



The Value of the Nonprofit Environment Field in Illinois

A Social Return on
Investment Analysis

with Donors Forum

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This report is available online at: www.socialimpactresearchcenter.issuelab.org

INTRODUCTION AND KEY FINDINGS

HOW TO READ THIS REPORT

This report is a narrative explanation of the work of the nonprofit environment field and the changes it brings about in the world for the people of Illinois and for society. The main chapter, Determining Value, walks through the environment SROI process step by step. The sidebar contains helpful methodological explanations that outline how and why decisions were made. Readers who want the full set of data sources, figures, and methods should refer to Appendices B, C, and D.

This Social Return on Investment (SROI) analysis compares the public and private investment into the Illinois nonprofit environment field to the social, environmental, and economic value it creates for people who live in Illinois and for society as a whole.

Environment programs share a common emphasis on concern for resources. While nonprofit environment programs are quite diverse and some focus on addressing problems as or after they have occurred, many environment programs are preventative in nature. The following activities and characteristics are illustrative of many nonprofit environment programs:

- Advance sound environmental law to improve regulation, promote best practices, protect habitats and species, and preserve natural resources
- Community organizing to engage residents in advocacy efforts related to environmental justice and improving local conditions
- Conservation and preservation
- Run hands-on activities focused on learning about and cultivating interest in nature and outdoor survival
- Provide leadership opportunities for youth
- Foster community engagement, respect and appreciation for the environment and natural resources, and stewardship
- Provide employment and education opportunities for youth and adults
- Community service projects
- Outreach and education

Key Findings

Almost \$685 million is invested in 184 Illinois nonprofits that do environment-related work. Seven percent of that investment is from public sources, and the remaining 93% is from private sources like foundations. What does this investment in Illinois's environment yield?

- Every dollar invested into the Illinois nonprofit environment field generates an estimated \$58 in socio-environmental-economic value.
- \$45 of this socio-environmental-economic value accrues to the people of Illinois.
- \$13 of this socio-environmental-economic value accrues to society through increased tax revenue, increased spending in the state due to environment sector jobs, and avoided spending to treat costly environmental problems.

The real utility of an SROI lies in its ability to reveal if and how our investments into programs pay off. And on that, this SROI of the nonprofit environment field in Illinois is clear: investing in the environment yields dividends.

HOW IS SROI DIFFERENT THAN ROI?

The SROI methodology uses the same core concepts and calculations as a traditional ROI or cost benefit. Where it differs is in the inclusion of outcomes that are not strictly economic. With an SROI, we explore all the outcomes a field affects, research each one, and include even the social and environmental outcomes that have enough evidence to justify their inclusion. When it comes time to put a value on the outcomes, we gather feedback from experts and use reasonable judgment to ascribe proxy values to the outcomes that don't have an inherent market value.

Put another way, a standard ROI and cost benefit reflect the money a program or policy or decision generates and the money it saves (the money that won't have to be spent). Our SROI studies include both money generated and money saved due to the work of the sector but adds in the value we've calculated for the social and environmental outcomes. Most ROIs usually only include value that accrues to one beneficiary, usually society or taxpayers. We add in the value that accrues to program participants or people in general, too.

This is why our findings reflect a higher ratio than you're used to seeing; we are being far more inclusive.

Social Return on Investment Background

How do we understand and communicate the value of nonprofits? As a field, the tools we've had at our disposal to answer this question have yielded unsatisfyingly incomplete answers. Cost-benefit analyses and return on investment analyses, the most common and well-known tools for this sort of purpose, were developed by investors and businesses to assess profits. This is appropriate for investors and businesses as their main objective is making money and turning a profit. However, these tools are insufficient when it comes to capturing the value nonprofits create since for nonprofits value does not equate turning money into dividends.

Value for nonprofits is a much broader concept. It's about money generated or costs avoided, sure, but it's also about creating more abstract things like social cohesion, civic engagement, or reduced human suffering.

Because the existing tools that measure value were designed for for-profit enterprises, using them to assess the value of nonprofits by definition yields an incomplete picture of nonprofit value. Because of this, nonprofits continue to be thought of as charities, the work they do as kind and compassionate, but ultimately dispensable when budgets get tight.

This has led Donors Forum to engage a research partner, the Social IMPACT Research Center, and to explore other techniques that give equal weight to—or at least space for—social and environmental value in addition to pure economic value. Social Return on Investment (SROI) emerged as fitting this bill.

SROI has roots in a California-based group called REDF that began experimenting in the late 1990s with how to understand investments into social enterprises against the impact of those social enterprises. SROI is not an entirely new method—it's a traditional return on investment model expanded to suit organizations whose primary aims are to create positive change in the world. It's a framework that starts with the economic role nonprofits play—as job creators, as avoiders of costly social problems—but that also includes the social and the environmental role nonprofits play—as builders of human capital, as pillars in communities, as protectors of air, land, and water.

The SROI concept garnered attention and considerable traction in Europe. REDF's original concept and methods have been refined there with the emergence of the European SROI Network in 2004, nef's primer on the subject released later that same year, followed by several other guides in 2005 through 2007. This eventually led to the founding of the SROI Network in 2008, which, with the support of the UK Cabinet Office, released a guide to conducting SROI and has been providing thought leadership, tools, and methodological guidance for the analytical framework ever since. SROI Network affiliates have opened in countries around the world, including the

United Kingdom, Australia, France, The Netherlands, Sweden, and Japan. Using a Social Return on Investment analysis for three nonprofit fields in Illinois, youth development, arts and culture, and environment, Donors Forum is in essence proposing a paradigm shift in how we define and measure value and how to think about the important role Illinois nonprofits play in making the state a better place to live, work, and play.

DETERMINING VALUE

METHODOLOGICAL INSIGHTS

We begin the SROI process by establishing a theory of change for the nonprofit environment field, which crystallizes what change the work of nonprofit environment programs bring about. In addition to research, a group of stakeholders—experts on environment programs—helped do this.

Here is where we determined who benefits from nonprofit environment programs. The expert stakeholders once again helped us sort this out. Conceivably, all sorts of people and groups benefit from environment work...from kids to seniors to those with respiratory diseases to businesses. We opted to stay focused on the primary beneficiaries,

OUTCOMES...Change Created by the Nonprofit Environment Field

Nonprofit environment programs have an impact in many different areas. The programs:

- Improve air quality
- Improve water quality
- Preserve and increase open space
- Improve health
- Improve livability
- Increase workforce engagement
- Increase life satisfaction
- Slow the effects of climate change
- Increase stewardship
- Produce clean energy

Some of these outcomes are more closely linked to the work of environment nonprofits and are more easily substantiated than others. For instance, those who work in environment programs on a daily basis see how connecting with the environment helps people take a more global view of the issues that impact them. But this sort of chain of events has not been sufficiently evidenced with research to warrant its inclusion in this analysis.

The outcomes that rose to the top as warranting inclusion after a research-based reality check are:

- Improve air quality
- Improve water quality
- Preserve and increase open space
- Improve health
- Improve livability
- Increase workforce engagement
- Increase life satisfaction
- Slow the effects of climate change
- Produce clean energy

BENEFICIARIES...The People and Groups that Experience the Changes

The outcomes are experienced uniquely by the people of Illinois and by society.

The people of Illinois benefit directly from the work done by the nonprofit environment field. Of the list of outcomes above, the people of Illinois experience improved health and improved livability because of environment programs, and these high-level outcome categories include change related to

Illinoisans, and society since “society” encompasses the communities and systems all Illinoisans experience and rely on.

This next step involves finding evidence to support the claim that nonprofit environment programs create these changes in Illinois. With this being a field-wide analysis, it’s obviously not feasible to gather the necessary data from each environment program in the state because a) no two programs are collecting the exact same outcome data in the exact same way, b) programs are likely not collecting all the different types of outcome data needed, and c) even if they are, they don’t have to give it to anyone who asks.

So, we had to look elsewhere to evidence these outcomes. We used a combination of secondary data sources (like the U.S. Census Bureau’s American Community Survey), a survey of nonprofit environment programs in Illinois conducted for the purposes of this project, and studies/evaluations done on nonprofit environment programs. Many estimates reflect just a subset of Illinoisans for whom the outcome is most likely to apply to. For instance, the outcome about open space increasing housing values was limited only to those who own their homes, and did not include renter households.

The other important thing going on here is that we are being very careful to not over claim the impact of nonprofit environment programs. We are discounting impact by

improved air quality, improved water quality, slowed climate change, preserved and increased open space, and increased life satisfaction.

Society—taxpayers, institutions, the shared economy—also benefits, though in a slightly different way, by the impact of nonprofit environment programs on health and livability. Additionally, society benefits from increased workforce engagement. These high-level outcome categories include change related to improved air quality, improved water quality, slowed climate change, preserved and increased open space, and the production of clean energy.

EVIDENCING AND DISCOUNTING...Substantiating Claims but Not Over Claiming

Each of these benefits or outcomes can be operationalized and quantified into something more concrete. The evidence that nonprofit environment programs create positive change that is important to the people of Illinois can be seen in the following ways:

Environment programs improve health for the people of Illinois:

- the number of Illinoisans with access to safe drinking water minus the number that would have had access to safe drinking water anyways or would have had access thanks to the environmental work of businesses and government agencies.
- the number of Illinoisans with asthma who did not make an emergency room visit last year as the result of air pollution minus the number of Illinoisans with asthma who would not have made an ER visit anyways or would have had avoided the ER thanks to the environmental work of businesses and government agencies.

Environment program improve the livability of communities and places throughout the state for the people of Illinois:

- the number of Illinoisans who are not impacted by weather-related disasters minus the number of Illinoisans who would not have been impacted by weather-related disasters anyways or would not have been impacted thanks to the environmental work of businesses and government agencies.
- the number of working Illinoisans age 16 and over who use forms of active transportation such as walking or biking to get to work minus those who would have used active transportation options anyways or would have thanks to the work of businesses and government agencies.
- the number of Illinois owner-occupied households in metro areas that enjoy increased property value due to being within 500 feet of a park or open space minus the number of households that would enjoy increased property value for other reasons or thanks to the efforts of businesses and government agencies.
- the number of Illinoisans volunteering annually at Illinois nonprofit environment programs minus the number of Illinoisans who would have

subtracting out what would likely have happened anyway, since, for example, government agencies implement and enforce environmental regulations advanced by the work of nonprofits. We used a survey of environment programs to learn more about the share of impact that can be claimed by the nonprofits engaged in this work.

See Appendix D for details on all data sources and methods used.

How is SROI different than program evaluation or a research study? An evaluation seeks to determine how well a program is meeting its goals, essentially how effective the program is in changing the things it sets out to change. Evaluations generally yield results like, “49% of participants in the program began recycling compared with 32% of the control group who did not participate in the program.”

SROI studies are very different. Their primary purpose is to determine the value of the change programs or the field creates in the world. Evaluation findings are a critical input in SROI studies and are used as evidence that programs in the sectors really do create the changes they set out to make.

Here is where SROI really distinguishes itself. We do the same thing that an ROI or cost benefit analysis would do by calculating the monetary value of each clearly monetizable result of the field’s work—money that’s generated and money saved through avoided costs. But we also do the same thing for the results that are more social or environmental

volunteered elsewhere if not for nonprofit environment programs.

The evidence that nonprofit environment programs create positive change that is important to society can be seen in the following ways:

Environment programs improve health throughout Illinois:

- the number of Illinoisans with access to safe drinking water minus the number that would have had access to safe drinking water anyways or would have had access thanks to the environmental work of businesses and government agencies.
- the number of Illinoisans with asthma who did not make an emergency room visit last year as the result of air pollution minus the number of Illinoisans with asthma who would not have made an ER visit anyways or would have had avoided the ER thanks to the environmental work of businesses and government agencies.
- the number of Illinoisans who use trails at least once a week for physical activity making them more likely to meet physical activity recommendations for preventing diabetes, cardiovascular disease, and other health impairments associated with sedentary lifestyles minus the number of Illinoisans who would have developed diabetes despite living an active lifestyle.

Environment programs improve the livability of communities and places throughout the state:

- the number of Illinois workers in clean energy jobs minus the clean energy jobs that would have been created by the efforts of businesses and government agencies.
- the number of Illinoisans who are not impacted by weather-related disasters minus the number of Illinoisans who would not have been impacted by weather-related disasters anyways or would not have been impacted thanks to the environmental work of businesses and government agencies.

Environment program increase workforce engagement for the state:

- the number tax-paying, full-time equivalent jobs in the nonprofit environment field minus the number who would likely find employment in another field if the environment field didn’t exist.

ASSIGNING VALUE...Expressing Value in Dollars Even When an Outcome Seems Social Not Economic

For each positive change that nonprofit environment programs create for Illinoisans and for society, value is created. Some of the value that is created is quite easily put into monetary terms, such as the difference in urban home values when near a park or open space or not. For other outcomes, such as slowing climate change, the value is less tangible because it does not have an inherent market value.

in nature and do not have a clear market value, like wages earned or spending avoided do. In essence, we use a monetary stand-in or a proxy value for the social and environmental outcomes in order to give them more equitable and concrete standing and to present a more holistic picture of the value created by nonprofits.

All these monetary values have been thoroughly researched and informed by stakeholders who know and understand environment programs. Where several approaches for valuing outcomes emerged, we used averaging or the most conservative one.

All values are represented in 2013 dollars. Read all about the sources and methods used for assigning value in Appendix D.

Here is an example of an outcome that doesn't have an easily identifiable market value. Most people would agree that maintaining and increasing access to active transportation options such as walking and biking is a very valuable thing. But how do you express that value in dollars? One way to think about it is, how else would the people of Illinois get around in their communities or travel to and from work if it weren't for nonprofit environment programs, and what's the cost of those alternate activities? In this instance, \$616. So, we can research the cost of other forms of transportation such as public buses and trains and use that dollar value as a proxy for the value of nonprofit environment programs as it relates to increased livability by way of increased and maintained access to active transportation options for the people of Illinois.

Nonetheless, it is critically important to determine the value of all the positive change environment programs create, not just the values that are easy to look up with a quick Internet search. Otherwise, the true value of nonprofit environment programs will be greatly understated.

The value of nonprofit environment programs in Illinois accrues distinctly to Illinoisans and to society. Impacted Illinoisans reap the following value as a result of nonprofit environment programs:

Environment programs improve health for the people of Illinois:

- For Illinoisans who have access to safe drinking water thanks to environment programs, the value to them is expressed as the annual per person cost of residential water in Illinois is \$194.
- For Illinoisans with asthma who did not make an ER visit because of air pollution thanks to nonprofit environment programs, they receive a benefit that is the average value of lost wages and missed school time related to asthma, \$214 per person per year.

Environment program improve the livability of communities and places throughout the state for the people of Illinois:

- For Illinoisans who are not impacted by weather-related disasters thanks to environment programs working to slow climate change, the value to them is the avoided annual cost of property damage due to severe weather events, \$2.87 per person.
- For Illinoisans who engage in forms of active transportation such as walking or biking to get to work, the value to them is the money saved on transit costs, \$616 on average per person per year.
- For Illinoisans in owner-occupied households in metro areas within 500 feet of parks or open space thanks to environment programs, the value to them is \$33,736, the average additional home value related to living near a park or open space.
- For Illinoisans who experience increased life satisfaction through volunteering for and helping to advance the mission of environment programs, the benefit to them is \$1,313, the per person annual value of charitable giving.

Society experiences a different sort of value, even when it experiences the same positive changes that the people of the state experience:

Environment programs improve health throughout Illinois:

- The value to society of Illinoisans ensuring that waterways are safe is \$82, which represents the per impacted person annual cost to society of dealing with water pollution.
- The value to society of making sure that air is polluted as little as possible so that Illinoisans don't experience the adverse health effects of poor air quality is \$4,300 per year, which is the avoided costs to society of asthma-related medical costs and lost productivity due to mortality.

- The value to society of protecting and increasing open space such as conservation areas and recreational spaces like parks and bike paths that provide opportunities for more active lifestyles, is \$8,004 annually, which is the per capita medical costs associated with diabetes, reflecting institutional care, outpatient care, medication, and supplies.

Our approach to evidencing outcomes and valuing them relies on using the best available research and information in a common-sense manner. We recognize that this is inherently imprecise and doesn't constitute rigorous evaluation. We believe that at the sector or field level, it is directionally accurate.

Environment program improve the livability of communities and places throughout the state for the people of Illinois:

- The value to society of preserving and increasing open space, including conservation and recreation areas, which tend to increase home values, is \$426, which represents the additional property taxes generated as a result of being located within 500 feet of a park or open space.
- The value to society of the taxes and economic ripple effect of clean energy jobs is \$70,237, which represents taxes paid, wages spent in communities, and the corresponding spending that those dollars facilitate.
- The value to society of slowing climate change and thus limiting its ramifications like weather-related disasters is \$256, which is the annual cost of government relief per weather-disaster-affected person.

Environment program increase workforce engagement for the state:

- The value to society of the full-time equivalent jobs in the environment field is \$62,435, which is the value of one nonprofit environment job in taxes paid, wages spent in communities, and the corresponding spending that those dollars facilitate.

MORE DISCOUNTING..Accounting for Weakening Effects Over Time and Other Non-Monetary Investments

This concept—what would have happened naturally in the absence of the program—is called the “counterfactual” in research terms. In SROI-speak, it’s called “deadweight.”

This SROI analysis of the Illinois nonprofit environment field covers the 5-year impact of 1 year of work. This is in contrast to other approaches that sometimes estimate the life-long impact.

Appendix D has all the detail about what duration and drop-off we ascribed, with the help of our stakeholders and research, to each outcome. Unless there was a pretty

In an effort to not over claim the nonprofit environment field’s contribution to creating change for Illinoisans and society, we’ve already excluded the portion of results that would likely have happened even in the absence of nonprofit environment programs. There are several other ways we must discount impact in order to further ensure we’re not over attributing impact to these programs.

First, we have to assess whether the outcomes last beyond the duration of programming. For example, to the degree that environment programs facilitate the establishment and maintenance of bike paths and sidewalks that improve access to active transportation options, the question becomes: does the benefit of those paths and sidewalks extend beyond the moment in time in which it is achieved? Obviously, the answer here is yes; once these transportation options exist, they can be used for years to come, so the benefit of increasing and maintaining access to active transportation options—avoided transportation costs—lasts into the future.

Other outcomes, like increased life satisfaction, aren’t so clear cut. When people volunteer, they are more engaged with the world around them, feel

compelling and logical case otherwise, we opted to be conservative and say that the benefits do not extend into subsequent years.

more connected to their communities, develop relationships with other people and generally derive a sense of purpose and life satisfaction. Once one is no longer volunteering for an environment organization, they have to find other activities to fill their time and that offer the same sense of purpose and satisfaction. So there is little to no effect that lingers into post-program years.

In instances where the outcome duration lasts beyond the year in which nonprofit environment programs are working, there is one more time-related consideration: does the magnitude or strength of the outcome drop-off in subsequent years? For example, there is a case to be made that air that is cleaned up or prevented from further contamination may remain clean in future years thanks to the advocacy and advancement of sound environmental policy. But without the work of the nonprofit environment field, it is likely that regulatory practices geared toward improving air quality will not see the same refinement or enforcement so it's important to discount the air quality impacts of nonprofit environment programs in the post-program years.

This concept in SROI terms is called attribution.

The final consideration for discounting impact has to do with whether the investments made into the field—the \$685 million from public and private funders—is the only investment that can lay claim to facilitating the outcomes. In addition to monetary resources, nonprofits often rely on volunteers and in-kind donations, which represent money that didn't have to be spent, so we also subtract out the share of the the nonprofit environment field's impact that can be attributed to volunteers and in-kind donations.

CALCULATING SOCIAL RETURN

To determine the SROI, we first multiply the quantity associated with each outcome by its financial proxy value and then subtract out the deadweight and attribution shares. For the outcomes that will last past the program year, we do the same for each subsequent year up to post-program year 5, reducing each estimate by the drop-off share.

The next step is to apply something called a discount rate. A discount rate is an accounting principle applied to estimates of future value. It honors the idea that money today is more desirable—it has more utility and less risk—today than 5 years down the road. After applying the discount rate of 10% to each year, then adding those values together and subtracting the value of the initial \$685 million investment into the environment field in Illinois, the resulting number is the net present value.

It's easier to understand this by looking at a table that lays out all the numbers. If you're interested, see Appendices B and C.

From there, the math is simple: divide the net present value over the initial investment.

The Illinois nonprofit environment field creates \$58 in socio-environmental-economic-environmental value for every dollar invested, \$45 of which is experienced by the people of Illinois and \$13 of which is experienced by society.

UNDERSTANDING SROI FINDINGS

SROI RESOURCES

Want to understand what SROI is all about?

[The SROI Network](#)

[REDF's SROI portfolio](#)

[nef](#)

[The Canadian Community Economic Development Network](#)

Considering doing an SROI and want more detail?

[The SROI Networks' Guide to SROI](#)

[A report on Valuing SROI](#)

Need some examples of how others have done SROI?

[The Children's Aid Society's SROI of Community Schools](#)

[The SROI Network's collection of SROI case studies](#)

[Women's Support Network's report on three SROI pilot projects](#)

This SROI analysis compares the money from public and private sources that is invested in the nonprofit environment field in Illinois to the value that the field creates for the people of Illinois and for society. The finding is expressed as a ratio: For every \$1 that is invested into this sector, \$58 are generated in economic, social, and environmental benefits. Any dollar value that the sector generates above \$1 means that the investment in the program has not only paid for itself but has generated additional value. The higher the SROI finding, the bigger the bang for the buck.

Because this SROI analysis is inclusive of social and environmental outcomes that are usually not considered in traditional return on investment analyses, and because we add together the value that Illinoisans get *and* the value society experiences because of this field, the SROI findings ratio is higher than most people are used to seeing.

This is not to say this SROI is 100% inclusive. On the contrary, there were many outcomes that our expert advisors and providers felt were important, like academic achievement as it relates to environment and healthy brain development. After investigating all the outcomes, however, we could only include those for which there was evidence. Quite simply, the research base was sorely lacking in its examination of many nonprofit environment program outcomes, including impact on people's environmental stewardship behaviors and how people interact with their environment.

The funding, research, and policy world should take note: though SROI helps us see a broader picture of impact and value, we're still only illuminating a piece of the picture. Until investments and commitments to conducting ongoing rigorous research for environment programs are made, we'll be unable to get that complete picture that we desire.

This is to say that in a perfect world where all the necessary research existed to give us great evidence for all SROI calculations, individual SROI studies would be comparable. But in the real world, with its lack of sufficient evidence to substantiate all outcomes, that's not the case. So SROI studies, at least this nonprofit environment SROI and the others Donors Forum has commissioned, vary in how comprehensive they are in capturing the change fields and programs create—to compare is a false enterprise.

Where the real utility in an SROI lies is in its ability to assure us that our investments pay off and to demystify exactly how they pay off. And on that, this SROI of the nonprofit environment field in Illinois is clear: investing in the environment yields dividends.

APPENDIX A

ENVIRONMENT FIELD SURVEY

To construct this SROI analysis of the nonprofit environment field in Illinois, we conducted an online survey of nonprofit environment programs in the state to gather some basic input and output data. The survey was sent to 184 verifiable organizations (meaning we were able to locate a federal employer identification number (FEIN) and corresponding 990 data for the organization) that are either classified in the National Taxonomy of Exempt Entities (NTEE) as Environment or that are known to conduct environment-related work.

Between 16% and 22% of all invited organizations answered each question. Responses to each question were then weighted by the response rate to estimate totals for the entire nonprofit environment field in Illinois.

Among responding organizations, 17% are not classified as Environment in the NTEE, which is important because it indicates that the universe of organizations considered part of environment for the purposes of this SROI is different than the universe considered in the National Center on Charitable Statistics (NCCS) data. Consequently, data on total revenue derived from this survey and used in this SROI analysis and the data on total revenue compiled by the NCCS on the Environment sector will differ.

The survey was conducted in the fall of 2014, and though fiscal years differ from organization to organization, most respondents provided data that most closely aligns to the year 2013.

APPENDIX B

IMPACT MAPS

The following impact maps lay out the theory of change for the nonprofit environment field in Illinois. There are two maps: one displaying what changes for the people of Illinois and another displaying what changes for society—taxpayers, institutions, the shared economy—as a result of the nonprofit environment field working in communities throughout the state. They are called impact maps because they logically lay out the connections between the economic, social, and/or environmental change the field creates, how many people are impacted, and what the value of that is to those impacted.

This SROI and these impact maps reflect a 5-year time horizon of impact for 1 year of programming. This is to say that this is *not* an analysis of a lifetime value.

These two impact maps are high-level summaries of this analysis. Appendix C is the natural extension of these Appendix B impact maps and lays out the investments into the nonprofit environment field and compares those total investments to the discounted impact of the field—resulting in the SROI finding. Appendix D examines each row of each impact map and spells out all of the data sources, rationale, and any assumptions used in conducting the analysis.

ILLINOISANS

Outcomes (what changes)							Discounting Impact (how much others contributes to change)				Calculating Impact
Description	Outcome	Indicator	Quantity	Duration	Outcomes start	Financial Proxy Value	Dead-weight	Displacement	Attribution	Drop-off	Quantity times financial proxy, less deadweight, displacement and attribution
How would the beneficiary describe the changes?	How would the program describe the changes?	How do you measure it?	How much change was there?	How many years does it last after end of program?	Does it start during the program or after	What is the value of the change?					
Improved health	Water is safe / access to safe drinking water is maintained	# Illinoisans with access to safe, nonimpaired drinking water	11,656,000	5	1	\$194	50%	0%	20%	75%	\$903,147,955
	Air is of high quality / high quality air is maintained	# of asthma sufferers who do not visit the ER	17,291	5	1	\$214	47%	0%	20%	75%	\$1,568,330
Improved livability	Climate change in slowed	# Illinoisans not directly impacted by weather-related disasters	5,587,969	5	1	\$2.87	50%	0%	20%	75%	\$6,420,758
	Access to active transportation options are increased and maintained	# working Illinoisans walking or biking to work	220,563	5	1	\$616	49%	0%	20%	25%	\$55,451,656
	Access to open space is increased and maintained, increasing home values	# owner-occupied housing units in urban areas within 500 feet of parks or open space	1,669,281	0	1	\$33,736	37%	0%	20%	0%	\$28,383,027,890
	Increased life satisfaction	# volunteers	134,352	0	1	\$1,313	27%	0%	20%	0%	\$103,019,484

SOCIETY

Outcomes (what changes)							Discounting Impact (how much others contributes to change)				Calculating Impact
Description	Outcome	Indicator	Quantity	Duration	Outcomes start	Financial Proxy Value	Dead-weight	Displacement	Attribution	Drop-off	Quantity times financial proxy, less deadweight, displacement and attribution
How would the beneficiary describe the changes?	How would the program describe the changes?	How do you measure it?	How much change was there?	How many years does it last after end of program?	Does it start during the program or after	What is the value of the change?					
Improved health	Water is safe / access to safe drinking water is maintained	# Illinoisans with access to safe, nonimpaired drinking water	11,656,000	5	1	\$82	50%	0%	20%	75%	\$384,569,040
	Air is of high quality / high quality air is maintained	# of asthma sufferers who do not visit the ER	17,291	5	1	\$4,300	47%	0%	20%	75%	\$31,524,618
	Access to open space is increased and maintained, promoting physical activity	# Illinois adults using trails at least once a week	249,166	5	1	\$8,004	37%	0%	20%	25%	\$1,005,082,709
Improved livability	Clean energy is produced	# clean energy jobs	68,781	5	1	\$70,347	56%	50%	20%	75%	\$851,582,085
	Access to open space is increased and maintained, increasing property taxes	# owner-occupied housing units in urban areas within 500 feet of parks or open space	1,669,281	5	1	\$426	37%	0%	20%	25%	\$358,401,308
	Climate change is slowed	# Illinoisans not directly impacted by weather-related disasters	5,587,969	5	1	\$256	50%	0%	20%	75%	\$573,128,609

Increased workforce engagement	People are employed in nonprofit environment jobs, pay taxes, have an economic ripple effect	# FTE jobs in sector	3,254	0	1	\$62,435	59%	0%	20%	0%	\$66,156,505
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APPENDIX C

CALCULATING SOCIAL RETURN ON INVESTMENT

Government investment in nonprofit environment programs	\$47,141,213.72
Private investment in nonprofit environment programs	\$637,842,441.62
Total Investment	\$684,983,655

	Program Year	Year 1	Year 2	Year 3	Year 4	Year 5
Total	\$32,723,080,947	\$4,170,877,068	\$1,752,187,103	\$970,147,653	\$641,612,571	\$459,709,886
Present value of each year (Discount rate = 10%)		\$3,791,706,425	\$1,448,088,515	\$728,886,291	\$438,230,019	\$285,443,671
Total Present Value (PV)						\$39,415,435,868
Net Present Value (PV minus the investment)						\$38,730,452,212
Social Return Value per amount invested in Illinois's nonprofit environment field						\$58

Note: There is no set standard for what discount rate to use in SROI or in other forms of value assessment like ROI and cost-benefit analyses. Some analysts use the U.S. Treasury Rate, which is relatively low and amounts to discounting future value by only 1-3%. Others opt to use rates more in line with high-risk investing, upwards of 20%. In an effort to acknowledge the uncertainty associated with predicting future outcomes of social and environmental programs and to acknowledge that value today is more desirable than value at some point in the future, this analysis applies a 10% discount rate over 5 years.

APPENDIX D

DETAILED EXPLANATION OF SOURCES AND METHODS FOR EACH OUTCOME

This appendix examines each row of the impact maps in Appendix B and spells out all of the data sources, rationale, and any assumptions used in conducting the analysis. The column headings from the impact maps in Appendix B are transposed as row headings in the following tables here in Appendix D.

While these tables lay out the numbers used and the calculations performed, it is important to note that if a person tries to recreate the calculations with a calculator, he or she will in most instances not arrive at the exact final numbers. This is because in our calculations we most often used unrounded numbers and here we present rounded numbers for clarity sake.

All dollar values are in 2013 dollars.

We used the most rigorous studies possible to evidence outcomes, though endeavoring to do this often revealed holes in the research base more than it yielded satisfyingly appropriate studies. Where there was no solid evidence that the field produced a certain outcome, we excluded that outcome from this analysis.

Where assumptions needed to be made, we sought out the expert advice of the project advisors, applied common sense and logical thinking, and then made very conservative assumptions so as not to overstate the impact of the field.

ILLINOISANS: Improved Health—Drinking Water is Safe

Nonprofit environment programs, through advocating for regulations and clean up, work to make sure that waterways are safe so that Illinoisans do not experience waterborne illness.

Quantity: How much change was there?	11,656,000 Illinoisans have access to safe drinking water	Over 12,400,000 Illinoisans are served by the public water system. ¹ In the course of a year, 6% of Illinois's population served by public water systems is exposed to water with reported violations of clean water protections, meaning 94% is not exposed. ² (12,400,000 * 94%) = 11,656,000 Illinoisans with access to safe drinking water
Duration: How many years does it last after end of program? (maximum of 5 years)	5 years	Water that is cleaned up or is prevented from contamination may remain clean in future years thanks to the work done on the issue this year by nonprofit environment groups.
Outcomes Start: Does it start during the program or after?	During	This outcome begins to accrue to the beneficiaries while the environment field is actively working on the issue.
Financial Proxy Value: What is the value of the change?	\$194, the annual per person cost of residential water in Illinois	The mean monthly Illinois household water bill at 5,000 gallons is \$23.68. ³ Since the average monthly household water consumption is 9,000 gallons, ⁴ multiply \$23.68 by 180% to get to a \$42.62 monthly average household water bill. Multiply this by 12 months to arrive at \$511.39 in average annual household water bill. Divide this by the average household size in Illinois, 2.64, ⁵ to arrive at a per person average annual water cost. ($\$23.68 * (9000 / 5000)$) * 12 = $\$511.39 / 2.64 = \194 in annual per person water cost in Illinois
Discounting Impact: Deadweight	50%	From the nonprofit environment field survey, practitioners estimate that 50% of the outcome in this area can be claimed by the nonprofit groups, and 50% would occur even without their efforts. ⁶
Discounting Impact: Attribution	20% of this outcome can be attributed to	There are two other potential major “investments” into nonprofit environment programs that can take some of the credit for producing this outcome: volunteers and in-kind donations. The total value of volunteer hours in Illinois is \$7.2 billion. ⁷ The entire Illinois nonprofit sector has a combined revenue of \$73 billion ⁸ and the environment programs included in this

¹ State of Illinois Environmental Protection Agency. *News release*. Available at <http://www3.illinois.gov/PressReleases/ShowPressRelease.cfm?SubjectID=1&RecNum=12214>

² The Trust for Public Land. (2011). *Illinois' return on investment in land conservation*. Boston: Authors. On file with author.

³ Dziegielewski, B., Kiefer, J., & Bik, T. (2004). *Water rates and ratemaking practices in community water systems in Illinois, project completion report*. Available at <http://web.extension.illinois.edu/iwrc/pdf/236.pdf>. Updated 2003 costs to 2013 dollars using the U.S. Department of Labor, Bureau of Labor Statistics' *CPI Detailed Report Data for November 2014*, available at <http://www.bls.gov/cpi/cpid1411.pdf>. 2003 to 2013 inflation factor is 1.2661.

⁴ U.S. Environmental Protection Agency, Office of Wastewater Management. *Water use today*. Available at http://www.epa.gov/watersense/our_water/water_use_today.html

⁵ U.S. Census Bureau's 2012 American Community Survey 1-year estimates program.

⁶ See Appendix A for details on the field survey.

⁷ Corporation for National & Community Service. *Volunteering and civic engagement in Illinois*. Available at <http://www.volunteeringinamerica.gov/IL>. Reflects 2013.

⁸ Urban Institute. *National Center for Charitable Statistics*. Available at <http://nccsweb.urban.org/tablewiz/tw.php>

	other program contributions aside from cash revenue	<p>analysis have a total revenue of \$685 million,⁹ which is 0.9% of the total nonprofit revenue in the state. Multiply the \$7.2 billion of volunteer time value by 0.9% to estimate the share of the volunteer time value that belongs to the environment field. Divide that figure by the \$685 million in environment field revenue to arrive at 9.8%, which is how much the value of volunteer time represents of the total environment field revenue.</p> <p>$(\\$7,200,000,000 * (684,983,655 / \\$73,312,774,643)) / 684,983,655 = 9.8\%$</p> <p>There are no good data sources to understand the total value of in-kind donations to programs in the Illinois environment field. In light of this, we estimated the in-kind donation value to be equal to that of the value of volunteer time and so double the 9.8% and round to a 20% attribution discounting rate.</p>
Discounting Impact: Drop-off	75%	While the effect of this outcome lasts beyond the year in which the work occurred to make it happen, there is no solid research to understand if it lasts completely. Therefore, we use a very conservative drop-off rate of 75% to indicate this uncertainty. This essentially means that 75% of this benefit is lost in each subsequent year after it is achieved.

Calculating Impact	Calculating Social Return					
Quantity times financial proxy, less deadweight, displacement and attribution	Discount rate = 10%					
	Year 0	Year 1	Year 2	Year 3	Year 4	Year 5
\$903,147,955	\$903,147,955	\$903,147,955	\$225,786,989	\$56,446,747	\$14,111,687	\$3,527,922

⁹ See Appendix A for details on the field survey.

ILLINOISANS: Improved Health—Air is High Quality

Nonprofit environment programs, through advocating for regulations, work to make sure that air is polluted as little as possible so that Illinoisans do not experience the adverse health effects of poor air quality. Among those most sensitive to air quality are people with asthma.

Quantity: How much change was there?	17,291 Illinoisans with asthma did not make an ER visit in last year because of air pollution	There are 12,875,255 people living in Illinois. ¹⁰ 8.5% of Illinoisans have asthma. ¹¹ In the course of a year, 21% of Illinois asthma sufferers make an ER visit, meaning 79% do not. ¹² On average, 2% of visits to the emergency room for respiratory disease are because of increased air pollution on a given day. ¹³ $((12,875,255 * 8.5\%) * 79\%) * 2\% = 17,291$ with asthma who did not make an ER visit in the last year because of air pollution
Duration: How many years does it last after end of program? (maximum of 5 years)	5 years	Air that is cleaned up or is prevented from further pollution may remain clean in future years thanks to the work done on the issue this year by nonprofit environment groups.
Outcomes Start: Does it start during the program or after?	During	This outcome begins to accrue to the beneficiaries while the environment field is actively working on the issue.
Financial Proxy Value: What is the value of the change?	\$214, the annual per person value of lost wages due to asthma	Based on the number of work days adults miss due to their own asthma and based on the number of work days parents miss based on their child's asthma and the average wage of asthma sufferers and average wage of the parents of child asthma sufferers, the value of lost work days is \$327 and the value of lost school days is \$101 annually. ¹⁴ Average these amounts to get the annual value of lost work and school days due to asthma. $(\$327 + \$101) / 2 = \$214$ in lost wages per person due to asthma
Discounting Impact: Deadweight	47%	From the nonprofit environment field survey, practitioners estimate that 53% of the outcome in this area can be claimed by the nonprofit groups, and 47% would occur even without their efforts. ¹⁵
Discounting Impact: Attribution	20% of this outcome can be	There are two other potential major "investments" into nonprofit environment programs that can take some of the credit for producing this outcome: volunteers and in-kind donations. The total value of volunteer hours in Illinois is \$7.2 billion. ¹⁶ The

¹⁰ U.S. Census Bureau's 2012 American Community Survey 1-year estimates program.

¹¹ Center for Disease Control and Prevention. *Behavioral Risk Factor Surveillance System, Chronic Disease Indicators*. Available at <http://www.cdc.gov/cdi/>

¹² Illinois Department of Public Health, Office of Health Promotion, Asthma Program. (2009). *Burden of asthma in Illinois 2000-2007*. Available at http://www.idph.state.il.us/about/chronic/IL_AsthmaBurdenReport2009.pdf

¹³ Peel, J. L., et. al. (2005, March). Ambient air pollution and respiratory emergency department visits. *Epidemiology* 16(2), 164-174. Available at http://journals.lww.com/epidem/Abstract/2005/03000/Ambient_Air_Pollution_and_Respiratory_Emergency_4.aspx. Used average of 1%-3% increase in ER visits among those with respiratory illness due to increased air pollution.

¹⁴ Barnett, S.L., & Nurmagambetov, T.A. (2009). Cost of asthma in the United States: 2002-2007. *Journal of Allergy and Clinical Immunology*, 127(1). Available at [http://www.jacionline.org/article/S0091-6749\(10\)01634-9/pdf](http://www.jacionline.org/article/S0091-6749(10)01634-9/pdf). Updated 2009 wages to 2013 dollars using the U.S. Department of Labor, Bureau of Labor Statistics' *CPI Detailed Report Data for November 2014*, available at <http://www.bls.gov/cpi/cpid1411.pdf>. 2009 to 2013 inflation factor is 1.0859.

¹⁵ See Appendix A for details on the field survey.

	attributed to other program contributions aside from cash revenue	<p>entire Illinois nonprofit sector has a combined revenue of \$73 billion¹⁷ and the environment programs included in this analysis have a total revenue of \$685 million,¹⁸ which is 0.9% of the total nonprofit revenue in the state. Multiply the \$7.2 billion of volunteer time value by 0.9% to estimate the share of the volunteer time value that belongs to the environment field. Divide that figure by the \$685 million in environment field revenue to arrive at 9.8%, which is how much the value of volunteer time represents of the total environment field revenue.</p> <p>$(\\$7,200,000,000 * (684,983,655 / \\$73,312,774,643)) / 684,983,655 = 9.8\%$</p> <p>There are no good data sources to understand the total value of in-kind donations to programs in the Illinois environment field. In light of this, we estimated the in-kind donation value to be equal to that of the value of volunteer time and so double the 9.8% and round to a 20% attribution discounting rate.</p>
Discounting Impact: Drop-off	75%	While the effect of this outcome lasts beyond the year in which the work occurred to make it happen, there is no solid research to understand if it lasts completely. Therefore, we use a very conservative drop-off rate of 75% to indicate this uncertainty. This essentially means that 75% of this benefit is lost in each subsequent year after it is achieved.

Calculating Impact	Calculating Social Return					
Quantity times financial proxy, less deadweight, displacement and attribution	Discount rate = 10%					
	Year 0	Year 1	Year 2	Year 3	Year 4	Year 5
\$1,568,330	\$1,568,330	\$1,568,330	\$392,083	\$98,021	\$24,505	\$6,126

¹⁶ Corporation for National & Community Service. *Volunteering and civic engagement in Illinois*. Available at <http://www.volunteeringinamerica.gov/IL>. Reflects 2013.

¹⁷ Urban Institute. *National Center for Charitable Statistics*. Available at <http://nccsweb.urban.org/tablewiz/tw.php>

¹⁸ See Appendix A for details on the field survey.

ILLINOISANS: Improved Livability—Climate Change is Slowed

Nonprofit environment programs, through advocating for regulations, work to make sure that climate change is slowed so that the ramifications of climate change, like more weather-related disasters, do not increase or they increase more slowly.

Quantity: How much change was there?	5,587,969 Illinoisans are not impacted by weather-related disasters	There are 12,875,255 people living in Illinois. ¹⁹ From 2007 to 2011, an average 7,287,286 Illinoisans lived in counties with declared weather-related disasters. ²⁰ Subtract 7,287,286 from 12,875,255 to get the number of Illinoisans not impacted by weather-related disasters. $12,875,255 - 7,287,286 = 5,587,969$ Illinoisans not impacted by weather-related disasters
Duration: How many years does it last after end of program? (maximum of 5 years)	5 years	There is a lingering effect to when climate change is slowed. If nonprofit environmental groups were to all disappear tomorrow, climate change would not immediately speed up.
Outcomes Start: Does it start during the program or after?	During	This outcome begins to accrue to the beneficiaries while the environment field is actively working on the issue.
Financial Proxy Value: What is the value of the change?	\$2.87, the per person annual value of property damage due to severe weather events	Take the average total property damage cost in Illinois from severe weather events each year from 2007 to 2011 inflated to 2013 dollars, which is \$35,430,537, and divide it by the average total population in the counties affected by severe weather events each year, which is 12,334,042, to determine the per person annual value of property damage due to severe weather. ²¹ $\$35,430,537 / 12,334,042 = \2.87 , the per person annual value of property damage due to severe weather events
Discounting Impact: Deadweight	50%	From the nonprofit environment field survey, practitioners estimate that 40% of the outcome in this area can be claimed by the nonprofit groups, and 60% would occur even without their efforts. ²²
Discounting Impact: Attribution	20% of this outcome can be attributed to other program	There are two other potential major “investments” into nonprofit environment programs that can take some of the credit for producing this outcome: volunteers and in-kind donations. The total value of volunteer hours in Illinois is \$7.2 billion. ²³ The entire Illinois nonprofit sector has a combined revenue of \$73 billion ²⁴ and the environment programs included in this analysis have a total revenue of \$685 million, ²⁵ which is 0.9% of the total nonprofit revenue in the state. Multiply the \$7.2

¹⁹ U.S. Census Bureau’s 2012 American Community Survey 1-year estimates program.

²⁰ Dutzik, T., & Willcox, N. (2012, February). *In the path of the storm: Global warming, extreme weather, and the impacts of weather-related disasters in the United States*. Available at <http://www.environmentamerica.org/sites/environment/files/reports/In%20the%20Path%20of%20the%20Storm%20.pdf>. Used a 5-year average of 2007-2011 data.

²¹ National Climatic Data Center, National Oceanic and Atmospheric Administration. *Storm events database*. Available at <http://www.ncdc.noaa.gov/stormevents/>. Updated 2007-2011 values to 2013 dollars using the U.S. Department of Labor, Bureau of Labor Statistics’ *CPI Detailed Report Data for November 2014*, available at <http://www.bls.gov/cpi/cpid1411.pdf>. 2007 to 2013 inflation factor is 1.1235, 2008 to 2013 is 1.0820, 2009 to 2013 is 1.0859, 2010 to 2013 is 1.0683, and 2011 to 2013 is 1.0356.

²² See Appendix A for details on the field survey.

²³ Corporation for National & Community Service. *Volunteering and civic engagement in Illinois*. Available at <http://www.volunteeringinamerica.gov/IL>. Reflects 2013.

²⁴ Urban Institute. *National Center for Charitable Statistics*. Available at <http://nccsweb.urban.org/tablewiz/tw.php>

²⁵ See Appendix A for details on the field survey.

	contributions aside from cash revenue	<p>billion of volunteer time value by 0.9% to estimate the share of the volunteer time value that belongs to the environment field. Divide that figure by the \$685 million in environment field revenue to arrive at 9.8%, which is how much the value of volunteer time represents of the total environment field revenue.</p> $(\$7,200,000,000 * (684,983,655 / \$73,312,774,643)) / 684,983,655 = 9.8\%$ <p>There are no good data sources to understand the total value of in-kind donations to programs in the Illinois environment field. In light of this, we estimated the in-kind donation value to be equal to that of the value of volunteer time and so double the 9.8% and round to a 20% attribution discounting rate.</p>
Discounting Impact: Drop-off	75%	While the effect of this outcome lasts beyond the year in which the work occurred to make it happen, there is no solid research to understand if it lasts completely. Therefore, we use a very conservative drop-off rate of 75% to indicate this uncertainty. This essentially means that 75% of this benefit is lost in each subsequent year after it is achieved.

Calculating Impact	Calculating Social Return					
Quantity times financial proxy, less deadweight, displacement and attribution	Discount rate = 10%					
	Year 0	Year 1	Year 2	Year 3	Year 4	Year 5
	\$6,420,758	\$6,420,758	\$1,605,189	\$401,297	\$100,324	\$25,081

ILLINOISANS: Improved Livability—Access to Active Transportation Options are Increased and Maintained

Nonprofit environment programs advocate for active transportation options like bike paths, bike routes and lanes, and sidewalks. They also work to raise awareness among the public about the benefits of active transportation.

Quantity: How much change was there?	220,563 Illinoisans bike or walk to work	220,563 working Illinoisans age 16 and over use forms of active transportation such as biking or walking to get to work. ²⁶
Duration: How many years does it last after end of program? (maximum of 5 years)	5 years	Once open transportation options exist, they can be used for years to come.
Outcomes Start: Does it start during the program or after?	During	This outcome begins to accrue to the beneficiaries while the environment field is actively working on the issue.
Financial Proxy Value: What is the value of the change?	\$616, the average per person transit costs avoided by biking or walking to work half the year	When people bike or walk to work, they save money on transit costs. Those costs may relate to car ownership/rental or to public transit. Since it is unknown which of these bikers and walkers would use if they didn't bike or walk, we opted to use the less costly proxy, the cost of public transit. Since Illinois weather likely dissuades many bikers and walkers during the winter, we assume that they bike or walk to work just 6 months of the year. We use an average of the cost of CTA train fare, CTA bus fare, Pace, and Metra costs to come up with a value of \$616 in savings per commuter who bikes or walks to work. ²⁷
Discounting Impact: Deadweight	49%	From the nonprofit environment field survey, practitioners estimate that 51% of the outcome in this area can be claimed by the nonprofit groups, and 49% would occur even without their efforts. ²⁸
Discounting Impact: Attribution	20% of this outcome can be attributed to other program contributions aside from cash revenue	There are two other potential major "investments" into nonprofit environment programs that can take some of the credit for producing this outcome: volunteers and in-kind donations. The total value of volunteer hours in Illinois is \$7.2 billion. ²⁹ The entire Illinois nonprofit sector has a combined revenue of \$73 billion ³⁰ and the environment programs included in this analysis have a total revenue of \$685 million, ³¹ which is 0.9% of the total nonprofit revenue in the state. Multiply the \$7.2 billion of volunteer time value by 0.9% to estimate the share of the volunteer time value that belongs to the environment field. Divide that figure by the \$685 million in environment field revenue to arrive at 9.8%, which is how much the value of volunteer time represents of the total environment field revenue.

²⁶ U.S. Census Bureau's 2013 American Community Survey 1-year estimates program.

²⁷ Available at <http://www.transitchicago.com/fares/>, http://www.pacebus.com/sub/schedules/fare_information.asp, and <http://metrarail.com/metra/en/home/tickets.html#FullFareSchedule>

²⁸ See Appendix A for details on the field survey.

²⁹ Corporation for National & Community Service. *Volunteering and civic engagement in Illinois*. Available at <http://www.volunteeringinamerica.gov/IL>. Reflects 2013.

³⁰ Urban Institute. *National Center for Charitable Statistics*. Available at <http://nccsweb.urban.org/tablewiz/tw.php>

³¹ See Appendix A for details on the field survey.

		$(\$7,200,000,000 * (684,983,655 / \$73,312,774,643)) / 684,983,655 = 9.8\%$ <p>There are no good data sources to understand the total value of in-kind donations to programs in the Illinois environment field. In light of this, we estimated the in-kind donation value to be equal to that of the value of volunteer time and so double the 9.8% and round to a 20% attribution discounting rate.</p>
Discounting Impact: Drop-off	25%	The effect of this outcome certainly lasts beyond the year in which the work occurred to make it happen, but active transportation options and awareness do need to be maintained, and if they aren't, the number of people using them might decline. Therefore, we use a drop-off rate of 25% to indicate this.

Calculating Impact	Calculating Social Return					
Quantity times financial proxy, less deadweight, displacement and attribution	Discount rate = 10%					
	Year 0	Year 1	Year 2	Year 3	Year 4	Year 5
\$55,451,656	\$55,451,656	\$55,451,656	\$41,588,742	\$31,191,556	\$23,393,667	\$17,545,250

ILLINOISANS: Improved Livability—Access to Open Space is Increased and Maintained

Nonprofit environment programs advocate for open space including conservation spaces and recreational spaces, amenities that tend to increase home values.

Quantity: How much change was there?	1,669,281 Illinois owner-occupied households in metro areas within 500 feet of parks or open space	Using GIS analysis, we determined that 1,669,281 Illinois owner-occupied households in metro areas are within 500 feet of a park or open space. ³²
Duration: How many years does it last after end of program? (maximum of 5 years)	0 years	Once parks and open space are established, they exist for years to come. However, the benefit of increased property values that homeowners experience because of them is not something that accrues from year to year, so duration is set at 0 years.
Outcomes Start: Does it start during the program or after?	During	This outcome begins to accrue to the beneficiaries while the environment field is actively working on the issue.
Financial Proxy Value: What is the value of the change?	\$33,736, the additional home value related to living within 500 feet of a park or open space	For people living in urban areas, having open space nearby increases home values (parks and open space do not have the same impact on housing values in rural areas where ample open space already exists), and the closer to the park, the more values increase. ³³ Using GIS analysis and Census data on property values in metro areas, we determined that the average value of homes <i>not</i> within 500 feet of a park or open space is \$168,682. A body of research shows that homes in close proximity to parks and open space generally enjoy a 20% boost in property values. ³⁴ \$168,682 * 20% = \$33,736, the additional home value related to living within 500 feet of a park or open space
Discounting Impact: Deadweight	37%	From the nonprofit environment field survey, practitioners estimate that 63% of the outcome in this area can be claimed by the nonprofit groups, and 37% would occur even without their efforts. ³⁵
Discounting Impact: Attribution	20% of this outcome can be attributed to	There are two other potential major “investments” into nonprofit environment programs that can take some of the credit for producing this outcome: volunteers and in-kind donations. The total value of volunteer hours in Illinois is \$7.2 billion. ³⁶ The entire Illinois nonprofit sector has a combined revenue of \$73 billion ³⁷ and the environment programs included in this

³² GIS shapefiles used for analysis available at <http://www.greenmapping.org/archive.php> and <https://data.cityofchicago.org/Parks-Recreation/Parks-Shapefiles/5msb-wbxn> with population data from the U.S. Census Bureau's 2009-2013 American Community Survey 5-year estimates program.

³³ Active Living Research, Robert Wood Johnson Foundation. (2010, May). *The economic benefits of open space, recreation facilities and walkable community design*. Available at http://activelivingresearch.org/sites/default/files/Synthesis_Shoup-Ewing_March2010_0.pdf

³⁴ Crompton, J.L., (2007). *The impact of parks and open spaces on property values*. Available at http://www.cprs.org/membersonly/Winter07_PropertyValues.htm

³⁵ See Appendix A for details on the field survey.

³⁶ Corporation for National & Community Service. *Volunteering and civic engagement in Illinois*. Available at <http://www.volunteeringinamerica.gov/IL>. Reflects 2013.

³⁷ Urban Institute. *National Center for Charitable Statistics*. Available at <http://nccsweb.urban.org/tablewiz/tw.php>

	other program contributions aside from cash revenue	<p>analysis have a total revenue of \$685 million,³⁸ which is 0.9% of the total nonprofit revenue in the state. Multiply the \$7.2 billion of volunteer time value by 0.9% to estimate the share of the volunteer time value that belongs to the environment field. Divide that figure by the \$685 million in environment field revenue to arrive at 9.8%, which is how much the value of volunteer time represents of the total environment field revenue.</p> <p>$(\\$7,200,000,000 * (684,983,655 / \\$73,312,774,643)) / 684,983,655 = 9.8\%$</p> <p>There are no good data sources to understand the total value of in-kind donations to programs in the Illinois environment field. In light of this, we estimated the in-kind donation value to be equal to that of the value of volunteer time and so double the 9.8% and round to a 20% attribution discounting rate.</p>
Discounting Impact: Drop-off	0%	Since this outcome does not accrue past the year of program activity, there is no need to calculate drop off.

Calculating Impact	Calculating Social Return					
Quantity times financial proxy, less deadweight, displacement and attribution	Discount rate = 10%					
	Year 0	Year 1	Year 2	Year 3	Year 4	Year 5
\$28,383,027,890	\$28,383,027,890					

³⁸ See Appendix A for details on the field survey.

ILLINOISANS: Improved Livability—Increased Life Satisfaction

Nonprofit environment programs offer many volunteer opportunities. When people volunteer, they are more engaged with the world around them, feel more connected to their communities, develop relationships with other people, and generally derive a sense of purpose and life satisfaction.

Quantity: How much change was there?	134,352 people volunteer annually at Illinois nonprofit environment programs	From the nonprofit environment field survey, we learned that 134,352 people volunteer at Illinois environment programs in the course of a year. ³⁹
Duration: How many years does it last after end of program? (maximum of 5 years)	0 years	This outcome occurs only while environment field is actively working on the issue.
Outcomes Start: Does it start during the program or after?	During	This outcome begins to accrue to the beneficiaries while the environment field is actively working on the issue.
Financial Proxy Value: What is the value of the change?	\$1,313, the per person value of annual charitable giving	People volunteer for various reasons, and one reason is help advance the mission of the organizations for which they volunteer their time. Another way to achieve that same objective of furthering the organization's mission is to donate money. In this way, average annual charitable giving can be used as a proxy to express the value that Illinoisans derive for themselves when they volunteer their time. The average annual giving amount in Illinois according to an analysis of tax returns, inflated to 2013 dollars is \$3,466. ⁴⁰ Divide this by the average Illinois household size of 2.64 ⁴¹ to get the per person value of charitable giving. \$3,466 / 2.64 = \$1,313, the per person value of annual charitable giving in Illinois
Discounting Impact: Deadweight	27%	27% of Americans volunteered through or for an organization in the last year, ⁴² so we assume that if they hadn't volunteered with the nonprofit environment field, 27% would still volunteer elsewhere.
Discounting Impact: Attribution	20% of this outcome can be attributed to	There are two other potential major "investments" into nonprofit environment programs that can take some of the credit for producing this outcome: volunteers and in-kind donations. The total value of volunteer hours in Illinois is \$7.2 billion. ⁴³ The entire Illinois nonprofit sector has a combined revenue of \$73 billion ⁴⁴ and the environment programs included in this

³⁹ See Appendix A for details on the field survey.

⁴⁰ National Center for Charitable Statistics, The Urban Institute, Center on Nonprofits and Philanthropy. (2011). *Profiles of individual charitable contributions by state, 2011*. Available at <http://nccsweb.urban.org/knowledgebase/showFile.php?file=bnNjczExMzQ=>. Updated 2011 values to 2013 dollars using the U.S. Department of Labor, Bureau of Labor Statistics' *CPI Detailed Report Data for November 2014*, available at <http://www.bls.gov/cpi/cpid1411.pdf>. 2011 to 2013 inflation factor is 1.0356.

⁴¹ U.S. Census Bureau's 2012 American Community Survey 1-year estimates program.

⁴² Bureau of Labor Statistics. (2014, February). *Volunteering in the United States—2013*. Available at <http://www.bls.gov/news.release/pdf/volun.pdf>

⁴³ Corporation for National & Community Service. *Volunteering and civic engagement in Illinois*. Available at <http://www.volunteeringinamerica.gov/IL>. Reflects 2013.

⁴⁴ Urban Institute. *National Center for Charitable Statistics*. Available at <http://nccsweb.urban.org/tablewiz/tw.php>

	other program contributions aside from cash revenue	<p>analysis have a total revenue of \$685 million,⁴⁵ which is 0.9% of the total nonprofit revenue in the state. Multiply the \$7.2 billion of volunteer time value by 0.9% to estimate the share of the volunteer time value that belongs to the environment field. Divide that figure by the \$685 million in environment field revenue to arrive at 9.8%, which is how much the value of volunteer time represents of the total environment field revenue.</p> <p>$(\\$7,200,000,000 * (684,983,655 / \\$73,312,774,643)) / 684,983,655 = 9.8\%$</p> <p>There are no good data sources to understand the total value of in-kind donations to programs in the Illinois environment field. In light of this, we estimated the in-kind donation value to be equal to that of the value of volunteer time and so double the 9.8% and round to a 20% attribution discounting rate.</p>
Discounting Impact: Drop-off	0%	Since this outcome does not accrue past the year of program activity, there is no need to calculate drop off.

Calculating Impact	Calculating Social Return					
Quantity times financial proxy, less deadweight, displacement and attribution	Discount rate = 10%					
	Year 0	Year 1	Year 2	Year 3	Year 4	Year 5
\$103,019,484	\$103,019,484					

⁴⁵ See Appendix A for details on the field survey.

SOCIETY: Improved Health—Drinking Water is Safe

Nonprofit environment programs, through advocating for regulations and clean up, work to make sure that waterways are safe so that fewer public dollars need to be spent on clean ups.

Quantity: How much change was there?	11,656,000 Illinoisans have access to safe drinking water	Over 12,400,000 Illinoisans are served by the public water system. ⁴⁶ In the course of a year, 6% of Illinois's population served by public water systems is exposed to water with reported violations of clean water protections, meaning 94% is not exposed. ⁴⁷ (12,400,000 * 94%) = 11,656,000 Illinoisans with access to safe drinking water
Duration: How many years does it last after end of program? (maximum of 5 years)	5 years	Water that is cleaned up or is prevented from contamination may remain clean in future years thanks to the work done on the issue this year by nonprofit environment groups.
Outcomes Start: Does it start during the program or after?	During	This outcome begins to accrue to the beneficiaries while the environment field is actively working on the issue.
Financial Proxy Value: What is the value of the change?	\$82, the per impacted person cost to society of dealing with impaired waterways	The Illinois Environmental Protection Agency spends over \$61 million a year to deal with water pollution. ⁴⁸ In the course of a year, 6% of Illinois's population of 12,400,000 who are served by the public water system ⁴⁹ is exposed to water with reported violations of clean water protections, resulting in 744,000 people impacted. ⁵⁰ Divide the EPA budget numbers by the number of impacted Illinoisans to arrive at a per impacted Illinoisan cost of dealing with impaired waterways. \$61,367,400 / (12,400,000 * 6%) = \$82, the per impacted person cost to society of dealing with impaired waterways
Discounting Impact: Deadweight	50%	From the nonprofit environment field survey, practitioners estimate that 50% of the outcome in this area can be claimed by the nonprofit groups, and 50% would occur even without their efforts. ⁵¹
Discounting Impact: Attribution	20% of this outcome can be attributed to other program	There are two other potential major "investments" into nonprofit environment programs that can take some of the credit for producing this outcome: volunteers and in-kind donations. The total value of volunteer hours in Illinois is \$7.2 billion. ⁵² The entire Illinois nonprofit sector has a combined revenue of \$73 billion ⁵³ and the environment programs included in this analysis have a total revenue of \$685 million, ⁵⁴ which is 0.9% of the total nonprofit revenue in the state. Multiply the \$7.2

⁴⁶ State of Illinois Environmental Protection Agency. *News release*. Available at <http://www3.illinois.gov/PressReleases/ShowPressRelease.cfm?SubjectID=1&RecNum=12214>

⁴⁷ The Trust for Public Land. (2011). *Illinois' return on investment in land conservation*. Boston: Authors. On file with author.

⁴⁸ State of Illinois. *Fiscal year 2014 agency budget sheets*. Available at <https://www2.illinois.gov/gov/budget/Documents/Budget%20Book/FY%202014/FY2014AgencyFactSheets.pdf>. Reflects FY13 enacted budget.

⁴⁹ State of Illinois Environmental Protection Agency. *News release*. Available at <http://www3.illinois.gov/PressReleases/ShowPressRelease.cfm?SubjectID=1&RecNum=12214>

⁵⁰ The Trust for Public Land. (2011). *Illinois' return on investment in land conservation*. Boston: Authors. On file with author.

⁵¹ See Appendix A for details on the field survey.

⁵² Corporation for National & Community Service. *Volunteering and civic engagement in Illinois*. Available at <http://www.volunteeringinamerica.gov/IL>. Reflects 2013.

⁵³ Urban Institute. *National Center for Charitable Statistics*. Available at <http://nccsweb.urban.org/tablewiz/tw.php>

⁵⁴ See Appendix A for details on the field survey.

	contributions aside from cash revenue	<p>billion of volunteer time value by 0.9% to estimate the share of the volunteer time value that belongs to the environment field. Divide that figure by the \$685 million in environment field revenue to arrive at 9.8%, which is how much the value of volunteer time represents of the total environment field revenue.</p> $(\$7,200,000,000 * (684,983,655 / \$73,312,774,643)) / 684,983,655 = 9.8\%$ <p>There are no good data sources to understand the total value of in-kind donations to programs in the Illinois environment field. In light of this, we estimated the in-kind donation value to be equal to that of the value of volunteer time and so double the 9.8% and round to a 20% attribution discounting rate.</p>
Discounting Impact: Drop-off	75%	While the effect of this outcome lasts beyond the year in which the work occurred to make it happen, there is no solid research to understand if it lasts completely. Therefore, we use a very conservative drop-off rate of 75% to indicate this uncertainty. This essentially means that 75% of this benefit is lost in each subsequent year after it is achieved.

Calculating Impact	Calculating Social Return					
Quantity times financial proxy, less deadweight, displacement and attribution	Discount rate = 10%					
	Year 0	Year 1	Year 2	Year 3	Year 4	Year 5
	\$384,569,040	\$384,569,040	\$384,569,040	\$96,142,260	\$24,035,565	\$6,008,891

SOCIETY: Improved Health—Air is High Quality

Nonprofit environment programs, through advocating for regulations, work to make sure that air is polluted as little as possible so that Illinoisans do not experience the adverse health effects of poor air quality. Among those most sensitive to air quality are people with asthma.

Quantity: How much change was there?	17,291 Illinoisans with asthma did not make an ER visit in last year because of air pollution	There are 12,875,255 people living in Illinois. ⁵⁵ 8.5% of Illinoisans have asthma. ⁵⁶ In the course of a year, 21% of Illinois asthma sufferers made an ER visit, meaning 79% do not. ⁵⁷ On average, 2% of visits to the emergency room for respiratory disease are because of increased air pollution on a given day. ⁵⁸ $((12,875,255 * 8.5\%) * 79\%) * 2\% = 17,291$ with asthma who did not make an ER visit in the last year because of air pollution
Duration: How many years does it last after end of program? (maximum of 5 years)	5 years	Air that is cleaned up or is prevented from further pollution may remain clean in future years thanks to the work done on the issue this year by nonprofit environment groups.
Outcomes Start: Does it start during the program or after?	During	This outcome begins to accrue to the beneficiaries while the environment field is actively working on the issue.
Financial Proxy Value: What is the value of the change?	\$4,300, the per person cost to society for each asthma sufferer with a medical event in the year	Research shows that nationally, the cost to society of asthma, updated to 2013 dollars, is \$56.8 billion. ⁵⁹ This calculation is based on only asthma sufferers who experienced an asthma-induced medical event in the year, 13.2 million, and includes medical costs and lost productivity due to mortality. Divide \$56.8 billion by 13.2 million to get the per person cost to society for each asthma sufferer with a medical event in the year. $\$56,757,866,429 / 13,200,000 = \$4,300$, the per person cost to society for each asthma sufferer with a medical event in the year.
Discounting Impact: Deadweight	47%	From the nonprofit environment field survey, practitioners estimate that 53% of the outcome in this area can be claimed by the nonprofit groups, and 47% would occur even without their efforts. ⁶⁰

⁵⁵ U.S. Census Bureau's 2012 American Community Survey 1-year estimates program.

⁵⁶ Center for Disease Control and Prevention. *Behavioral Risk Factor Surveillance System, Chronic Disease Indicators*. Available at <http://www.cdc.gov/cdi/>

⁵⁷ Illinois Department of Public Health, Office of Health Promotion, Asthma Program. (2009). *Burden of asthma in Illinois 2000-2007*. Available at http://www.idph.state.il.us/about/chronic/IL_AsthmaBurdenReport2009.pdf

⁵⁸ Peel, J. L., et. al. (2005, March). Ambient air pollution and respiratory emergency department visits. *Epidemiology* 16(2), 164-174. Available at http://journals.lww.com/epidem/Abstract/2005/03000/Ambient_Air_Pollution_and_Respiratory_Emergency_4.aspx. Used average of 1%-3% increase in ER visits among those with respiratory illness due to increased air pollution.

⁵⁹ Barnett, S.L., & Nurmagambetov, T.A. (2009). Cost of asthma in the United States: 2002-2007. *Journal of Allergy and Clinical Immunology*, 127(1). Available at [http://www.jacionline.org/article/S0091-6749\(10\)01634-9/pdf](http://www.jacionline.org/article/S0091-6749(10)01634-9/pdf). Updated 2009 wages to 2013 dollars using the U.S. Department of Labor, Bureau of Labor Statistics' *CPI Detailed Report Data for November 2014*, available at <http://www.bls.gov/cpi/cpid1411.pdf>. 2009 to 2013 inflation factor is 1.0859.

⁶⁰ See Appendix A for details on the field survey.

Discounting Impact: Attribution	20% of this outcome can be attributed to other program contributions aside from cash revenue	<p>There are two other potential major “investments” into nonprofit environment programs that can take some of the credit for producing this outcome: volunteers and in-kind donations. The total value of volunteer hours in Illinois is \$7.2 billion.⁶¹ The entire Illinois nonprofit sector has a combined revenue of \$73 billion⁶² and the environment programs included in this analysis have a total revenue of \$685 million,⁶³ which is 0.9% of the total nonprofit revenue in the state. Multiply the \$7.2 billion of volunteer time value by 0.9% to estimate the share of the volunteer time value that belongs to the environment field. Divide that figure by the \$685 million in environment field revenue to arrive at 9.8%, which is how much the value of volunteer time represents of the total environment field revenue.</p> <p>$(\\$7,200,000,000 * (684,983,655 / \\$73,312,774,643)) / 684,983,655 = 9.8\%$</p> <p>There are no good data sources to understand the total value of in-kind donations to programs in the Illinois environment field. In light of this, we estimated the in-kind donation value to be equal to that of the value of volunteer time and so double the 9.8% and round to a 20% attribution discounting rate.</p>
Discounting Impact: Drop-off	75%	<p>While the effect of this outcome lasts beyond the year in which the work occurred to make it happen, there is no solid research to understand if it lasts completely. Therefore, we use a very conservative drop-off rate of 75% to indicate this uncertainty. This essentially means that 75% of this benefit is lost in each subsequent year after it is achieved.</p>

Calculating Impact	Calculating Social Return					
Quantity times financial proxy, less deadweight, displacement and attribution	Discount rate = 10%					
	Year 0	Year 1	Year 2	Year 3	Year 4	Year 5
\$31,524,618	\$31,524,618	\$31,524,618	\$7,881,155	\$1,970,289	\$492,572	\$123,143

⁶¹ Corporation for National & Community Service. *Volunteering and civic engagement in Illinois*. Available at <http://www.volunteeringinamerica.gov/IL>. Reflects 2013.

⁶² Urban Institute. *National Center for Charitable Statistics*. Available at <http://nccsweb.urban.org/tablewiz/tw.php>

⁶³ See Appendix A for details on the field survey.

SOCIETY: Improved Health—Access to Open Space is Increased and Maintained

Nonprofit environment programs advocate for open space including conservation spaces and recreational spaces like parks and bike paths that provide opportunity for more active lifestyles.

Quantity: How much change was there?	249,166, Illinoisans using trails at least once a week who avoid diabetes	Having parks and open space nearby increases people’s physical activity levels. ⁶⁴ People who use trails at least once a week are over twice as likely to meet physical activity recommendations, ⁶⁵ which is important for preventing diabetes, cardiovascular disease, and other diseases associated with sedentary lifestyles. There are 9,812,204 Illinois adults, ⁶⁶ and research shows that 24.3% of people use trails at least once a week. ⁶⁷ 5% of participants in a study about diabetes and physical activity developed diabetes despite being leading an active lifestyle. ⁶⁸ Further, 89% of study participants who did not lead an active lifestyle did not develop diabetes. $(9,812,204 * 24.3\%) - ((9,812,204 * 24.3\%) * 5\%) = 2,265,147 - (2,265,147 * 89\%) = 249,166$ the number of Illinoisans using trails at least once a week who do not develop diabetes
Duration: How many years does it last after end of program? (maximum of 5 years)	5 years	Once parks and open space are established, they exist for years to come.
Outcomes Start: Does it start during the program or after?	During	This outcome begins to accrue to the beneficiaries while the environment field is actively working on the issue.
Financial Proxy Value: What is the value of the change?	\$8,004, the per capita annual medical costs associated with diabetes	The annual per capita medical costs associated with diabetes, reflecting institutional care, outpatient care, medication and supplies, updated to 2013 dollars. ⁶⁹
Discounting Impact: Deadweight	37%	From the nonprofit environment field survey, practitioners estimate that 63% of the outcome in this area can be claimed by the nonprofit groups, and 37% would occur even without their efforts. ⁷⁰
Discounting Impact: Attribution	20% of this outcome can be	There are two other potential major “investments” into nonprofit environment programs that can take some of the credit for producing this outcome: volunteers and in-kind donations. The total value of volunteer hours in Illinois is \$7.2 billion. ⁷¹ The

⁶⁴ Active Living Research, Robert Wood Johnson Foundation. (2010, May). *The economic benefits of open space, recreation facilities and walkable community design*. Available at http://activelivingresearch.org/sites/default/files/Synthesis_Shoup-Ewing_March2010_0.pdf

⁶⁵ GIS shapefiles used for analysis available at <http://www.greenmapping.org/archive.php> and <https://data.cityofchicago.org/Parks-Recreation/Parks-Shapefiles/5msb-wbxn>

⁶⁶ U.S. Census Bureau’s 2012 American Community Survey 1 year estimates survey.

⁶⁷ Librett, J.J., Yore, M.M., & Schmid, T.L. (2006). Characteristics of physical activity levels among trail users in a U.S. national sample. *American Journal of Preventive Medicine*, 31(5): 399–405.

⁶⁸ U.S. Department of Health and Human Services, *National Diabetes Information Clearinghouse*. Available at <http://www.diabetes.niddk.nih.gov/dm/pubs/preventionprogram/index.aspx#results>

⁶⁹ American Diabetes Association. (2013). *Economic costs of diabetes in the U.S. in 2012*. Available at <http://care.diabetesjournals.org/content/early/2013/03/05/dc12-2625>

⁷⁰ See Appendix A for details on the field survey.

⁷¹ Corporation for National & Community Service. *Volunteering and civic engagement in Illinois*. Available at <http://www.volunteeringinamerica.gov/IL>. Reflects 2013.

	attributed to other program contributions aside from cash revenue	<p>entire Illinois nonprofit sector has a combined revenue of \$73 billion⁷² and the environment programs included in this analysis have a total revenue of \$685 million,⁷³ which is 0.9% of the total nonprofit revenue in the state. Multiply the \$7.2 billion of volunteer time value by 0.9% to estimate the share of the volunteer time value that belongs to the environment field. Divide that figure by the \$685 million in environment field revenue to arrive at 9.8%, which is how much the value of volunteer time represents of the total environment field revenue.</p> $(\$7,200,000,000 * (684,983,655 / \$73,312,774,643)) / 684,983,655 = 9.8\%$ <p>There are no good data sources to understand the total value of in-kind donations to programs in the Illinois environment field. In light of this, we estimated the in-kind donation value to be equal to that of the value of volunteer time and so double the 9.8% and round to a 20% attribution discounting rate.</p>
Discounting Impact: Drop-off	25%	The effect of this outcome certainly lasts beyond the year in which the work occurred to make it happen, but parks and open space do need to be maintained, and if they aren't, people will not be as likely to use them and be active. Therefore, we use a drop-off rate of 25% to indicate this.

Calculating Impact	Calculating Social Return					
Quantity times financial proxy, less deadweight, displacement and attribution	Discount rate = 10%					
	Year 0	Year 1	Year 2	Year 3	Year 4	Year 5
	\$1,005,082,709	\$1,005,082,709	\$753,812,032	\$565,359,024	\$424,019,268	\$318,014,451

⁷² Urban Institute. *National Center for Charitable Statistics*. Available at <http://nccsweb.urban.org/tablewiz/tw.php>

⁷³ See Appendix A for details on the field survey.

SOCIETY: Improved Livability—Clean Energy is Produced

Nonprofit environment programs advocate for clean energy production. That society benefits from clean energy production can be evidenced in the number of tax-paying clean energy jobs, which also then have an economic ripple effect as wages from those jobs are spent in Illinois communities.

Quantity: How much change was there?	68,781 Illinois workers in clean energy jobs	There are 96,875 Illinois workers who spend some portion of their day supporting clean energy activities—energy efficiency, renewable energy, clean or alternative transportation, and greenhouse gas management. ⁷⁴ 71% of them spend the majority of their time on clean energy activities. 96,875 * 71% = 68,781 Illinois workers in clean energy jobs
Duration: How many years does it last after end of program? (maximum of 5 years)	5 years	Clean energy jobs would not disappear overnight or perhaps at all if nonprofit environment programs stopped their work altogether.
Outcomes Start: Does it start during the program or after?	During	This outcome begins to accrue to the beneficiaries while the environment field is actively working on the issue.
Financial Proxy Value: What is the value of the change?	\$70,347, the value of one clean energy job to society, in taxes paid, spending in communities, and the ripple effect of spending	We use the median annual salary for an HVAC worker, one of the most common occupations in clean energy, which is \$54,103. ⁷⁵ On average, someone who earns around this wage pays \$14,066 in total taxes. ⁷⁶ Using the average personal savings rate of 4.8%, we subtract out the share of post-tax wages saved, leaving the share of wages likely to be spent. ⁷⁷ Illinois renters spend an average of 30.4% of their income on housing costs and the remaining 69.6% on other things. ⁷⁸ Multiply the amount spent on housing by the Illinois housing multiplier of 1.5862, and multiply the remainder by the retail multiplier of 2.1359. ⁷⁹ To account for the fact that some spending likely happens outside of Illinois, subtract 25%. Add together the amount of total taxes paid and the value of wages spent and the ripple effect they produce in Illinois. \$40,037 in post-tax wages – (\$40,037 * 4.8%) = \$38,115 of wages likely to spend. \$38,115 * 30.4% = \$11,587 spent on housing costs and \$38,115 * 69.6% = \$26,528 spent on other things. (\$11,587 * 1.5863) + (\$26,528 * 2.1359) = \$75,041 \$75,041 – (\$75,041 * 25%) = \$56,281, the value of wages spent in Illinois communities and the ripple effect they produce. \$56,281 + \$14,066 in total taxes paid = \$70,347, the value of tax revenue and wages spent in Illinois communities and the ripple effect they produce

⁷⁴ Clean Energy Trust. (2014). *Clean jobs Illinois, an in-depth look at clean energy employment in Illinois*. Available at <http://www.cleanjobsillinois.com/#welcome>

⁷⁵ Illinois Department of Employment Security. *Occupational employment statistics: Wage information*. Available at http://www.ides.illinois.gov/LMI/Pages/Occupational_Employment_Statistics.aspx

⁷⁶ CollegeBoard. *Trends in higher education: Median earnings and tax payments by education level, 2008*. Available at <http://trends.collegeboard.org/education-pays/figures-tables/median-earnings-and-tax-payments-education-level-2008>. 2008 prices inflated to 2013 dollars using the U.S. Department of Labor, Bureau of Labor Statistics' *CPI Detailed Report Data for November 2014*, available at <http://www.bls.gov/cpi/cpid1411.pdf>. 2008 to 2013 inflation factor is 1.0820.

⁷⁷ Bureau of Economic Analysis. *Comparison of personal saving in the National Income and Product Accounts (NIPAs) with personal saving in the Flow of Funds Accounts (FFAs)*. Available at <http://www.bea.gov/national/nipaweb/nipa-frb.asp>. 10-year personal savings average of 4.8% (2004-2013).

⁷⁸ U.S. Census Bureau's 2012 American Community Survey 1 year estimates program.

⁷⁹ Bureau of Economic Analysis. *RIMS II Economic Output Multiplier*. On file with author. More information about RIMS II available at <http://blog.bea.gov/tag/rims-ii/>

Discounting Impact: Deadweight	56%	From the nonprofit environment field survey, practitioners estimate that 44% of the outcome in this area can be claimed by the nonprofit groups, and 56% would occur even without their efforts. ⁸⁰
Discounting Impact: Attribution	20% of this outcome can be attributed to other program contributions aside from cash revenue	<p>There are two other potential major “investments” into nonprofit environment programs that can take some of the credit for producing this outcome: volunteers and in-kind donations. The total value of volunteer hours in Illinois is \$7.2 billion.⁸¹ The entire Illinois nonprofit sector has a combined revenue of \$73 billion⁸² and the environment programs included in this analysis have a total revenue of \$685 million,⁸³ which is 0.9% of the total nonprofit revenue in the state. Multiply the \$7.2 billion of volunteer time value by 0.9% to estimate the share of the volunteer time value that belongs to the environment field. Divide that figure by the \$685 million in environment field revenue to arrive at 9.8%, which is how much the value of volunteer time represents of the total environment field revenue.</p> <p>$(\\$7,200,000,000 * (684,983,655 / \\$73,312,774,643)) / 684,983,655 = 9.8\%$</p> <p>There are no good data sources to understand the total value of in-kind donations to programs in the Illinois environment field. In light of this, we estimated the in-kind donation value to be equal to that of the value of volunteer time and so double the 9.8% and round to a 20% attribution discounting rate.</p>
Discounting Impact: Drop-off	75%	While the effect of this outcome lasts beyond the year in which the work occurred to make it happen, there is no solid research to understand if it lasts completely. Therefore, we use a very conservative drop-off rate of 75% to indicate this uncertainty. This essentially means that 75% of this benefit is lost in each subsequent year after it is achieved.
Discounting Impact: Displacement	50%	It’s possible that when the nonprofit environment field succeeds in its efforts and more clean energy jobs are created as a result, other jobs—in traditional energy fields, for instance—may disappear. Since there is no good research on this, we opt to conservatively set the rate of displacement at 50%, recognizing that for every two clean energy jobs created, one other job may be lost.

Calculating Impact	Calculating Social Return					
Quantity times financial proxy, less deadweight, displacement and attribution	Discount rate = 10%					
	Year 0	Year 1	Year 2	Year 3	Year 4	Year 5
\$851,582,085	\$851,582,085	\$851,582,085	\$212,895,521	\$53,223,880	\$13,305,970	\$3,326,493

⁸⁰ See Appendix A for details on the field survey.

⁸¹ Corporation for National & Community Service. *Volunteering and civic engagement in Illinois*. Available at <http://www.volunteeringinamerica.gov/IL>. Reflects 2013.

⁸² Urban Institute. *National Center for Charitable Statistics*. Available at <http://nccsweb.urban.org/tablewiz/tw.php>

⁸³ See Appendix A for details on the field survey.

SOCIETY: Improved Livability—Access to Open Space is Increased and Maintained

Nonprofit environment programs advocate for open space including conservation spaces and recreational spaces, amenities that tend to increase home values, leading to higher property tax revenue for the state.

Quantity: How much change was there?	1,669,281 Illinois owner-occupied households in metro areas within 500 feet of parks or open space	Using GIS analysis, we determined that 1,669,281 Illinois owner-occupied households in metro areas are within 500 feet of a park or open space. ⁸⁴
Duration: How many years does it last after end of program? (maximum of 5 years)	5 years	Once parks and open space are established, they exist for years to come. Since property taxes are levied annually, the benefit of this outcome is set at 5 years.
Outcomes Start: Does it start during the program or after?	During	This outcome begins to accrue to the beneficiaries while the environment field is actively working on the issue.
Financial Proxy Value: What is the value of the change?	\$426, the additional property taxes generated as a result of being within 500 feet of a park or open space	For people living in urban areas, having open space nearby increases home values (parks and open space do not have the same impact on housing values in rural areas where ample open space already exists), and the closer to the park, the more values increase. ⁸⁵ Using GIS analysis and Census data on property values in metro areas, we determined that the average property taxes of homes <i>not</i> within 500 feet of a park or open space is \$3,392 and the average property tax for homes within 500 feet is \$3,818, a differential of \$426. \$3,818 - \$3,392 = \$426, the additional property taxes generated as a result of being within 500 feet of a park or open space
Discounting Impact: Deadweight	37%	From the nonprofit environment field survey, practitioners estimate that 63% of the outcome in this area can be claimed by the nonprofit groups, and 37% would occur even without their efforts. ⁸⁶
Discounting Impact: Attribution	20% of this outcome can be	There are two other potential major “investments” into nonprofit environment programs that can take some of the credit for producing this outcome: volunteers and in-kind donations. The total value of volunteer hours in Illinois is \$7.2 billion. ⁸⁷ The

⁸⁴ GIS shapefiles used for analysis available at <http://www.greenmapping.org/archive.php> and <https://data.cityofchicago.org/Parks-Recreation/Parks-Shapefiles/5msb-wbxn> with population data from the U.S. Census Bureau’s 2009-2013 American Community Survey 5-year estimates program.

⁸⁵ Active Living Research, Robert Wood Johnson Foundation. (2010, May). *The economic benefits of open space, recreation facilities and walkable community design*. Available at http://activelivingresearch.org/sites/default/files/Synthesis_Shoup-Ewing_March2010_0.pdf

⁸⁶ See Appendix A for details on the field survey.

⁸⁷ Corporation for National & Community Service. *Volunteering and civic engagement in Illinois*. Available at <http://www.volunteeringinamerica.gov/IL>. Reflects 2013.

	attributed to other program contributions aside from cash revenue	<p>entire Illinois nonprofit sector has a combined revenue of \$73 billion⁸⁸ and the environment programs included in this analysis have a total revenue of \$685 million,⁸⁹ which is 0.9% of the total nonprofit revenue in the state. Multiply the \$7.2 billion of volunteer time value by 0.9% to estimate the share of the volunteer time value that belongs to the environment field. Divide that figure by the \$685 million in environment field revenue to arrive at 9.8%, which is how much the value of volunteer time represents of the total environment field revenue.</p> <p>$(\\$7,200,000,000 * (684,983,655 / \\$73,312,774,643)) / 684,983,655 = 9.8\%$</p> <p>There are no good data sources to understand the total value of in-kind donations to programs in the Illinois environment field. In light of this, we estimated the in-kind donation value to be equal to that of the value of volunteer time and so double the 9.8% and round to a 20% attribution discounting rate.</p>
Discounting Impact: Drop-off	25%	The effect of this outcome certainly lasts beyond the year in which the work occurred to make it happen, but parks and open space do need to be maintained, and if they aren't, home values may not retain their premium. Therefore, we use a drop-off rate of 25% to indicate this.

Calculating Impact	Calculating Social Return					
Quantity times financial proxy, less deadweight, displacement and attribution	Discount rate = 10%					
	Year 0	Year 1	Year 2	Year 3	Year 4	Year 5
	\$358,401,308	\$358,401,308	\$268,800,981	\$201,600,736	\$151,200,552	\$113,400,414

⁸⁸ Urban Institute. *National Center for Charitable Statistics*. Available at <http://nccsweb.urban.org/tablewiz/tw.php>

⁸⁹ See Appendix A for details on the field survey.

SOCIETY: Improved Livability—Climate Change is Slowed

Nonprofit environment programs, through advocating for regulations, work to make sure that climate change is slowed so that the ramifications of climate change, like more weather-related disasters, do not increase or they increase more slowly.

Quantity: How much change was there?	5,587,969 Illinoisans not impacted by weather-related disasters	There are 12,875,255 people living in Illinois. ⁹⁰ From 2007 to 2011, an average 7,287,286 Illinoisans lived in counties with declared weather-related disasters. ⁹¹ Subtract 7,287,286 from 12,875,255 to get the number of Illinoisans not impacted by weather-related disasters. $12,875,255 - 7,287,286 = 5,587,969$ Illinoisans not impacted by weather-related disasters
Duration: How many years does it last after end of program? (maximum of 5 years)	5 years	There is a lingering effect to when climate change is slowed. If nonprofit environmental groups were to all disappear tomorrow, climate change would not immediately speed up.
Outcomes Start: Does it start during the program or after?	During	This outcome begins to accrue to the beneficiaries while the environment field is actively working on the issue.
Financial Proxy Value: What is the value of the change?	\$256, the annual cost of government relief per weather-disaster-affected person	From 2011 to 2013, the U.S. spent on average \$45.5 billion annually on extreme weather disaster relief. ⁹² Over those same three years, the average total household population in the U.S. was 115.7 million, ⁹³ which comes to \$392 per household. In those years, Illinois's average number of households was almost 4.7 million. ⁹⁴ Multiply \$392 by 4.7 million to arrive at nearly \$1.9 billion of the total government spending attributable to Illinois. Nearly 7.3 million Illinoisans are impacted by weather-related disasters on average each year. ⁹⁵ Divide Illinois's total of government spending on disasters by the 7.3 million people to arrive at the annual cost per weather-disaster-affected person. $((\$45,497,666,667 / 115,750,766) * 4,763,608) / 7,287,286 = \256 , the annual cost per weather-disaster-affected person of government disaster relief
Discounting Impact: Deadweight	50%	From the nonprofit environment field survey, practitioners estimate that 50% of the outcome in this area can be claimed by the nonprofit groups, and 50% would occur even without their efforts. ⁹⁶
Discounting	20% of this	There are two other potential major "investments" into nonprofit environment programs that can take some of the credit for

⁹⁰ U.S. Census Bureau's 2012 American Community Survey 1-year estimates program.

⁹¹ Dutzik, T., & Willcox, N. (2012, February). *In the Path of the Storm: Global warming, extreme weather, and the impacts of weather-related disasters in the United States*. Available at <http://www.environmentamerica.org/sites/environment/files/reports/In%20the%20Path%20of%20the%20Storm%202.pdf>. Used a 5-year average of 2007-2011 data.

⁹² Center for American Progress. (2013). *Disastrous spending: Federal disaster-relief expenditures rise amid more extreme weather*. Available at <https://www.americanprogress.org/issues/green/report/2013/04/29/61633/disastrous-spending-federal-disaster-relief-expenditures-rise-amid-more-extreme-weather/>

⁹³ U.S. Census Bureau's 2012 American Community Survey 1-year estimates program.

⁹⁴ U.S. Census Bureau's 2012 American Community Survey 1-year estimates program.

⁹⁵ Dutzik, T., & Willcox, N. (2012, February). *In the Path of the Storm: Global warming, extreme weather, and the impacts of weather-related disasters in the United States*. Available at <http://www.environmentamerica.org/sites/environment/files/reports/In%20the%20Path%20of%20the%20Storm%202.pdf>. Used a 5-year average of 2007-2011 data.

⁹⁶ See Appendix A for details on the field survey.

Impact: Attribution	outcome can be attributed to other program contributions aside from cash revenue	<p>producing this outcome: volunteers and in-kind donations. The total value of volunteer hours in Illinois is \$7.2 billion.⁹⁷ The entire Illinois nonprofit sector has a combined revenue of \$73 billion⁹⁸ and the environment programs included in this analysis have a total revenue of \$685 million,⁹⁹ which is 0.9% of the total nonprofit revenue in the state. Multiply the \$7.2 billion of volunteer time value by 0.9% to estimate the share of the volunteer time value that belongs to the environment field. Divide that figure by the \$685 million in environment field revenue to arrive at 9.8%, which is how much the value of volunteer time represents of the total environment field revenue.</p> <p>$(\\$7,200,000,000 * (684,983,655 / \\$73,312,774,643)) / 684,983,655 = 9.8\%$</p> <p>There are no good data sources to understand the total value of in-kind donations to programs in the Illinois environment field. In light of this, we estimated the in-kind donation value to be equal to that of the value of volunteer time and so double the 9.8% and round to a 20% attribution discounting rate.</p>
Discounting Impact: Drop-off	75%	While the effect of this outcome lasts beyond the year in which the work occurred to make it happen, there is no solid research to understand if it lasts completely. Therefore, we use a very conservative drop-off rate of 75% to indicate this uncertainty. This essentially means that 75% of this benefit is lost in each subsequent year after it is achieved.

Calculating Impact	Calculating Social Return					
Quantity times financial proxy, less deadweight, displacement and attribution	Discount rate = 10%					
	Year 0	Year 1	Year 2	Year 3	Year 4	Year 5
\$573,128,609	\$573,128,609	\$573,128,609	\$143,282,152	\$35,820,538	\$8,955,135	\$2,238,784

⁹⁷ Corporation for National & Community Service. *Volunteering and civic engagement in Illinois*. Available at <http://www.volunteeringinamerica.gov/IL>. Reflects 2013.

⁹⁸ Urban Institute. *National Center for Charitable Statistics*. Available at <http://nccsweb.urban.org/tablewiz/tw.php>

⁹⁹ See Appendix A for details on the field survey.

SOCIETY: Increased Workforce Engagement—People are Employed in Nonprofit Environment Jobs and Pay Taxes and Spend Their Wages in Illinois Communities

Nonprofit environment programs employ thousands of Illinoisans who pay a variety of taxes, from federal and state payroll taxes to property and sales taxes. They also spend a portion of their wages in their communities, infusing money into the local economy and precipitating an economic ripple effect as the businesses they spend their money at now have more money to spend.

Quantity: How much change was there?	3,254 full-time equivalent jobs in the field	From the nonprofit environment field survey, we know that environment programs employ approximately 3,254 full-time equivalents. ¹⁰⁰
Duration: How many years does it last after end of program? (maximum of 5 years)	0 years	Employment in the field lasts for the duration of the program year.
Outcomes Start: Does it start during the program or after?	During	This outcome begins to accrue to the beneficiaries while the environment field is actively working on the issue.
Financial Proxy Value: What is the value of the change?	\$62,435, the value of one nonprofit environment job to society, in taxes paid, spending in communities, and the ripple effect of spending	To determine total taxes paid, we inflate to 2013 dollars the median wages and taxes paid by educational attainment, ¹⁰¹ and also inflate to 2013 dollars the median annual earnings of the nonprofit workforce by educational attainment. ¹⁰² We determine if the median nonprofit earnings by educational level are higher or lower than the median earnings of the workforce overall and by how much, which results in a percentage. We then multiply that percentage by the average taxes paid by education level to get the estimated amount of taxes paid by education level for Illinois nonprofit workers. As a final step, we derive a weighted annual taxes paid figure using educational attainment data on the nonprofit workforce. ¹⁰³ This results in \$13,065 in annual total taxes paid. To determine the ripple effect of earnings spent in Illinois, we first inflate 2011 median annual earnings of the nonprofit workforce by educational level to 2013 dollars and then derive a weighted annual wage using educational attainment data on the nonprofit workforce. This results in a weighted annual median wage of \$48,186. ¹⁰⁴ Subtract out the average total taxes paid, resulting in \$35,121 left to spend. ¹⁰⁵ Using the average personal savings rate of 4.8%, we subtract out the

¹⁰⁰ See Appendix A for details on the field survey.

¹⁰¹ CollegeBoard. *Trends in higher education: Median earnings and tax payments by education level, 2008*. Available at <http://trends.collegeboard.org/education-pays/figures-tables/median-earnings-and-tax-payments-education-level-2008>. 2008 prices inflated to 2013 dollars using the U.S. Department of Labor, Bureau of Labor Statistics' *CPI Detailed Report Data for November 2014*, available at <http://www.bls.gov/cpi/cpid1411.pdf>. 2008 to 2013 inflation factor is 1.0820.

¹⁰² Building a Stronger Illinois. *Nonprofit employees*. Available at <http://buildingstrongeril.com/statewide-profile/nonprofit-employees/#.VJ2lrF4AI>. 2011 prices inflated to 2013 dollars using the U.S. Department of Labor, Bureau of Labor Statistics' *CPI Detailed Report Data for November 2014*, available at <http://www.bls.gov/cpi/cpid1411.pdf>. 2011 to 2013 inflation factor is 1.0356.

¹⁰³ Building a Stronger Illinois. *Nonprofit employees*. Available at <http://buildingstrongeril.com/statewide-profile/nonprofit-employees/#.VJ2lrF4AI>. 2011 prices inflated to 2013 dollars using the U.S. Department of Labor, Bureau of Labor Statistics' *CPI Detailed Report Data for November 2014*, available at <http://www.bls.gov/cpi/cpid1411.pdf>. 2011 to 2013 inflation factor is 1.0356.

¹⁰⁴ Building a Stronger Illinois. *Nonprofit employees*. Available at <http://buildingstrongeril.com/statewide-profile/nonprofit-employees/#.VJ2lrF4AI>. 2011 prices inflated to 2013 dollars using the U.S. Department of Labor, Bureau of Labor Statistics' *CPI Detailed Report Data for November 2014*, available at <http://www.bls.gov/cpi/cpid1411.pdf>. 2011 to 2013 inflation factor is 1.0356.

¹⁰⁵ See Appendix D, SOCIETY: Increased Workforce Engagement—People are Employed in Nonprofit Environment Sector and Pay Taxes.

		<p>share of wages saved, leaving the share of wages likely to be spent, \$33,435.¹⁰⁶ Illinois renters spend an average of 30.4% of their income on housing costs and the remaining 69.6% on other things.¹⁰⁷ Multiply the amount spent on housing by the Illinois housing multiplier of 1.5862, and multiply the remainder by the retail multiplier of 2.1359.¹⁰⁸ To account for the fact that some spending likely happens outside of Illinois, subtract 25%.</p> <p>$\\$35,121 - (\\$35,211 * 4.8\%) = \\$33,435$ of wages likely to spend. $\\$33,435 * 30.4\% = \\$10,164$ spent on housing costs and $\\$33,435 * 69.6\% = \\$23,271$ spent on other things. $(\\$10,164 * 1.5863) + (\\$23,271 * 2.1359) = \\$65,827$ $\\$65,827 - (\\$65,827 * 25\%) = \\$49,370$, the value of wages spent in Illinois communities and the ripple effect they produce.</p> <p>$\\$49,370 + \\$13,065 = \\$62,435$, the value of taxes paid and the ripple effect of wages spend in Illinois communities for one nonprofit environment field worker</p>
Discounting Impact: Deadweight	59%	59% of Illinoisans age 16 and over are employed, so we assume that if their environment field job weren't available, 59% of employees would find work elsewhere. ¹⁰⁹
Discounting Impact: Attribution	20% of this outcome can be attributed to other program contributions aside from cash revenue	<p>There are two other potential major "investments" into nonprofit environment programs that can take some of the credit for producing this outcome: volunteers and in-kind donations. The total value of volunteer hours in Illinois is \$7.2 billion.¹¹⁰ The entire Illinois nonprofit sector has a combined revenue of \$73 billion¹¹¹ and the environment programs included in this analysis have a total revenue of \$685 million,¹¹² which is 0.9% of the total nonprofit revenue in the state. Multiply the \$7.2 billion of volunteer time value by 0.9% to estimate the share of the volunteer time value that belongs to the environment field. Divide that figure by the \$685 million in environment field revenue to arrive at 9.8%, which is how much the value of volunteer time represents of the total environment field revenue.</p> <p>$(\\$7,200,000,000 * (684,983,655 / \\$73,312,774,643)) / 684,983,655 = 9.8\%$</p> <p>There are no good data sources to understand the total value of in-kind donations to programs in the Illinois environment field. In light of this, we estimated the in-kind donation value to be equal to that of the value of volunteer time and so double the 9.8% and round to a 20% attribution discounting rate.</p>
Discounting Impact: Drop-off	0%	Since this outcome does not accrue past the year of program activity, there is no need to calculate drop off.

¹⁰⁶ Bureau of Economic Analysis. *Comparison of personal saving in the National Income and Product Accounts (NIPAs) with personal saving in the Flow of Funds Accounts (FFAs)*. Available at <http://www.bea.gov/national/nipaweb/nipa-frb.asp>. 10-year personal savings average of 4.8% (2004-2013).

¹⁰⁷ U.S. Census Bureau's 2012 American Community Survey 1 year estimates program.

¹⁰⁸ Bureau of Economic Analysis. *RIMS II Economic Output Multiplier*. On file with author. More information about RIMS II available at <http://blog.bea.gov/tag/rims-ii/>

¹⁰⁹ U.S. Census Bureau's 2012 American Community Survey 1 year estimates program.

¹¹⁰ Corporation for National & Community Service. *Volunteering and civic engagement in Illinois*. Available at <http://www.volunteeringinamerica.gov/IL>. Reflects 2013.

¹¹¹ Urban Institute. *National Center for Charitable Statistics*. Available at <http://nccsweb.urban.org/tablewiz/tw.php>

¹¹² See Appendix A for details on the field survey.

Calculating Impact	Calculating Social Return					
Quantity times financial proxy, less deadweight, displacement and attribution	Discount rate = 10%					
	Year 0	Year 1	Year 2	Year 3	Year 4	Year 5
\$66,156,505	\$66,156,505					

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