

The Working Landscapes Development Authority

A concept paper for increasing private
investment in ecological services
and rural economic development

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Executive Summary

Many regions in the Great Lakes basin and the Midwest are struggling, both ecologically and economically. Low-value commodities such as corn and soybeans dominate much of the Midwest, providing limited opportunity for value-added processing and contributing to persistent environmental concerns such as nutrient runoff and soil erosion. Rural agricultural communities have lost much of the local economic cycling that keeps them viable. The lack of jobs and investment opportunities has resulted in very large farms and the weakening of the stewardship ethic more prevalent on smaller, family farms.

As an alternative to these dominant, regional trends, a growing number of people and organizations are promoting the concept of working landscapes. This is the premise that landscapes are the trust from which our health, quality-of-life and the economic vitality of our communities all depend. Land should not be reduced to providing solely economic or environmental benefits, but needs to provide multiple functions. Working landscapes looks at ways to couple voluntary, incentive-based policies with landowner innovation and private enterprise. Working landscapes offers a framework under which efforts for environmental protection, economic development, cultural preservation, fish and wildlife habitat restoration, and food and fiber production can flourish and enhance each other.

While the concept of working landscapes offers tremendous opportunity, by itself it cannot facilitate greater investment in ecological services and rural communities. Public investment is necessary to foster the growth of new markets and opportunities. Government has used economic tools such as public housing initiatives and Industrial Development Authorities to leverage public funds into private investment. These private-public partnerships that use market principles offer an effective and efficient method of generating societal benefits.

Market-based financial mechanisms have not been fully utilized to foster environmental benefits. Because of the need to foster the multiple environmental and social benefits that working landscapes can provide, this paper explores the development of a Working Landscapes Development Authority (WLDA). A WLDA would have similar powers to other development authorities, such as the ability to issue tax exempt, revenue-based bonds. It would be geographically large enough to capture appropriate collaborative investment opportunities yet small enough to remain locally driven. A local stakeholder board would decide on priorities, investment criteria, and other funding decisions.

WLDAs may provide the next logical step in the watershed movement. This type of approach will expand interest in the production of ecological services, leverage public investment in the environment, and create a forum for local stakeholders to determine how to best spend available resources. We welcome your comments and ideas on the topic.

Sincerely,

Mark Ritchie,
President

Introduction

The Institute for Agriculture and Trade Policy (IATP) is currently exploring new ways of expanding investment in conservation practices in the Great Lakes basin. This effort is driven by a number of interlocking concerns, including the following:

- The current level of environmental progress in the Great Lakes basin, while measurable and important, is not sufficient to resolve the environmental problems and to meet the environmental needs of the basin and its tributary watersheds;
- Where new initiatives are coming out of the watershed movement, it is often difficult to obtain the resources or the institutional leadership needed to implement them;
- The creativity and vision that local citizens bring to addressing long standing conservation and environmental problems is not sufficiently utilized or supported;
- Existing resources are largely administered through top-down command and control bureaucracies resulting in strategies that are often too rigid to maximize investment efficiency or to respond quickly enough to evolving environmental and community needs and opportunities;
- Existing patterns of environmental investment often fail to strengthen communities and are too often exclusively targeted on one environmental objective, despite the growing understanding of and need for holistic environmental policies;
- Many current governmental environment programs are too fragmented or too underfunded to provide significant environmental benefits;
- Patterns of environmental investment, particularly in water quality and landscape management, remain skewed toward large, structured solutions and give little value or attention to combining bands of mutually supportive activities undertaken by many individuals over a broad watershed landscape;
- There is a growing interest in integrating federal agricultural payments with good environmental management of farmlands, but current efforts represent only a beginning towards creating a reformed farm program built around landscape stewardship and ecosystem services as a key component of agricultural payments.

New environmental investments that promote communities and landowners to pursue conservation objectives will be more cost effective. Additionally, they will have many other positive benefits for the environment, such as spreading good environmental land practices far more efficiently and effectively. After an initial exploration of a number of potential resource-augmenting strategies, IATP concluded that the most promising approach for obtaining new resources for environmental investment in the Great Lakes basin was resource bundling. Bundling grows out of recognition that well managed watersheds produce multiple environmental benefits, (such as safe drinking water, clean water, natural habitat, public open space, reduced infrastructure costs, etc.) which have a significant economic value. This makes it possible to structure environmental investments that would be attractive to multiple stakeholders. For example, a utility interested in preserving pristine water quality and a wildlife organization interested in saving habitat both have an interest in preserving unspoiled natural areas. As seen in this example, the bundling concept has a twofold essence. First, on the watershed side, it assesses the resource goods provided by watershed ecosystems and identifies new

investments that will protect or create those goods more efficiently. Second, on the investor side, it identifies multiple stakeholders and investors who have an interest in those goods and brings them together in ways that expand the pool of resources for mutually beneficial environmental investments.

In summary, IATP's project objectives can be articulated as follows: IATP would like to improve the water quality of the Great Lakes and tributaries by enhancing the environmental quality of the Great Lakes' tributary watersheds. This could be done by increasing the flow of strategic environmental investment in those watersheds. In turn, this increased investment could be accomplished through successfully marketing the ecological benefits such as improved water quality, fish and wildlife habitat, natural habitat protection, public open space, and scenic vistas that would flow from more environmentally sensitive farming, forestry and land use practices by private landowners, and more effective pollution prevention and cleanup strategies. The best way to successfully market these green benefits appears to be bundling them so that they offer multiple benefits and provide an incentive for expanded environmental service purchases by watershed stakeholders such as downstream water utilities, fish and wildlife interests, insurance companies, energy utilities, smart growth advocates, agricultural preservation interests and recreational interests, either individually or by banding together collectively, while simultaneously providing new and better incentives for watershed landowners and residents to be stewards of working landscapes and providers of ecosystem services. Finally, successful marketing of the bundled green benefits would require providing the necessary market linkages to successfully bring together such buyers and sellers without prohibitive transaction costs.

Resource Bundling

These bundling concepts are not only rooted in basic free market dynamics; there is an obvious common sense appeal to them. The result has been a growing interest in the concept. Ideas for integrating farm income support with on-farm environmental quality investments are now being widely debated, and federal agencies are crafting such approaches at the administrative level. In a recent example, the United States Department of Agriculture (USDA) partnered with the City of Syracuse to jointly develop and fund a Conservation Reserve Enhancement Program (CREP) to protect 1,000 marginal acres around Skaneateles Lake, one of the 11 Finger Lakes and the drinking water source for the City of Syracuse. Another example took place in the dairy farming region of the Catskill mountains that lies within the New York City watershed, where bundling concepts have been one of the keys to the success of New York City's highly regarded Whole Farm Planning program.

In the Great Lakes basin, numerous ecological green goods that could be bundled to appeal to multiple sets of buyers have been identified. These include: open space acquisition and preservation, changes in agricultural practices, smart wood forestry, stream corridor protection, recreational enhancements, bluebelts, wetland restorations, and flood plain protection. Similarly, IATP has identified both many potential buyers and new financial instruments for those buyers to use, including wetland trusts, bond acts, crop insurance, pollution trading, alternative energy producers, carbon sequestration credits, and contracts with private landowners for improved land management services.

In its explorations with selected watershed interests and potential stakeholders, IATP has uncovered significant interest and potential support for the concept, and thus originally conceived of bundling as something that would be carried out by potential purchasers, with education and technical assistance from existing watershed organizations. In essence, local advocates and citizens would recognize the advantages of bundling and, with some initial guidance, be able to make deals with each other. Unfortunately, more detailed planning and analysis has suggested that this initial concept of an individualistic, unstructured approach is not feasible. Watershed organizations are primarily advocacy groups, who often rely on volunteers and do not have the time, the resources, or the expertise to devote to the creation of saleable packages of bundled resources. As for the landowners and others who control the sites for the ecological bundles, they have little incentive to band together until there is a purchaser clearly apparent. However, purchasers have little incentive to coalesce until there are real bundles of ecological goods. It is a classic chicken and egg problem. Thus, the transaction costs of bundling ecological goods together turn out to be too high and have too great a level of uncertainty of return for landowners and watershed organizations to attempt to bundle ecosystem service goods in any but the most opportunistic and obvious instances.

On the buyer side, stakeholder purchasers also turn out to be equally ill equipped to bundle themselves together. There are many potential purchasers of environmental goods, but virtually all of them are organized around pursuing a single environmental good. To create a bundling package, they must reach out to organizations who have their

own specialized interests, persuade them that there is a mutual self-interest in working together, and then find a potential resource that will have a common payback for all, when, as has just been discussed, the identification of those resources is also subject to great difficulty and uncertainty. Thus, purchasers bundling themselves together also imposes a very high upfront cost with little guarantee that the ultimate benefit will be worth it. It follows naturally that some of the most dramatic examples of bundling to date have occurred where governments played the role of broker and negotiator. However, government bureaucracies are, by nature, frequently anti-entrepreneurial. Combine that with the internal fragmentation and political constraints on government, and, some dramatic exceptions like the New York City watershed notwithstanding, it is not surprising that government has done more to explore bundling than actually carry it out.

IATP's exploration of the bundling of environmental goods has identified another issue that its original model of self-initiated deal making did not sufficiently address. There are two potential approaches to bundling environmental goods: a freestanding goods model and a regional watershed resource model, and the difference is important, as the following example illustrates.

1. Wetlands can be purchased regardless of location as long as they provide significant wetland site benefits (e.g. wildlife habitat). The transactions have no tie to any watershed strategy or larger landscape improvement.
2. Wetlands can be strategically purchased in order to re-create a functional watershed ecology. These wetland purchases provide both strategic and site-specific benefits.

The second approach obviously increases the return on environmental investment, but also requires a need for a source of strategic direction. The challenge is to retain the innovation and private creativity provided by bundling while fitting it into a framework of overall watershed enhancement and restoration.

The answer to the above problems starts with the concept of a broker. In areas like real estate, stocks and commodity purchases, the problem of matching buyers with a widespread base of market opportunities that require both time and technical expertise to properly assess and package has been turned over to professional brokers, or deal facilitators. Their existence does not exclude direct buyer-seller dealing but, in all but a few specialized instances, it is more effective to use a broker's services. Upon analysis, bundling presents similar market challenges and requires a similar marketing tool. Many buyers face many potential sellers, either with individual circumstances, characteristics, benefits or needs, all of which make for complicated transactions. Without brokers to sort the information and help pair buyers and sellers, an efficient market cannot exist. Adding an explicit broker function would also solve the chicken and egg problem described above, where sellers have limited incentives to bundle because of the uncertainty of bundled buyers and buyers have few incentives because of the uncertainty of finding a bundled product. A broker of bundled transactions could both facilitate the creation of packages designed to reflect available buyers and could put together bundles

of buyers by being able to more clearly guarantee a beneficial and cost effective purchase.

Where then would this broker function be seated and how would it be structured? IATP has concluded that the best starting point is the concept of an investment fund. Investment funds pursue specific investment goals for groups of individual investors. The relevant models are investment funds that promote social investments, with the most refined examples coming from the area of affordable housing. These funds have both public goals (e.g. increase the availability of affordable housing by a certain amount) and private economic goals. Often, given their public purpose, they obtain the ability to offer investors special incentives such as tax credits, limits on losses, or access to tax free credit. This mixture of public and private profit investment has played an important role in the strengthening of affordable housing in many urban areas.

Another model is the Industrial Development Authority (IDA). A successful IDA can set specific, socially beneficial targets (e.g. creating a knowledge-based corporate industrial park in conjunction with a local university), identify the investments needed to achieve them, and raise the financing to do so through a combination of investor bond purchases and participant capital investment.

Working Landscapes Development Authority

IATP has concluded that some entity modeled on these public-private partnership models would provide the most effective tool for realizing the potential of bundling to increase environmental investment in the Great Lakes basin. The creation of a Working Landscapes Development Authority could provide that service. Using powers similar to a traditional Industrial Development Authority, (or perhaps utilizing the provisions of Internal Revenue Code Section 6320, which provides in certain circumstances an alternative way to set up a privately run, investment authority able to issue tax exempt bonds) the Working Landscapes Development Authority (WLDA) would have the following characteristics and tasks:

1. The ability to issue tax-exempt, revenue based bonds as one major source of investment capital.
2. Management direction by a local watershed citizen and stakeholder board, with ties to relevant government agencies and its own locally based professional staff.
3. Initial startup funding through borrowing from the State Revolving Fund or similar governmental resource.
4. Investment criteria based on an investment plan for the watershed created through a process of outreach and consultation with both local landowners and stakeholders and government resource and regulatory agencies. For example, an initial plan might identify that a watershed needed a certain reduction in erosion, as well as in nutrient discharge, and a stretch of restored stream corridor. It could then set targets, such as acres converted to sustainable forestry practices, conservation tillage and perennial crops. It would then attach initial investment targets to support each of these programs and begin to develop sets of bundled environmental goods whose investment would be structured to achieve them. The WLDA would commence deal-making between potential purchasers of environmental goods and the watershed stakeholders. Some of these efforts would produce a revenue stream that could be bonded; others would be financed through funding from existing government programs. In addition, it would integrate its environmental goals with specific programs for improving the economic viability of working landscapes and landowners, following New York City's pioneering example in its Whole Farm Planning program.
5. The WLDA would have the authority to offer a premium for packages of bundled goods that have critical importance on a watershed scale. For example, assume that the investment goal is 300 miles of stream corridor restoration. To achieve that by working with each individual landowner would be time consuming and cumbersome. The WLDA might pay \$40 a foot (the following figures are arbitrary and chosen solely to make an easy to follow example) to an individual landowner who offers to carry out such a restoration. The WLDA could also offer \$50 a foot for a group of landowners restoring 2,000 feet of stream corridor, and \$70 a foot for 2,000

continuous feet, and so forth.

6. The WLDA could become, in its watershed, a catalyst for many government support programs that deal with individual landowners, provided it could attain a certain minimum level of critical mass. For example, the WLDA would get a priority allocation for swamp buster investments if it could provide a certain percentage in a single transaction of an overall watershed's environmental goal. Similarly, a WLDA could offer an ongoing revenue stream in exchange for agricultural conservation easements. The WLDA would bundle public and private money together to leverage relatively small public resources. Also, all of the USDA current categorical programs could be administered as one pot of money on a watershed basis. A WLDA approach, by promoting watershed scale efficiencies, could provide a low cost way to improve the reach of this money.
7. The WLDA could become the centerpoint for nutrient and other pollution trading schemes. Ideally, the WLDA would provide a tool to create ad hoc TMDL management, based on overall ecological benefits, within a watershed.
8. The WLDA would provide funding for public information and education about the implications of new bundling strategies, as well as new watershed and working landscapes approaches to watershed protection, Great Lakes' water quality improvement and landscape community revitalization.
9. Both as resources and local confidence builders, a broad network of advisory and technical assistance groups should be interacting with and assisting the WLDA.
10. Financially, the WLDA would operate as much like an affordable housing fund as a traditional IDA. Traditional IDAs, except for legislative supplements, must make back all of their bond investment through ongoing project-based revenue streams. In the affordable housing arena, it is recognized that likely revenue streams will be insufficient to cover both debt services on capital investment and ongoing operating costs for desirable projects. Funds often use a combination of public capital and public financial incentives (such as tax credits) to subsidize and lower the capital costs, while using tight business and financial planning to identify a level of market rent that is within the range of an affordable housing renter or purchaser. This combination of market-based rents, targeted on renters with limited incomes made possible by publicly supported capital investment, has many applications to the issue of environmental investments.
11. The WLDA would be subject to all modern accounting standards, full financial disclosure and applicable conflict of interest standards.
12. The WLDA would ideally be able to sell purchasers environmental progress without an advance linkage to a particular project. For example, a water utility interested in minimizing the cost of filtering water could purchase participation in a series of individual project investments (i.e. constructed wetlands, soft path water treatment,

etc.) or simply conclude that it does not want to select among particular investments, only that it wishes to buy a clean watershed. The utility could then provide the WLDA a fixed amount of cash flow over a fixed amount of years as an ongoing investment in a clean watershed as defined not be specific projects, but in terms of watershed performance measures.

13. The WLDA should have an initial life span of ten years with a carryover sunset clause (i.e. continue to manage existing projects until some later transfer date, but no new projects). The same process for establishing the WLDA would have to be repeated after ten years to ensure it would not be self-perpetuating.
14. An important potential resource for bundling and for effective creation of working landscapes is existing entities such as drainage districts and lake authorities who already have taxing power. However, both legal and political constraints tend to keep their investments and land management strategies focused in narrow, traditional ways. The WLDA's ability to raise additional resources and pool them could be used in a sensitive, collaborative way to induce these entities to consider restructuring and pooling their benefits to provide more goods for both their purposes and the larger purposes of their constituencies. One tool for doing so would be joint investment agreements between the WLDA and other such entities.
15. Finally, the potential of the WLDA, as a private, locally based entity that has the ability to go where government cannot go or would not be accepted will be very valuable and potentially a key element in attracting stakeholder investment. For example, effective endangered species protection is going to require widespread interaction with private landowners. Endangered species initiatives have long found this to be a major obstacle, as many landowners have strongly opposed wildlife agency attempts to control their private land use. A WLDA, with a board rooted in the local watershed and a commitment to integrate environmental protection with landscape based economic development, could be a powerful tool for overcoming these obstacles and bringing environmental investment to areas where it has so far been resisted.

A particular point of discussion should be the relation of the WLDA watershed investment agenda with applicable environmental regulations and regulatory targets. These targets are generally not set in a holistic, watershed context. Rather, they tend to be single media targets set with little exploration of whether this is the most cost effective or urgent environmental investment for that watershed. The ultimate potential of resource bundling is to leverage environmental investments and to steer them towards targets of greatest opportunity. The WLDA approach, by creating a mechanism for resource bundling, by putting resource bundling in a watershed context, and by developing a priority plan for environmental improvement for the watershed, offers an important advance over the existing structure of environmental protection that can accelerate environmental progress to the benefit of the Great Lakes and other important environmental resources.

The obstacles to this approach will largely come from two areas. First, it means a shift from emphasizing pre-determined, single purpose, hard path, pollution clean-up solutions such as sewage treatment plant construction to a much more holistic ecosystem management, pollution prevention, habitat preservation and restoration approach. Second, it means partnerships instead of a punitive approach. The environmental community is often wary of this approach for fear of weakened environmental standards. But a WLDA creates an economic interest in the watershed for ecosystem services and provides a powerful new voice against those who, under the guise of seeking to reform the regulatory process, try to undermine environmental responsibility.

Though IATP's interest in bundling was originally driven by a concern for expanding the resources addressing environmental problems in the Great Lakes basin, the Working Landscapes Development Authority approach has applications far beyond the Midwest. If this analysis proves correct in practice, IATP will have created a model that can marry the potential synergies of a watershed approach and a combined environmental, community development, working farm strategy that can truly integrate the environment and resource based community development, an integration that is the essence of the goals of the working landscape and farm bill reform debates.

Implementation

To translate the WLDA concept from paper to practice will require an intense planning and pilot effort approach. In brief, the necessary planning involves building off the research and contacts developed over the past 18 months in the basin. An ad hoc task force would be created in at least one watershed, leading to the selection of a locally based WLDA board, identification of a specific legal framework and assembling the necessary startup financing and creation of a board. Meanwhile, the task force would identify an initial watershed agenda and what specific forms of bundling should be first pursued given the watershed's specific conditions. Relationships with resource bureaucracies would be established, as well as connections to local smart growth, sustainable development and working landscapes efforts. Links would also be created with other efforts that promote the generation of ecological services, such as eco-industrial parks, environmental and green business associations, and especially with evolving federal agricultural policies.

Over a period of six months to a year, all of this effort would culminate in the creation of a business plan, which could meet both strict financial standards of due diligence and investment return, while fulfilling its environmental goals as well. This business plan would then become the operating program of the WLDA during its start-up phase, with a provision for periodic renewal as the WLDA successfully ramps up. Overall, the implementation effort will likely take two to three years to successfully pilot the program, fine tune it in the light of actual experience, and begin to replicate it elsewhere.

Conclusion

Over the past 30 years, the United States has made considerable strides in protecting the environment. The Clean Water Act of 1972, through the use of regulation and capital investment, has significantly reduced pollution, especially from urban and industrial point sources. However, there is still more effort needed to reduce non-point source pollution, create wildlife habitat and revitalize rural communities.

The watershed movement has made important contributions to that progress. But it has not been sufficient to overcome the steady loss of clean water momentum as the country struggles with the far more intractable problems of eroding soil, nutrient overloading, loss of biodiversity, and disruption of natural stream hydraulics.

Traditional regulatory approaches have had limited success addressing these non-point source issues. Only the creation of a new working landscape tool, with resource mobilizing techniques like bundling, can provide sufficient incentives and coordination of efforts to make meaningful environmental progress on these issues.

Thus, bringing the resources into the economic framework of the rural economy is crucial for achieving long-term sustainability in Great Lakes and American landscapes. This means turning the potential of bundling into reality and thereby allowing private landowners to profit from the value of the ecosystem services they can provide. And it also means bringing in stakeholders such as cities, businesses, utilities, governments and others who depend on the economic benefits of ecosystem services. IATP believes that the Working Landscapes Development Authority, with its flexible and entrepreneurial administrative structure and its combination of selected public capital subsidies and private market tools, would provide an innovative and uniquely effective way to achieve these objectives.

About the Author

Mr. Appleton, under contract with IATP, is currently a Senior Fellow at the Regional Plan Association (RPA) in New York City, America's oldest non-profit regional planning and public policy group. His work concentrates on developing and obtaining the implementation of public policies that innovatively integrate infrastructure and environmental investment in mutually supportive ways. Mr. Appleton also occasionally consults nationally and internationally on issues of environment, infrastructure and economic investment. He is currently working with a network of Great Lakes organizations on developing more robust non-regulatory tools for protecting Great Lake watersheds.

Prior to joining RPA, Mr. Appleton served as Commissioner of the New York City Department of Environmental Protection and Director of the New York City Water and Sewer system. During his tenure, Mr. Appleton established New York City's watershed protection program, which saved New York City ratepayers billions of dollars in long term infrastructure costs by investing in environmental landscape management and pollution prevention. His innovations included the New York City whole farm planning program, a nationally acclaimed model for non-point source pollution prevention through urban-rural partnership.

Mr. Appleton has served as an officer or director of many Tri-State conservation organizations, most notably as President of the New York City Audubon Society and as a member of the National Advisory Board of Trust for Public Land. He is also a former member of the National Academy of Sciences National Research Commission's Committee on Better Management of the World's Rapidly Growing Cities. Mr. Appleton is a graduate of Gonzaga University in Spokane, Washington, with a double major in Mathematics and Political Science, and of Yale Law School in New Haven, Connecticut.

About the Institute for Agriculture and Trade Policy

The Institute for Agriculture and Trade Policy (IATP) was established in 1986 as an independent non-profit and tax-exempt research, education and advocacy organization. The Institute for Agriculture and Trade Policy promotes resilient family farms, rural communities and ecosystems around the world through research and education, science and technology, and advocacy.

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