can meet their sustainability goals by passing performance requirements for nutrient management through their value chains.

This team will explore which customers value reframing nutrient use and loss as their carbon footprint equivalents. Significantly, this testing will also help the team understand how these products would result in farmers and landowners implementing conservation practices. This work will set the stage for field testing -in a later phase -the financial products the team has developed.

Team Composition:
University of Michigan (Fiscal Agent)
Croatan Institute
Limno-Tech, Inc.
Farmers Business Network
Cornell University

Empower Land Conservancies to Prioritize Nutrient Pollution ($1,500,000)

This team will create a new regional enterprise co-managed by land trusts that will retire and restore problematic agricultural parcels; and develop a permanent funding stream that pays for it. Farmland that contributes to nutrient pollution will be restored to native perennial vegetation in the Maumee, St. Louis, and Saginaw River watersheds. This new enterprise will be a hub for expansion across the basin and a model for other land trusts.

The team will create this new enterprise by pursuing three workstreams.

- Develop a land trust community of practice with the following five land trusts who will be critical, on-the-ground partners: Minnesota Land Trust, Wisconsin Landmark Conservancy, Saginaw Basin Land Conservancy, Little Forks Conservancy, and Black Swamp Conservancy.
- Create a technical advisory committee – including the five land trust partners – to develop an ensemble model to prioritize cropland with the highest phosphorus reduction potential.
- Generate a steady source of flexible funding for the land trusts that can be used for land purchase, outreach, restoration, and land stewardship to improve Great Lakes water quality.

The project will provide value to the Great Lakes community through the new community of practice, the land prioritization modeling results, and the increased capacity within the land trusts created by the project.

Team Composition:
Freshwater Society (Fiscal Agent)
Minnesota Land Trust
Wisconsin Landmark Conservancy
Saginaw Basin Land Conservancy
Little Forks Conservancy
Black Swamp Conservancy
Conservation Fund
Bolin Agency
Ulrich Consulting

Increase Under-Resourced Municipalities' Access to Green Infrastructure ($1,400,000)

Decades of underinvestment in wastewater and stormwater infrastructure have degraded Great Lakes water quality and increased ecosystem and community vulnerability to the impacts of severe flooding. Many large municipalities can pay for these services or have experts on staff. However, in small to mid-sized cities, the work is often done only as staff time and budgets allow. As a result, planning and implementing green infrastructure projects remains out of reach for many municipalities that could benefit from it.

This team will improve Great Lakes water quality by reducing stormwater runoff and flooding in smaller communities. They will establish an integrated design, build, finance, and maintain service for green infrastructure that will primarily focus on disadvantaged and under-resourced municipalities that don't implement green infrastructure projects independently. The team will work with at least ten municipalities, as well as community members and community-based organizations to design the service program so that it is an integrated approach to planning, implementing, maintaining, and monitoring green infrastructure projects across many municipalities. The team will assess alternative funding sources for these projects, including federal and state financing programs and philanthropy. They will also explore the potential of a new low-cost micro-bond product explicitly designed for small communities to implement and maintain green infrastructure. The team will pilot the program in Lansing, MI, and Manitowoc, WI.

Team Composition:
Delta Institute (Fiscal Agent)
Stantec
Regiment Securities
389nm
City of Lansing, MI
City of Manitowoc, WI

Permanent Destruction of PFAS in Landfill Leachates and Wastewater ($690,000)

The project team is developing an innovative approach to destroying PFAS in the Great Lakes region, and they anticipate their work will raise the bar for PFAS destruction technology. Its success will activate a marketplace for technologies that destroy PFAS, permanently removing these dangerous compounds from the Great Lakes ecosystem. Current treatments remove PFAS from water by filtration, adsorption, and reverse osmosis; however, these methods produce solid waste and wastewater with highly concentrated PFAS that are often stored on industrial sites or in landfills from where they can re-enter the environment.

The team, led by Michigan State University and Fraunhofer USA, will test, validate, and scale their technology, a magnetically enhanced arc plasma (MEAP), which has been shown to permanently destroy PFAS, removing the risk that these compounds will re-contaminate Great Lakes water. Their work has shown this process to be more effective, faster, and less energy-intensive than other emerging PFAS destruction technologies. The project team, which includes industry, academic, municipal, and not-for-profit participants, will evaluate MEAP technology's performance in treating landfill leachates and wastewater –two significant sources of PFAS in the environment – and create a foundation for its widespread adoption after Fund support ends.

Team Composition:

Michigan State University (Fiscal Agent)
Fraunhofer USA Center Midwest CMW
City of Grand Rapids, MI
Granger Waste Services
Ampres, Inc.

Forging New Pathways to Improved Water Quality and Climate Resiliency in the Great Lakes ($1,215,000)

The 2021 Bipartisan Infrastructure Law (BIL) created a unique opportunity to reinvest in the region's water infrastructure through state revolving fund (SRF) loans and grants. Many water utilities in the Great Lakes basin need significant capital reinvestment, especially those serving smaller and disadvantaged communities, which often lack technical, managerial, and financial resources. Historically, SRF support has been used to replace aging water infrastructure with the same conventional infrastructure. While this approach may improve the performance of some systems, it is unlikely to reduce the burden on ratepayers, which is often unbearably high for small and disadvantaged communities. This is a cycle in need of disruption, and we expect the project team's efforts to change the trajectories of these communities.

The project team—Moonshot Missions, technical experts, and the partner utilities—will spearhead this disruption by developing "Moonshot Modules" that incorporate natural infrastructure and resiliency solutions while also standardizing, simplifying, and reducing the cost of improvements relevant to many utilities. They will develop, pilot, and then package these Modules at six utilities that represent the diversity of Great Lakes systems and engage communities across the region to expand their impact.

The project team will expand to include twenty-five more utilities by the end of the project's term and build a community of practice that will carry these practices across the region.

Team Composition:

Moonshot Missions (Fiscal Agent)
HydroDigital, LLC
SJS Consulting
City of Akron, OH
City of Toledo, OH
City of Gary, IN
City of Lima, OH
City of Defiance, OH

Building Agroforestry to Improve Water Quality ($1,200,000)

Awarded in 2021, this project will drive the growth of agroforestry across the Great Lakes basin. Agroforestry – incorporating trees into row crop farmland – has been shown to improve the performance of riparian buffers around farmland, and alley cropping (the practice of interspersing rows of tree crops among common row crops) substantially reduces nutrient loss from the land. However, significant challenges exist regarding the widespread adoption of agroforestry throughout the Great Lakes basin, including the inability to drive market demand for tree crops, like hazelnuts, without a reliable supply source, and vice versa. Further, an unreliable market creates a

dearth of capable technical support for farmers to incorporate agroforestry on their land. This project will develop and deploy the support systems needed to accelerate the adoption of agroforestry across the region.

The project team will (1) establish a set of pilot farms in northeast Wisconsin implementing agroforestry, (2) engage a community of farmers and customers throughout the basin, and (3) develop the tools they need to accelerate the growth of agroforestry across the region. With demonstration sites as hubs, the project team's farmers and trained technical service providers will create practitioners' guides to agroforestry's technical and financial aspects. These guides, engagement by farmers across the region, and the feedback from initial pilot clusters will lead to a second set of agroforestry pilots in western Michigan in the latter stages of the project and detailed plans for four more in the following years.

Team Composition:

Savanna Institute (Fiscal Agent)
Farm Commons
Chiwara Permaculture Research and Education L3C / We are the Forest
USDA National Agroforestry Center
Iroquois Valley Farmland REIT
Newaygo Conservation District
Michigan Alliance for Environmental and Outdoor Education
Country Financial
Artisan Grain Collaborative
Oceana Conservation District
Croatan Institute
McFarlane Manufacturing Company Incorporated
Ozaukee Washington Land Trust
Riveredge Nature Center
River Alliance of Wisconsin

Transforming Land Stewardship Through a Farm Navigator Network ($1,219,000)

Awarded in 2021, this project will increase the adoption of conservation practices and regenerative farming systems across the Great Lakes basin by creating the Great Lakes Farm Navigator Network, a new network of "navigators" and a supporting training program that will assist senior farmers and landowners to transition their land to new owners and operators who have a commitment to conservation.

Nearly one in three farmers in the Great Lakes states are over 65 years old, and the average age of landowners renting land to farmers is 66. Many of these farmers and landowners are interested in establishing and maintaining conservation practices on their land. Still, they haven't created farm transfer plans that incorporate conservation practices. The Network will advise, train and support senior farmers and landowners to implement conservation options in their farm transfer plans and support beginning farmers to secure land access with a commitment to conservation. They will focus on: Women farmers/landowners – to develop and implement conservation or farm transfer plans. Senior farmers/landowners – to implement conservation options, such as agricultural conservation easements within their farm transfer planning. Beginning farmers – to secure land access with an articulated land ethic or commitment to conservation, tied to their personal and business goals.

The team will recruit and train navigators from regions where agriculture's impact is the highest in the basin: Michigan, New York, Ohio, and Wisconsin. Navigators will come from multiple sectors, including University Extension, agricultural organizations, retailers, land trusts, and soil and water conservation districts, and they will undergo training in estate planning, contracting, trust instruments, and corporate and other sustainability initiatives. This will be a first-of-its-kind holistic program to serve all three diverse audiences of women farmers/landowners, senior farmers/landowners, and beginning farmers to achieve multiple land-related goals. If successful, the team expects to reduce phosphorus contribution to the Lakes by more than 400 metric tons per year within ten years.

Team Composition:

American Farmland Trust (Fiscal Agent)
Michigan State University Kellogg Biological Station
Michigan State University Extension
Central State University Extension
Renewing the Countryside
Ohio Federation of Soil and Water Conservation Districts
Northwest State Community College
Ohio State University Extension
Cornell University

Nutrient Reduction through Real-time Optimization and Control ($905,000)

Awarded in 2019, this is a foundational proof-of-concept project to develop a real-time monitoring and control system for reducing phosphorus, nitrogen, and sediment discharged by agricultural drains. The project team will deploy an array of sensors on farmland to continuously measure critical parameters such as precipitation, water levels, flow, water quality, and soil moisture. They will build machine learning models using sensor and weather data to predict field drainage behavior on a variety of time scales.

Team Composition:

Xylem, Inc. (Fiscal Agent)
University of Notre Dame
Van Buren Conservation District

Healthy Ports: Port Bay Monitoring ($100,000)

In 2018, the Board awarded a team led by the University of Buffalo $1,590,000 to pilot new passive sediment management strategies at river mouths to create new wetland and fish habitat, improve water quality, support local economies, and reduce the cost and environmental impacts from dredging. To further support this project, under the same resolution, the Board voted unanimously to make up to $100,000 available to support expanded monitoring and data analysis, so that the project team can assess improvements to the physical, chemical and biological integrity of the Great Lakes ecosystem.

This is a three-year project to monitor the Healthy Port Futures Port Bay, New York site, that will provide proof-of-concept for the work the team has done and generate novel and valuable data that will inform other shoreline communities. The Port Bay project depends on adaptive management, so monitoring is essential to its long-term

viability. The project, which consists of annual construction of a cobble-feeding system of dredged material, provides both beach nourishment and habitat creation. It is part of a much larger regional sedimentary system; thus, information from this project can be quickly used to support projects elsewhere. The team will prepare an integrated assessment of impact from all its pilot projects at the end of the three years.

Team Composition:

University of Pennsylvania (Fiscal Agent)

Advancing Early Detection of Ballast-mediated Invaders in the Great Lakes ($648,000)

Awarded in 2020 and developed from a project design award, this project will make early detection of aquatic invasive species (AIS) both more economical and practical and significantly improve the prospects for prevention and containment of AIS in the Great Lakes. Existing detection methods for targeting invasive organisms are time-consuming and expensive. Consequently, new colonies of AIS are often only detected after they are well-established. The project team will develop "smoke detectors" for AIS – new protocols for sampling and analysis that are inexpensive, rapid, and easy to use. They will use methods that detect the genetic material of target organisms in Great Lakes harbors and determine whether its presence indicates a reproducing colony of that organism. The team will "package" the products of their work so state resource managers and others that lead AIS management activities can quickly adopt them.

Team Composition:

Pennsylvania State University – Erie (Fiscal Agent)
Governors State University
Pennsylvania Sea Grant
Tom Ridge Environmental Center Foundation
US Environmental Protection Agency
US Naval Research Laboratory
American Great Lakes Ports Association
Alliance for the Great Lakes
Pennsylvania Department of Environmental Protection
Great Lakes Commission
Central Michigan University
NOAA Great Lakes Environmental Research Laboratory

Improving Shoreline Resilience and Coastal Adaptation through Community Action ($150,000)

This design effort will revolutionize coastal management across the Great Lakes region by introducing a new way of thinking about shoreline resilience. Great Lakes coastal communities now have an opportunity to reshape how their coastlines are built and managed for the future. The team will demonstrate how shorter-term adaptive management -guided by customized remote sensing technologies, tools, and data collection – can better prepare coastal communities for the escalating impacts of climate change. Through this work, communities will be able to develop, construct, and maintain more ecologically integrated and resilient coastlines at a lower cost.

During this design phase, the team will identify potential coastal community partners, focusing on smaller communities that have demonstrated a need for more cost-effective, resilient coastal management and a

willingness to participate in more innovative experimental practices. The feedback from the coastal communities will enable the team to develop customized remote sensing technologies and data mapping tools to guide new adaptive management practices as well as meet the unique needs of communities.

Team Composition:
Proof Projects (Fiscal Agent)
AltoMaxx

Advancing Stormwater Management at Marinas in the Great Lakes ($839,000)

This team will improve nearshore water quality and habitat quality in the Great Lakes by advancing better stormwater management at Great Lakes marinas. Great Lakes marinas and the boating industry depend on clean waters and a healthy coastal environment for the success of their business. Yet, they operate on the nearshore of the Great Lakes and their tributaries, where concentrated human activity can significantly impact flora and fauna. Furthermore, the operation of marinas can cause various sources of pollution, such as sediments, pesticides, oil, road dirt, heavy metals, and nutrients to run off into nearshore waters during storm events.

To improve stormwater management at Great Lakes marinas, the team will develop a marina-specific stormwater management decision support tool and pilot the installation of green infrastructure practices in three private marinas in Michigan, Ohio and Wisconsin. The team will develop and implement monitoring and maintenance plans at each marina, as well as develop training curricula. They will host a technical training workshop to scale up green infrastructure practices across the nearly 1,000 marinas in the Great Lakes watershed. The team will leverage its multi-state Clean Marina program (there are currently 200 marinas certified in the region) to drive adoption of the practices identified by the tool and demonstrated in the pilots.

Team Composition:
Michigan Sea Grant (Fiscal Agent)
Michigan Clean Marina Program
Ohio Sea Grant
Erie Conservation District
Ohio Department of Natural Resources
Wisconsin Sea Grant
Wisconsin Coastal Management
Ohio State University

Great Lakes Protection Fund

The Fund's mission is to identify, demonstrate, and promote regional action to enhance the health of the Great Lakes Ecosystem.

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