Great Lakes Protection Fund
2010 Annual Report

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 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 2010, the Fund has made a total of 237 grants and program-related investments, representing a $59.8 million commitment to protecting and restoring the ecological health of the Great Lakes ecosystem. Additionally, the Fund has paid more than $42.4 million directly to its seven member states to support their Great Lakes priorities. Over the course of the past 21 years, the Great Lakes ecosystem has benefited from the States' initial investment of $81 million with an overall commitment of more than $102.2 million to date.

Activities During 2010

In the past year, the Fund generated over $2.4 million in investment income from the endowment. The Fund returned almost $1.1 million to its member states to support their Great Lakes priorities. The Fund paid $2.2 million to support regional projects. Audited financial statements can be found in Appendix 1.

The Fund entered 2010 with 19 active projects focused on efforts to prevent biological pollution, restore natural flow regimes, engage market forces, and provide leadership for ecosystem restoration in the Great Lakes Basin. These projects represented an investment by the Fund of $9.3 million.

Over the course of the year, work was completed on six of these projects. These projects are identified in Appendix 2. All projects generated new and useful tools that will ultimately improve the health of the

Great Lakes ecosystem. Each project provided a unique and positive mission-related return on the Fund's investment.

During 2010, the Fund developed and supported seven new projects, maintaining the portfolio of active, supported work at just over $9.9 million. These projects support the Governors' non-regulatory water conservation and efficiency efforts under the Great Lakes–St. Lawrence River Basin Sustainable Water Resources Compact. The new projects for 2010 include an effort to apply and modify water footprinting tools in a water-rich region such as the Great Lakes basin. Another team has already succeeded in engaging agricultural service providers who are actively engaged with landowners and local conservation communities to promote and sell the combination of increased crop production and environmental health. These projects will help to achieve the Governors' objective of adopting sustainable use practices that protect the Great Lakes water resources. The complete portfolio of supported work, including new projects awarded in 2010, can be found in Appendix 3.

Evaluation of the Corporation's Performance

The Fund accomplished its objectives in 2010. Regional projects were designed and funded to address key gubernatorial priorities—especially the sustainable use of Great Lakes water and stopping invasive species. Ongoing regional efforts were monitored, adjusted when required, and closed out when appropriate. Despite difficult economic conditions, significant funds were paid directly to the member states to support their individual priorities.

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 research agenda in support of these priorities. In the near term, the Fund is likely to focus on continued development of significant, new technological tools to help protect and restore the resources of the Great Lakes. These include tools that address the global emphasis on water risk and security including opportunities to design, test and monitor response actions as well as addressing solutions to the proliferation of genetically modified organisms.

Actions Taken by the Directors in Response to Public Comments

The Directors have sought, but not received, public comments on this report.

MEMBERS OF THE CORPORATION IN 2010

Governor of Illinois

Pat Quinn

Governor of Michigan

Jennifer M. Granholm

Governor of Minnesota

Tim Pawlenty

Governor of New York

David Paterson

Governor of Ohio

Ted Strickland

Governor of Pennsylvania

Edward G. Rendell

Governor of Wisconsin

James E. Doyle

BOARD OF DIRECTORS IN 2010

Wendy Abrams *(Highland Park, IL)*

Todd Ambs *(Madison, WI)*

Lori Boughton *(Meadville, PA)*

Ken DeBeaussaert *(Lansing, MI)*

Matthew Driscoll *(Syracuse, NY)*

Michael Elmendorf *(Albany, NY)*

Alan Fish *(Madison, WI)*

Caren Glotfelty *(Pittsburgh, PA)*

Edwin Hammett *(Toledo, OH)*

Scott Harrison *(Lutsen, MN)*

Jack Kilroy *(Avon, OH)*

Pat Lupo, OSB *(Erie, PA)*

Matthew Millea *(Albany, NY)*

Craig Shaver *(Minneapolis, MN)*

Debra Shore *(Chicago, IL)*

Maureen Smyth *(Flint, MI)*

GREAT LAKES PROTECTION FUND STAFF

Shannon Donley – Associate Program Officer

Amy Elledge – Communications Administrator

Robert Eder – Director, Finance and Administration

David Rankin – Program Director

Russell Van Herik – Executive Director

APPENDIX 1

2010 AUDITED FINANCIAL STATEMENTS

Great Lakes Protection Fund

Financial Report
December 31, 2010

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McGladrey & Pullen, LLP
Certified Public Accountants

McGladrey

Independent Auditor's Report

To the Board of Directors
Great Lakes Protection Fund

We have audited the statements of financial position of Great Lakes Protection Fund (the Fund) as of December 31, 2010 and 2009 and the statements of activities and cash flows for the years then ended. These financial statements are the responsibility of the Fund's management. Our responsibility is to express an opinion on these financial statements based on our audits.

We conducted our audits in accordance with auditing standards generally accepted in the United States of America. Those standards require that we plan and perform the audit to obtain reasonable assurance about whether the financial statements are free of material misstatement. An audit includes examining, on a test basis, evidence supporting the amounts and disclosures in the financial statements. An audit also includes assessing the accounting principles used and significant estimates made by management, as well as evaluating the overall financial statement presentation. We believe our audits provide a reasonable basis for our opinion.

In our opinion, the financial statements referred to above present fairly, in all material respects, the financial position of Great Lakes Protection Fund as of December 31, 2010 and 2009 and its activities and its cash flows for the years then ended in conformity with accounting principles generally accepted in the United States of America.

McGladrey & Pullen, LLP

Chicago, Illinois
March 14, 2011

Great Lakes Protection Fund

Statements of Financial Position
December 31, 2010 and 2009

	2010	2009
Assets		
Cash and cash equivalents	**$ 12,701,704**	$ 8,825,966
Investments	**100,608,412**	96,806,264
Accrued interest	**239,105**	104,466
Other assets	**21,378**	15,304
Furniture, equipment and leasehold improvements, net of accumulated depreciation of $311,998 and $294,496 in 2010 and 2009, respectively	**8,845**	24,279
	$ 113,579,444	$ 105,776,279
Liabilities and Net Assets		
Liabilities		
Grant commitments	**$ 110,299**	$ 588,140
Member state shares payable	**1,081,164**	-
Accrued expenses	**264,671**	160,696
Accrued pension contribution	**4,124**	6,719
Accrued postretirement health benefits	**183,519**	188,957
	1,643,777	944,512
Net Assets		
Unrestricted	**3,768,284**	3,759,861
Temporarily restricted	**27,167,373**	17,544,918
Permanently restricted	**81,000,010**	83,526,988
	111,935,667	104,831,767
	$ 113,579,444	$ 105,776,279

See Notes to Financial Statements.

Great Lakes Protection Fund

Statements of Activities
Years Ended December 31, 2010 and 2009

	2010				2009			
	Unrestricted	Temporarily Restricted	Permanently Restricted	Total	Unrestricted	Temporarily Restricted	Permanently Restricted	Total
Revenue:								
Investment income (loss)	$ 8,423	$ 4,687,145	$ -	$ 4,695,568	$ 46,551	$ (3,361,416)	$ -	$ (3,314,865)
Miscellaneous revenue	-	5,852	-	5,852	-	141	-	141
Net assets released from restrictions	4,253,667	(4,253,667)	-	-	3,200,514	(3,200,514)	-	-
	4,262,090	439,330	-	4,701,420	3,247,065	(6,561,789)	-	(3,314,724)
Expenses:								
Program grants	1,761,233	-	-	1,761,233	1,899,930	-	-	1,899,930
Member state shares	1,081,164	-	-	1,081,164	-	-	-	-
Investment management and advisory fees	101,633	-	-	101,633	126,700	-	-	126,700
Administrative expenses	1,354,666	-	-	1,354,666	1,162,599	-	-	1,162,599
	4,298,696	-	-	4,298,696	3,189,229	-	-	3,189,229
Increase (decrease) in net assets before other items	(36,606)	439,330	-	402,724	57,836	(6,561,789)	-	(6,503,953)
Unrealized gain on investments	-	6,656,147	-	6,656,147	-	24,106,707	-	24,106,707
Change in other postretirement benefit obligation	45,029	-	-	45,029	(11,285)	-	-	(11,285)
Transfer to reflect change in restricted status of interest charges on member state contributions	-	2,526,978	(2,526,978)	-	-	-	-	-
Increase (decrease) in net assets	8,423	9,622,455	(2,526,978)	7,103,900	46,551	17,544,918	-	17,591,469
Net assets:								
Beginning of year	3,759,861	17,544,918	83,526,988	104,831,767	3,713,310	-	83,526,988	87,240,298
End of year	$ 3,768,284	$ 27,167,373	$ 81,000,010	$ 111,935,667	$ 3,759,861	$ 17,544,918	$ 83,526,988	$ 104,831,767

See Notes to Financial Statements.

Great Lakes Protection Fund

Statements of Cash Flows
Years Ended December 31, 2010 and 2009

	2010	2009
Cash Flows from Operating Activities		
Increase in net assets	**$ 7,103,900**	$ 17,591,469
Depreciation and amortization	**17,502**	18,147
Realized (gain) loss on sales of investments	**(2,476,613)**	5,936,883
Unrealized gain on investments	**(6,656,147)**	(24,106,707)
Changes in:		
Accrued interest	**(134,639)**	45,574
Other assets	**(6,074)**	5,216
Grant commitments	**(477,841)**	588,140
Member state shares payable	**1,081,164**	(200,620)
Accrued expenses	**103,975**	(43,935)
Accrued pension contribution	**(2,595)**	1,589
Accrued post retirement health benefits	**(5,438)**	44,102
Net cash used in operating activities	**(1,452,806)**	(120,142)
Cash Flows from Investing Activities		
Purchases of investments	**(18,189,602)**	(14,016,799)
Proceeds from sales of investments	**23,520,214**	14,075,760
Purchases of furniture, equipment and leasehold improvements	**(2,068)**	-
Net cash provided by investing activities	**5,328,544**	58,961
Increase (decrease) in cash and cash equivalents	**3,875,738**	(61,181)
Cash and cash equivalents:		
Beginning of year	**8,825,966**	8,887,147
End of year	**$ 12,701,704**	$ 8,825,966

See Notes to Financial Statements.

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 goals of the Great Lakes Toxic Substances Control Agreement and the binational Great Lakes Water Quality Agreement, so as to advance the health of the ecosystem of the Great Lakes Basin.

Basis of accounting: Under accounting principles generally accepted in the United States of America, not-for-profit organizations report net assets in each of the three classes: permanently restricted, temporarily restricted, or unrestricted based on the existence or absence of donor-imposed restrictions.

Cash and cash equivalents: For purposes of the statements of cash flows, the Fund considers all highly liquid debt instruments purchased with a maturity of three months or less to be cash equivalents.

The Fund maintains cash accounts at financial institutions, which at times, may exceed $250,000. The accounts are insured by the Federal Deposit Insurance Corporation (FDIC) up to $250,000. A significant portion of cash equivalents is invested in money market accounts. Such amounts are insured by the Securities Investors Protection Company up to $500,000. Amounts in excess of those levels are insured by the manager to the balance of the account. 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 for mutual funds are computed using the specific-identification method. Realized gains for all other investments are computed using the first-in, first-out method.

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.

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 five to seven years. Leasehold improvements are amortized over the remaining lease term.

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 contingencies have been met.

Use of estimates: The preparation of financial statements in conformity with accounting principles generally accepted in the United States of America 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.

Postretirement benefits: The Fund provides certain health care benefits for its retired employees that meet eligibility requirements. The Fund's share of the estimated costs that will be paid after retirement is generally being accrued by charges to expense over the employees' active service periods to the dates they are fully eligible for benefits.

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

Income taxes: The Fund is exempt from income taxes under Section 115(1) of the Internal Revenue Code 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 (UBIT). 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 percent likelihood of being realized upon ultimate settlement. The guidance on accounting for uncertainty in income taxes also addresses de-recognition, classification, interest and penalties on income taxes, and accounting in interim periods. At December 31, 2010 and 2009, there were no unrecognized tax benefits identified or recorded as liabilities.

Subsequent events: The Fund has evaluated subsequent events for potential recognition and/or disclosure through March 14, 2011, the date the financial statements were available to be issued.

Reclassifications: Certain December 31, 2009 amounts have been reclassified to conform with the current year presentation without affecting previously reported net assets or changes in net assets.

Note 2. Investments

Investments consist of the following:

	2010	
	Cost	Market
Common stocks and stock equivalents - global equity	$ 9,134,767	$ 8,768,336
Mutual funds		
Domestic equity	35,564,429	38,305,394
International equity	26,002,102	28,098,614
Fixed income	24,896,321	25,436,068
	$ 95,597,619	$ 100,608,412

	2009	
	Cost	Market
Common stocks and stock equivalents		
Domestic equity	$ 2,776,231	$ 3,173,944
Global equity	9,087,840	8,186,129
Mutual funds		
Domestic equity	26,714,412	33,229,224
International equity	35,564,428	26,761,263
Fixed income	24,308,708	25,455,704
	$ 98,451,619	$ 96,806,264

Note 2. Investments (Continued)

Gains and losses (realized and unrealized) are reported in operating revenue and in other revenue as follows:

	2010	2009
Interest and dividends	$ 2,218,955	$ 2,622,018
Realized gains (losses) on securities sold	2,476,613	(5,936,883)
Total investment income (loss) included in operating revenue	$ 4,695,568	$ (3,314,865)
Change in unrealized gains and losses relating to assets still held at end of year	$ 6,656,147	$ 24,106,707

Note 3. Fair Value Disclosures

The Fund follows accounting guidance related to fair value measurements, which provides a framework for measuring fair value under generally accepted accounting principles. This guidance 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 at the measurement date and sets out a fair value hierarchy. The fair value hierarchy gives the highest priority to quoted prices in active markets for identical assets or liabilities (Level 1) and the lowest priority to unobservable inputs (Level 3). Inputs are broadly defined under this guidance as assumptions market participants would use in pricing an asset or liability. The three levels of the fair value hierarchy under this guidance are described below:

Level 1. Valuations for assets and liabilities traded in active exchange markets, such as the New York Stock Exchange. Level 1 assets primarily include listed equities and mutual funds.

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.

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. The following section describes the valuation techniques used by the Fund to measure different financial instruments at fair value and includes the level within the fair value hierarchy in which the financial instrument is categorized.

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.

Note 3. Fair Value Disclosures (Continued)

Securities traded in the over-the-counter market and listed securities for which no sale was reported on that date are stated at the last quoted bid price. These financial instruments are classified as Level 2 in the fair value hierarchy.

For the years ended December 31, 2010 and 2009, the application of valuation techniques applied to similar assets and liabilities has been consistent. The fair value of investment securities is the market value based on quoted market prices, when available, or market prices provided by recognized dealer brokers.

The tables below summarize investments according to the fair value hierarchy as of December 31, 2010 and 2009, respectively:

	December 31, 2010			
	Quoted Prices in Active Markets for Identical Assets (Level 1)	Significant Other Observable Inputs (Level 2)	Significant Unobservable Inputs (Level 3)	Total
Common stocks and stock equivalents - global equity	$ 8,768,336	$ -	$ -	$ 8,768,336
Mutual funds				
Domestic equity	38,305,394	-	-	38,305,394
International equity	28,098,614	-	-	28,098,614
Fixed income	25,436,068	-	-	25,436,068
Total assets	$ 100,608,412	$ -	$ -	$ 100,608,412

	December 31, 2009			
	Quoted Prices in Active Markets for Identical Assets (Level 1)	Significant Other Observable Inputs (Level 2)	Significant Unobservable Inputs (Level 3)	Total
Common stocks and stock equivalents				
Domestic equity	$ 3,173,944	$ -	$ -	$ 3,173,944
Global equity	7,047,836	1,138,293	-	8,186,129
Mutual funds				
Domestic equity	33,229,224	-	-	33,229,224
International equity	26,761,263	-	-	26,761,263
Fixed income	25,455,704	-	-	25,455,704
Total assets	$ 95,667,971	$ 1,138,293	$ -	$ 96,806,264

The carrying amounts of financial instruments, including cash and cash equivalents, receivables, investments, accrued interest receivable, other assets, member state shares payable, and accrued expenses approximates fair value due to the short maturity of these instruments.

Note 4. Member State Shares

In accordance with the articles of incorporation, the Fund is required to disburse to the member states one-third of its realized investment 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. Accrued member state shares were $1,081,164 at December 31, 2010. No member state shares were accrued at December 31, 2009.

Note 5. Grants Committed

Grant activity for 2010 and 2009 is as follows:

	Grants Approved	Grants Paid	Grants Committed December 31
2010	$ 2,273,802	$ 2,239,074	$ 110,299
2009	1,046,000	1,311,790	588,140

As of December 31, 2010, total grants approved since the Fund's inception amounted to $59,891,315, of which $4,773,022 related to grants for which the contingencies have not been met and, therefore, the grant expenses have not been recognized. Upon satisfaction of the contingencies by the recipients, the Fund will recognize the grant expenses and disburse the remaining payments.

Note 6. Net Assets

Unrestricted

Unrestricted net assets represent amounts that are not subject to externally-imposed purpose or time restrictions. Certain unrestricted net assets have been designated by the board of directors for a specific purpose. On November 7, 2008, the board of directors designated $5,000,000 as a Sequestration Fund, representing an estimate of amounts sufficient to provide for commitments and obligations of the Fund. The balance of unrestricted net assets represents the unspent portion of the Sequestration Fund.

Temporarily Restricted

Temporarily restricted net assets are comprised of endowment fund earnings that have not yet been appropriated for expenditure by the Fund, which beginning in 2010 includes interest received on late payments of original contributions by member states.

Permanently Restricted

Permanently restricted net assets represent the contributions received from member states in accordance with the Fund's articles of incorporation. These amounts cannot be expended.

Prior to 2010, permanently restricted net assets also included interest on delayed payments from member states. In 2010, the board voted to rescind this policy and treat interest on late payments of original contributions as temporarily restricted net assets until appropriated for expenditure.

Note 6. Net Assets (Continued)

With the exception of Indiana, all states have made their required contributions, which were as follows:

Illinois	$ 15,000,000
Michigan	25,000,000
Minnesota	1,500,000
New York	12,000,000
Ohio	14,000,000
Pennsylvania	1,500,000
Wisconsin	12,000,000
	$ 81,000,000

There is no due date for the contribution payable by Indiana, which has not yet joined the Fund.

In accordance with its articles of incorporation, the Fund charges interest to states electing to extend the time to make the required contributions. No such interest was charged in 2010 or 2009. No interest is due from the State of Indiana until such time as it elects to join the Fund and to determine the time to make its required contributions.

In 1991, the board voted to treat interest on late payments to original contributions as part of the original corpus (permanently restricted net assets); and the financial statements have accordingly so reflected since. In 2009, that amount was $2,526,978. In 2010, the board voted to rescind the earlier policy and treat interest on late payments to original contributions as temporarily restricted net assets until appropriated for expenditure.

Note 7. 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 not-for-profit organizations.

Interpretation of Relevant Law – The Fund has interpreted the Illinois UPMIFA as requiring the preservation of the fair value of the original gift as of the gift date of the donor-restricted endowment funds absent explicit donor stipulations to the contrary. As a result of this interpretation, the Fund classifies as permanently restricted net assets (a) the original value of gifts donated to the permanent endowment, (b) the original value of subsequent gifts to the permanent endowment, and (c) accumulations to the permanent endowment made in accordance with the direction of the applicable donor gift 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; and
7) The investment policies of the Fund.

Note 7. Endowment Net Assets (Continued)

The changes in endowment net assets for the Fund were as follows for 2010 and 2009:

	2010			
	Unrestricted	Temporarily Restricted	Permanently Restricted	Total
Endowment net assets, beginning of year	$ 3,759,861	$ 17,544,918	$ 83,526,988	$ 104,831,767
Transfer to reflect change in restricted status of interest charges on member state contributions	-	2,526,978	(2,526,978)	-
Investment income	8,423	4,687,145	-	4,695,568
Miscellaneous revenue	-	5,852	-	5,852
Unrealized gains on investments	-	6,656,147	-	6,656,147
Amounts appropriated for expenditure	-	(4,253,667)	-	(4,253,667)
Endowment net assets, end of year	$ 3,768,284	$ 27,167,373	$ 81,000,010	$ 111,935,667

	2009			
	Unrestricted	Temporarily Restricted	Permanently Restricted	Total
Endowment net assets, beginning of year	$ 3,713,310	$ -	$ 83,526,988	$ 87,240,298
Investment income (loss)	46,551	(3,361,416)	-	(3,314,865)
Miscellaneous revenue	-	141	-	141
Unrealized gains on investments	-	24,106,707	-	24,106,707
Amounts appropriated for expenditure	-	(3,200,514)	-	(3,200,514)
Endowment net assets, end of year	$ 3,759,861	$ 17,544,918	$ 83,526,988	$ 104,831,767

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 8 percent and a real return of 4 percent in excess of the Consumer Price Index. Actual returns in any given year may vary from this amount.

Note 7. Endowment Net Assets (Continued)

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. Overall target asset allocation for the Fund is as follows:

Asset Class	Target Allocation
Domestic and foreign stocks	60-70%
Fixed income (U.S. Bonds), cash and cash equivalents	30-40%

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 8. Commitments

The Fund is obligated under an office lease expiring in December 2019.

Rent expense totaled $106,690 and $170,002 for 2010 and 2009, respectively.

Minimum payments required under the lease are as follows:

2011	$ 128,061
2012	130,572
2013	133,083
2014	135,594
2015	150,660
Thereafter	627,750
	$ 1,305,720

Note 9. Retirement Plan

The Fund maintains a retirement plan under the provisions of Section 401(a) of the Internal Revenue Code applicable to governmental retirement plans. All employees are eligible to participate upon commencement of employment. The Fund makes contributions equal to 10 percent of each employee's compensation and additional contributions at the discretion of the Board of Directors. Employees cannot contribute to the plan. The Fund contributed $44,945 and $54,589 to the plan for 2010 and 2009, respectively.

Note 10. Deferred Compensation Plan

The Fund maintains a deferred compensation plan under the provisions of Section 457(b) of the Internal Revenue Code applicable to governmental retirement plans. All employees are eligible to participate upon commencement of employment. Participants can elect to participate in the deferred compensation plan. The Fund matches employee contributions up to six percent of salary. The Fund contributed $26,402 and $30,713 to the plan for 2010 and 2009, respectively.

Note 11. Board-Designated Additional Compensation Plan

The Fund maintains a plan of additional compensation to maintain competiveness with comparable positions in comparable organizations. Certain employees (Executive Director, Vice President – Program, and Vice President – Finance and Administration) are eligible to participate. The additional compensation is contributed to the 401(a) Retirement Plan. The Fund contributed $65,000 to the plan for 2010. Of the $65,000 contributed in 2010, $52,000 had been expensed in prior years; however, due to an administrative error, the amendment to the 401(a) plan had not been approved by the board and executed by the plan trustees prior to December 31, 2009.

Therefore, the Executive Director and the Vice President – Program were required to forfeit their prior year employer contributions, plus gains, until the amendment had been executed. After the amendment was executed, the forfeited amounts were returned to the employees' 401(a) plan accounts.

Note 12. Postretirement Health Benefits

On July 1, 2008, the Fund established a retiree health plan to provide certain health care benefits to retired employees. Employees who retire at age 65 or older with at least 10 cumulative years of service are eligible to participate in the plan.

The Fund follows accounting guidance requiring revised accounting and disclosure for defined benefit pension and other postretirement plans. The provisions of this guidance require employers to recognize the overfunded or underfunded positions (the difference between the costs funded to date and the benefit obligation) of postretirement plans as an asset or liability in the statement of financial position and to recognize changes in that funded status in changes in unrestricted net assets in the year in which the changes occur.

Change in other postretirement benefit obligation:

	2010	2009
Unrecognized prior service cost	$ -	$ -
Amortization of prior service cost	(11,118)	(11,118)
Amortization of net loss	(2,746)	(1,142)
Net loss experienced during the year	(31,165)	23,545
	$ (45,029)	$ 11,285

Note 12. Postretirement Health Benefits (Continued)

Net periodic benefit cost is recognized in the statement of activities is as follows:

	2010	2009
Service cost	$ 14,201	$ 11,721
Interest cost	11,526	8,836
Amortization of unrecognized prior service cost	11,118	11,118
Amortization of net loss	2,746	1,142
	$ 39,591	$ 32,817

Additional information is as follows:

	2010	2009
Accumulated postretirement benefit obligation, beginning of year	$ 188,957	$ 144,855
Service cost	14,201	11,721
Interest cost	11,526	8,836
Plan amendments	-	-
Actuarial loss	(31,165)	23,545
Accumulated postretirement benefit obligation, end of year	$ 183,519	$ 188,957
Plan assets at fair value, end of year	$ -	$ -
Fair value of plan assets	$ -	$ -
Accumulated postretirement benefit obligation	(183,519)	(188,957)
Funded status	$ (183,519)	$ (188,957)

The postretirement benefit obligation of $183,519 and $188,957 is accrued as a liability in the statement of financial position at December 31, 2010 and 2009, respectively.

The estimated prior service cost for the postretirement benefit plan that will be amortized into net periodic benefit cost during 2011 is $14,201.

The Fund intends to fund the plan with operating revenue. No contributions were made to the plan in 2010 or 2009.

Note 12. Postretirement Health Benefits (Continued)

Weighted average assumptions used in the calculation of the net periodic postretirement benefit cost and the postretirement benefit obligation are as follows:

	2010	2009
Discount rate, beginning of year	5.60%	6.10%
Discount rate, end of year	5.60%	6.10%
Expected return on assets	N/A	N/A
Health care cost trend rate		
2011		10.44%
2012		9.67%
2013		8.89%
2014		8.11%
2015		7.33%
2016		6.55%
2017		5.78%
2018 and beyond		5.00%
Ultimate trend rate		5.00%
Year of ultimate trend rate		2018

Assumed health care cost trend rates have a significant effect on the amounts reported for the health care plan. A one-percentage point change in assumed health care cost trend rates would have the following effects:

	1% Increase	1% Decrease
Effect on postretirement benefit obligation	$ 36,181	$ (29,348)
Effect on service cost and interest cost	$ 5,370	$ (4,315)

No benefit payments were made for 2010 or 2009. Estimated future benefit payments are as follows:

	Postretirement Benefits
2011	$ -
2012	-
2013	-
2014	2,524
2015	5,851
2016-2020	45,875
	$ 54,250

APPENDIX 2

PROJECTS COMPLETED IN 2010

PREVENTING BIOLOGICAL POLLUTION

Eco-Pro: An Intelligence System for Shipping to Protect the Ecosystem of the Great Lakes

This project team created a first-of-its-kind information system that integrates biological, commercial, and transportation information to generate detailed profiles of each vessel transiting the St. Lawrence Seaway. Profiles included their destinations, their prior ports of call, and the ecological and public health conditions existing at those locales. The team also designed a searchable computerized system that collects relevant real-time information on the likely risks presented by a particular vessel.

The team's work resulted in a private alpha version of the prototype system that successfully answered specific questions related to vessel traffic into and within the Great Lakes. This empowering technology allows users to view ships and disease outbreaks anywhere and at any time, effectively arming individuals with the information needed to act.

University of Illinois — $435,000
Contact: Bing Liu
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liub@cs.uic.edu

Genetic Biocontrol of Invasive Fish and Mollusks

This team's international symposium assembled scientists from fish genetics and biotechnology to risk assessment science and ecology, and professionals working in various facets of managing aquatic invasive species, to present and discuss the possibilities and risks of biocontrol methods—the release of genetically-manipulated organisms—to remove invasive species. The symposium addressed issues of concern such as cost, genetic "pollution" and unpredictability associated with biocontrol methods. The team's synthesis papers from the symposium will address technology, environmental risk assessment, regulatory research needs and policy research needs. The accumulation of this information is a necessary step in moving forward with biocontrol options intelligently and cautiously.

University of Minnesota — $75,000
Contact: Jeffrey Gunderson
218-726-8715
jgunder1@umn.edu

NATURAL FLOW REGIMES

Innovative Outreach to Absentee Landowners in the Great Lakes

This team contacted almost 2,000 absentee landowners by mail and in person in the counties of Arenac, MI; Tuscola, MI; Manitowoc, WI; and, Orleans, NY to gauge interest in conservation practices. Outreach efforts raised both interest and awareness among landowners regarding conservation. As a next step, the team explored the use of a "landowner advocate" to help absentee landowners navigate potential conservation opportunities. Team members hosted webinars to discuss lessons learned, and they developed a toolkit for outreach agents to aid them in effectively encouraging conservation activities with absentee landowners. This work could spark new conservation practices and behaviors on large pieces of U.S. land that were previously left unaddressed.

M&M Divide Resource Conservation & Development $542,000
Contact: Patricia Axman
712-792-4415
patricia.axman@ia.usda.gov

Implementing and Documenting the Benefits and Costs of "Stormwater Treatment Trains" in Three Model Conservation (Watershed Sensitive) Developments

The team developed a 'how-to' manual to explain the rationale and process for measuring and monitoring the performance of Stormwater Treatment Trains (STTs). STTs include vegetated swales that convey runoff, wetlands that remove nutrients and sediment, and sedimentation basins with staged release outlets. The guidebook included an extensive literature review related to stormwater management performance monitoring and monitoring program design. It also contained pricing information for equipment and laboratory analyses in a budgeting tool that helps users better balance data collection needs with budget constraints. Team members focused on Germantown, Oak Creek and Caledonia, Wisconsin as case studies. Resulting from the team's interaction with local officials in those areas, new county ordinances and zoning templates identified potential sites for new conservation development and applied innovative approaches to stormwater management.

Applied Ecological Services, Inc. $369,000
Contact: Steven Apfelbaum
608-897-8547
steve@appliedeco.com

Optimizing Industry Water Use

In this planning phase, the team held a water footprinting expert panel workshop to explore effective footprinting methodologies for industrial operations in the Great Lakes basin. Through this effort, the team assembled an expert panel to guide the development of a study, and resultant work plan, to identify water conservation strategies in industrial processes that in turn eliminate adverse environmental impacts in the Great Lakes region.

In December 2010 the team was awarded a Phase II grant for $256,000 to complete the water footprinting study.

Council of Great Lakes Industries $20,000
Contact: George Kuper
734-663-1944
ghk@cgli.org

Great Lakes Water Use Information Initiative

This team made recommendations to the Great Lakes States and the Provinces of Ontario and Quebec that resulted in improved data collection, sharing, and dissemination of water use information that will be available to the States and Provinces. The Compact Council and Regional Body adopted these recommendations.

Now data collected will be comparable and jurisdictions will follow a similar timeframe and process for reporting. In addition, long-term arrangements were created to maintain the regional database repository. A new website and a new State/Provincial communications team now assist the Compact Council with communications to the public and coordination of future work. Information regarding the initiative continues to be shared with regional partners and the public through various means, including the Council of Great Lakes Governors website and newsletter.

Council of Great Lakes Governors $199,300
Contact: David Naftzger
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APPENDIX 3

PORTFOLIO OF PROJECTS AS OF DECEMBER, 2010

PREVENTING BIOLOGICAL POLLUTION

Developing and Applying a Portable Real-Time Genetic Probe for Detecting Aquatic Invasive Species in Ships' Ballast

The Great Lakes will have a new line of defense against the "next set" of invasive species, when a new detection technology is unveiled by a team of researchers from the University of Notre Dame. This team will work with experts in invasive species biology, nanotechnology and molecular ecology, as well as Canadian and U.S. agencies to:

- Build five species-specific molecular probes—four for potentially invasive species (Chinese mitten crab, killer shrimp, golden mussel and predatory water flea) and one to detect zebra mussels
- Develop a ship-scale, laboratory independent detection platform for onboard or in port
- Establish a network to communicate the technology's progress and application

If successful, decision-makers will be able to know the invasive species threat posed by a particular vessel within two hours of taking a ballast water sample.

University of Notre Dame — $805,000
Contact: David Lodge
574-631-6094
lodge.1@nd.edu

Eco-Separation of the Chicago Area Waterway System to Prevent Invasion of Asian Carp and Other Species (awarded in 2010)

This team has convened stakeholders, recruited technical experts, and assembled a project team to evaluate different plans to physically separate the Great Lakes from the Mississippi River via the Chicago Area Waterway System (CAWS). This work is prompted by the history of invasive species moving between the watersheds, as well as the presence of two species of Asian carp in the upper reaches of the Illinois River and perhaps in the CAWS. This is the first step in a larger collaborative effort to engage the entire region in developing solutions that promote economic development, recreational uses and the biological security of the Lakes. The Fund's early support allowed the team to secure more than $1.7 million for the project's second phase.

Great Lakes Commission — $193,000
Contact: Tim Eder
734-971-9135
teder@glc.org

Risk Assessment and Management of Great Lakes Species

A risk assessment protocol created by this project team will speed up efforts to eliminate new introductions of invasive species into the Great Lakes. It will also help to stop the further spread of invasive, non-native species from the Great Lakes to other waters in North America. Work goals include:

- providing a sound scientific basis for assessing the relative invasion risk of vessels entering the Great Lakes, based on ports they have previously visited
- accelerating the creation of rapid genetic tests to identify ballast tank content
- identifying the best places and strategies to stop the spread of invasive species by recreational boaters

University of Notre Dame $1,090,000
Contact: David Lodge
574-631-6094
lodge.1@nd.edu

Ship-Mediated Harmful Microbes: Protecting the Great Lakes Ecosystem

"Microbial stowaways" on Great Lakes ships will be the target of this project, which will:

- Develop, test, and make widely available a set of new research techniques for microorganisms that threaten human health, wildlife health, or are otherwise ecologically or economically important
- Inventory the bacteriological content of ships' ballast water; and develop an institutional blueprint for monitoring microbes in the Great Lakes Basin

In parallel, and without Fund support, the Great Ships Initiative will start to test disinfection methods to create a "rapid treatment response" capacity to prevent ships operating in the Lakes from releasing harmful microbes. All of these actions will improve the ability of the Great Lakes region to identify and respond to threats posed by such stowaways on vessels or in basin ports.

Northeast-Midwest Institute $1,029,000
Contact: Allegra Cangelosi
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acangelo@nemw.org

A Phosphorus Soil Test Metric for Reducing Dissolved Phosphorus Loads

The objectives of this project are to:

- Develop a surficial phosphorous (SurP) soil test to measure the level of phosphorous currently available in the soil
- With certified crop advisors, the fertilizer community and local farmers, create management options for taking action based on detected phosphorous levels
- Measure phosphorous inputs to tributaries in Ohio, and share the results and lessons learned with groups in Saginaw Bay, MI; Green Bay, WI; and Ontario
- Develop a SurP metric that describes the level of reactive phosphorous in the soil and the likelihood of increased phosphorous loads into nearby tributaries (this should motivate changes that lead to ecosystem improvements in the Lakes)

The talents of all members of the agricultural supply chain will be tapped to accomplish a significant goal: a fifty percent reduction of dissolved, reactive phosphorous in the Ohio Lake Erie Basin within the next ten years. The team will also deliver the tools needed to achieve similar results in Saginaw Bay, Green Bay and Ontario. The successful reduction of phosphorous levels will drive down eutrophication in Lake Erie, reduce the outbreak of harmful algal blooms, and improve aquatic health.

Heidelberg College $947,000
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Compact Council Support; Non-regulatory Operations
(awarded in 2010)

This grant allows the Great Lakes-St. Lawrence River Basin Water Resources Council (Compact Council) and the Great Lakes-St. Lawrence River Water Resources Regional Body (Regional Body) to convene and undertake non-regulatory activities. In addition, the states and provinces, with the assistance of the Council of Great Lakes Governors, Inc., will develop a funding plan that will allow the Compact Council and Regional Body to support its own operations, without the continued financial support of outside sources.

Council of Great Lakes Governors $311,802
Contact: David Naftzger
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dnaftzger@cglg.org

Economic and Environmental Benefits of Industrial Water Use Efficiency

(awarded in 2010)

This team will design a basin-wide industrial water conservation assistance program. They will conduct conservation and ecological improvement opportunity assessments at three industrial facilities that use public water supply and wastewater treatment services; explore how financial, technical, and other resources can overcome common barriers to conservation; and then create a menu of program offerings and develop a plan to deliver those services. The program could reduce the use and release of chemicals used to treat water and wastewater, air emissions associated with pumping water and wastewater and flow disruptions associated with water withdrawals and returns flows.

Alliance for Water Efficiency $324,000
Contact: Mary Ann Dickinson
773-360-5100
maryann@a4we.org

Great Lakes Watershed Ecological Sustainability Strategy

This team will produce an effective and scientifically sound plan for ecological sustainability in Great Lakes watersheds. The team will create and demonstrate a Watershed Ecological Sustainability Strategy for the Great Lakes Basin (WESS), including:

- Water conservation actions like leakage control, water re-use and demand reduction
- Improved water quality through better agricultural management and waste treatment

The team will design an effort to pilot the strategy to two pilot watersheds—one agricultural, one urban. In workshops and on a website, the team hopes to effectively demonstrate the feasibility and utility of the WESS for restoring and sustaining the health of watersheds throughout the basin.

Limno-Tech, Inc. $125,000
Contact: Joseph DePinto
734-332-1200
jdepinto@limno.com

Implementing Real-Time Resource Use Feedback to Motivate and Empower Conservation

Water and electricity users will experience a new and immediate connection to the consequences of their actions, as a result of this project which seeks to change individual activity through social accountability. The project team seeks to "engage, educate, motivate and empower" resource consumers to change their behavior in 138 residential and commercial spaces on or near the Oberlin College campus.

The team will develop, deploy and evaluate a monitoring system that provides users real-time feedback on the amount of water and electricity they use, as well as direct consequences of that use. They propose that this will reduce residential power and water use, and in turn, reduce air emissions and restore stream flows in the Plum Creek watershed, which runs through Oberlin and is part of the Black River watershed that drains into Lake Eerie.

The team will install displays in student dormitories, apartment buildings, and mixed-use housing that show what is being consumed, how much it costs, and what the effect is upon air and water resources. They will also build an automated monitoring network that will assess changes in flow due to water withdrawals and discharges, as well as air quality and power sold. The team expects to provide information at the residence, neighborhood, city and watershed scales.

Oberlin College $812,000
Contact: John Petersen
440-775-6692
john.petersen@oberlin.edu

Integrating Energy and Water Resources Decision Making

The Great Lakes Commission will design a project to incorporate ecological factors into the planning, siting, and operation of new power production facilities, to limit negative impacts on aquatic habitats and resources. The project team will do this through modeling and macro-level analysis, seeking the assistance of energy and environment decision makers. A future pilot project will seek to apply the regional and sub-regional results of this project to future energy production practices and decisions. Long-term ecological outcomes could include:

- Protection of aquatic habitats from the impacts of power generation technologies
- Reductions in water use from power production sectors
- Environmental benefits resulting from such reductions

Great Lakes Commission $207,000
Contact: Victoria Pebbles
734-971-9135
vpebbles@glc.org

Launching GLIN Labs

This project will begin the redesign of the Great Lakes Information Network (GLIN), a creation ultimately intended to lead to positive results for the Great Lakes such as decreased invasions of exotic species, less harmful runoff from farms and cities, and reduced air and water pollution. The team will begin this effort by launching an innovation platform called "GLIN Labs" that will:

- Create new software
- Help users create new information products
- Host a small set of strategy experiments for what GLIN should become

The project team will upgrade how the network's data is made available and coordinate a series of design and piloting workshops to explore the potential capabilities of a re-energized GLIN. The team will update its strategic and operating plans for GLIN to incorporate what has been learned in this work and pursue next steps in a future proposal.

Great Lakes Commission $81,000
Contact: Tim Eder
734-971-9135
teder@glc.org

Networked-Neighborhoods for Eco-conservation

A team led by Michigan State University will encourage Great Lakes communities to conserve water, manage runoff and adopt various watershed improvement activities in this project. The project team will introduce environmental improvement activities and then test a way to "network" individual activities on a neighborhood level in order to achieve results at local and regional scales.

First, they will develop informational guides on positive items such as rain barrel installation, water use timing, rain gardens, and permeable pavements and landscaping. Next, they will distribute the information and lead the positive actions with neighborhood groups in Grand Rapids, MI, Toledo, OH, Racine, WI and an 8-county region in west Michigan.

In addition to this, individual participants will be socially motivated toward action by monitoring and comparing their own and their neighbors' actions via the Internet. Modeling will help neighborhoods identify where practices could be most effective by displaying results on local watershed or neighborhood websites.

Michigan State University $481,000
Contact: Jon Bartholic
517-353-3742
bartholi@msu.edu

Redeveloping Vacant Land as Green Infrastructure in Great Lakes Cities

(awarded in 2010)

This team will test the extent that green infrastructure in urban centers can increase ecological functions and highlight existing efforts to implement green infrastructure in the Great Lakes region and beyond. Green infrastructure could improve water quality by reducing flows of untreated wastewater that impact the Great Lakes each year through storm events. To do this, the team will investigate the environmental, economic, and social value of reusing vacant lands as green infrastructure in major Great Lakes cities. Leaders from across the Great Lakes will be recruited during this 12-month planning and convening period to explore this topic. The team will develop four to six large-scale demonstration projects and will work in the following cities: Duluth, MN; Flint and Detroit, MI; Chicago, IL; Milwaukee, WI; Gary, IN; Cleveland and Toledo, OH; Buffalo and Rochester, NY; Erie, PA; and Windsor, Toronto, and Hamilton, ON.

Cleveland Botanical Garden $167,000
Contact: Geri Unger
216-707-2817
gunger@cbgarden.org

Water Management Program Efficiency and Effectiveness Initiative

The Council of Great Lakes Governors will offer broad support to the non-regulatory work of the Great Lakes-St. Lawrence River Basin Water Resources Council (Compact Council) and the Great Lakes-St. Lawrence River Water Resources Regional Body (Regional Body). Project work will include a variety of planning and management elements in support of the Compact Council and the Regional Body. This ongoing work will continue to develop the region's water management regime and lay the foundation for longer-term institutional and programmatic arrangements. Results will include information, analysis and options needed for the Regional Body and Compact Council to decide how to effectively tackle future work related to the sustainable use and management of Great Lakes water.

Council of Great Lakes Governors $200,000
Contact: David Naftzger
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dnaftzger@cglg.org

MARKET MECHANISMS

Value of Great Lakes Water Initiative

The team will explore cost drivers and revenue models for water utilities, identify areas where water conservation can make a critical difference in ecological and public health, and design one or more pilot projects to explore the role of pricing in meeting these outcomes.

This project will assess:

- The potential use of efficiency-oriented pricing for Great Lakes water resources
- How pricing could be combined with other conservation practices
- How pricing can relate to regional water management issues including the availability of water for use, and impacts on the Great Lakes ecosystem

Great Lakes Commission $167,000
Contact: Tom Crane
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tcrane@glc.org

Transforming our Approach to Generate Conservation Benefits from Agriculture (awarded in 2010)

This team hopes to displace the low-margin fertilizer sales business with advisory services. The team will offer performance guarantees for farmers, and it will connect suppliers and advisors to federal subsidies that make offering these technical services attractive as a line of business. The team's work will focus in areas where farmers have yet to implement complete conservation practices on their fields. In this pilot phase, the team is working with farmers to reduce annual field contributions of phosphorus by over 17,000 pounds, nitrogen by over 67,000 pounds, and sediment by over 4,000 tons in two pilot areas. The team will also apply these lessons to other watersheds in New York, Michigan and/or Wisconsin's Great Lakes basin.

The IPM Institute of North America, Inc. $622,000
Contact: Thomas Green
608-232-1410
ipmworks@ipminstitute.org

Optimizing Industry Water Use – Phase II

(awarded in 2010)

The team will explore a suite of different water footprinting methods. It will determine how well these tools characterize industrial water use and identify water conservation strategies in industrial processes and modify them to work in a water-rich region. The team will also test the strength of these tools in detecting ecosystem impacts in a water-rich area such as the Great Lakes and determine whether they can be modified for applicability in the Great Lakes. If successful, this work will provide new tools that will advance the sustainability of the basin's water resources and reduce ecosystem impacts.

Council of Great Lakes Industries $256,000
Contact: George Kuper
734-663-1944
ghk@cgli.org

Piloting a Paradigm for Adaptive Management of Great Lakes Watesheds

(awarded in 2010)

This team will create, test, refine and deploy a new set of analytic tools to explore the many uses of the basin's waters. The team will also identify where, when, and by what degree water uses impact ecological health, and it will identify the economic value created by such uses. The team will develop quantitative relationships between use, impact and economic value in three "trial" watersheds, vet analyses in workshops with water users and regulators, create a set of tools for those audiences and prepare a strategy to further refine their approach. This work takes advantage of information developed in a large National Science Foundation-supported project that is assessing the economic value of Great Lakes water. It provides the best chance to link that effort to the state and provincial initiatives driven by the Great Lakes Water Resources Compact and companion Regional Agreement, especially assessments of cumulative impacts and revisions to the Decision standard to be undertaken in 2013.

Michigan Technological University $400,000
Contact: Alex Mayer
906-487-3372
asmayer@mtu.edu

Real-Time System Optimization for Sustainable Water Transmission and Distribution

To minimize air emissions created by water supply systems, this project seeks to optimize water movements within the supply, collection and treatment system. This effort could also reduce water withdrawals, effluent discharges and impacts of overflows that cause unintentional releases.

Proposed in-system storage capacity will allow the utility to alter the timing and magnitude of water withdrawals, shifting the system pumps' demand for electricity away from peak times when the power system requires the use of high-emission generating sources.

The team will also install pump monitors and flow meters for real-time information on the hydraulic characteristics of the system. New software will use this information to optimize the use of pumps and track the resulting changes in power demand, energy costs, withdrawal timing, storm-holding capacity and other measures. Software and training will be made available to water utilities at no charge.

Wayne State University — $1,480,000
Contact: Carol Miller
313-577-3790
cmiller@eng.wayne.edu

Water Use Impacts and Conservation Benefits

This project will address the negative effects of changing the Great Lakes hydrologic systems. The team expects this effort to result in better understanding of the benefits of water conservation and how they can be characterized, captured, and/or monetized. The project will be completed in three steps:

- Examining the environmental, economic and energy impacts of altering flow paths of water based on source and discharge
- Identifying pilot areas where activities and carbon offsets can be demonstrated and measured
- Developing a work plan to measure environmental impacts as well as addressing the potential for trading water conservation-based carbon credits

Environmental Consulting & Technology, Inc. — $171,000
Contact: Jeffrey Edstrom
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