

Sustainable Raritan River Initiative

November 2009

Balancing Redevelopment and Restoration

Introduction

“Perhaps the most serious obstacle impeding the evolution of a ‘Land Ethic’ is the fact that our educational and economic system is headed away from, rather than toward, an intense consciousness of land.”

This observation is not the slogan of a new environmental campaign. It is a concern expressed sixty years ago by Aldo Leopold (*A Sand County Almanac*); a problem that was so obvious to him then, and one that has become institutional over the last century. In the 1960's and '70's the rise of environmental concerns spawned additional discussion of a land ethic among certain movements and environmental organizations established during this era. However, the necessary focus of most conservation and preservation groups was the multitude of basic pollution problems and, the need for stronger environmental laws and agencies that could put teeth into new regulatory programs. As a result, environmental agencies gravitated to mainly reactive command and control/deterrent regulatory policies and became mired in the focus to correct a history of poor social and industrial pollution problems and practices. Only in the recent past has the objective shifted – to setting more proactive environmental agendas and planning innovative strategies toward practical and sustainable resource use – akin to Leopold’s “Land Ethic.”

New Jersey has the opportunity to once again be a pioneer in the environmental arena. The climate is ripe for the smart integration of sustainability innovations with regional planning by creating new sources of economic development through environmentally conscious design. Simply finding strategies to balance the concepts of “protecting of the environment” with “building our economy” may already be an outdated way of looking at the task. In the 21st Century, these concepts should be considered indispensable partners, not mutually exclusive. Today, in New Jersey’s largest and most densely populated watershed, we are now poised to integrate these concepts and move sustainability and the Land Ethic forward, for the benefit of our natural resources, our economy and our communities along the Raritan

Background

In the 1700’s, the waters of the Raritan River where at the time “praised by sailors as the sweetest [drinking] water around” (Rutgers Magazine, 1990). The Raritan’s ports and branches were a vibrant goods and transportation hub, as flood tides brought sloops from the bay upriver to New Brunswick. The Raritan’s first big city grew into a prosperous mercantile center and became “a critical link in the passage of goods between New York and Philadelphia.” With the founding of Queens College in 1766 and the opening of the D&R canal in 1830, the Raritan was on the map and saw more goods transported on its waters than the Panama Canal did many years later. (Rutgers Magazine, 1990). Combined with the fishing industry, that early basin

economy was fully intertwined and dependant on a functioning river system and its natural resources.

By the 20th century, commercial activity on the Raritan fell off significantly and its natural resource base suffered from the well known affects of industrialization. As a result of national and state environmental efforts beginning in 1970's, the Raritan has made a comeback in many areas. The work of environmental groups, watershed associations, and water purveyors, coupled with our state Department of Environmental Protection has resulted in significant protection and conservation upstream, on north and south branches, in the tributaries and more recently in the lower basin. As a result, the river still boasts a natural resource base that provides drinking water, habitat, recreation, and some transportation, but impacts from the past remain unresolved in many of the river's reaches. It is therefore now time to build on these collective efforts and take the revitalization of the Raritan, its natural resources and its communities, to the next level on a river/basin-wide effort. The Sustainable Raritan River Initiative was organized to be the vehicle to work towards this complex but timely objective.

The Sustainable Raritan Initiative

In the fall of 2008, the Mushett Family Foundation asked Rutgers to create a collaborative that would bring together all of the environmental organizations in the region to support the restoration and future protection of the Raritan River. The Raritan River Initiative was launched with a thorough review of current activities by governmental and non-governmental parties. A May 2009 symposium, the Sustainable Raritan River, drew over 170 professionals to craft the main elements of the restoration agenda. One of the Sustainable Raritan Initiative (SSRI) is to examine the Raritan River Basin Watershed region for opportunities in the restoration of contaminated sites along the North and South Branch(es) and Raritan Bay, and the potential to develop those and other areas along the river into modern, sustainable communities. The five task groups within SSRI are: 1) Contamination and Remediation, 2) Water Quality and Quantity, 3) Habitat and Stewardship, 4) Public Access and Greenways, and 5) Balancing Restoration and Redevelopment, which is the subject of this White Paper. Initially it appeared that the task of analyzing the objective of 'Balancing Restoration and Redevelopment' necessarily required the incorporation of general aspects of each of the other four topic areas which are geared only toward the restoration and improvement of access to the river system. The "balancing act" will therefore require a concerted effort to identify and promote sustainable economic activity within manufacturing, the service industry, development, and redevelopment. This white paper does not draw conclusions, but lays out a potential path for addressing each of the issues.

During the 2009 Sustainable Raritan Summit, participants in the Balancing Redevelopment and Restoration focus group identified issues, priorities and constraints they felt would be associated with balancing the promotion of economic activity, including development and redevelopment with efforts to improve environmental conditions, including restoration and enhanced public access to the river. A review of the focus group findings confirmed that this "balancing act" would be the overarching task and the key to accomplishing the goals of the Summit's other focus group areas of 1) Greenways and Public Access, 2) Habitat Restoration, 3) Water Quality

and Quantity and 4) Remediation and Prevention of Contaminants. The strategic objectives and tasks of these other four focus areas would be difficult, if not impossible to achieve without a balanced effort to promote development and sustain business activity in the river basin.

The Balancing Redevelopment and Restoration Subcommittee distilled the findings of the Summit focus group down to the following six priorities:

- 1) Organizational Structure - Establish an organizational structure to serve as a clearing house which will disseminate information to a diverse community of stakeholders, to guide and facilitate their collaboration and to coordinate various funding sources that will support the balancing effort.
- 2) Research on costs/benefits – Research costs and benefits of sustainable practices to identify and support successful sustainable practices and the incorporation of environmental amenities/restoration as part of development and business activity on the river.
- 3) Successful Balanced/Sustainable Models– Identify local, state or national examples of projects to serve as models for the basin.
- 4) Education and Outreach - Develop a communications strategy to disseminate information on the research and model projects to government, NGO, business community stakeholders and the general public.
- 5) Regional Approach with Local Project Areas – Develop a regional vision and approach that accounts for differences in the upper and lower river areas, then step down the planning effort to fit with local objectives
- 6) Opportunity for Policy and Regulatory Support – Seek opportunities to propose new or amended policy and regulatory provisions that support balanced redevelopment and restoration.

1. Organizational Structure

Background

A significant dilemma with development in the U.S. today is the result of non-coordination of private developers, municipalities and counties, and adjacent/contiguous areas to the proposed development space. Sprawl and other types of patchwork development often destroy the flow of the land and in turn significantly reduce or eliminate use of its natural resources. Regional planning, with a supervisory organization to coordinate, is the key to solving this problem. Rutgers University has been the project coordinator of the SRRI and its over thirty collaborators to date. As an independent entity from government and industry, Rutgers has proven the ability to coordinate public and private organizations without fear or bias in past local and state ventures.

Identified Constraints

Whereas organizations such as the New Jersey Meadowlands Commission (NJMC), the Pinelands Commission, and the Highlands Commission have regulatory authority in their respective areas, the SRRI will not retain that power. In order to promote and execute plans for

above-minimum standard development in the Raritan Basin, incentive approaches must be discovered and applied.

Tasks

1. **Ensure the redevelopment objectives.** The most important aspect of this project may be in attempting to maintain a solid path toward the regional vision set forth in the planning stages amongst the various stakeholders. With site specific attention paid to each development within the comprehensive plan, the organizing body will have to ensure each site is in accordance with proper remediation techniques; its adjacent areas, creating contiguous swaths when possible; maximum use of its natural resources; and the overall goals of the SRRI.
2. **Develop incentives in place of regulations.** This organizational group will not have the power of legislative capability, the 'teeth' behind the goals of the SRRI must, therefore, come from incentives programs that will be built into the cost/benefit analysis in the early stages of planning. The coordinating body must also interest the attentions of rule-making agencies in order to maximize the project standards in the planning process. Rather than ruling with new regulation, however, the organizing commission will create incentive tools for monetary credit, to be researched in stimulus funds, 'green acres' or 'open spaces' programs, etc.; and non-monetary programs, such as free consulting from organizations of the SRRI.
3. **Collect and disseminate data and funds.** Rutgers has designed the SRRI website, www.raritan.rutgers.edu, as a central contact and news/update bulletin. This website will contain information on the steps taken and those still to be acted upon, and must be updated often to ensure the collective efforts of all collaborators. SRRI participants must provide samples or news to the coordinating body so that it may properly inform and guide the project and its stakeholders.

Fund-raising and appropriation will be one of the varied duties of the coordinating body. Whereas local funding has been discovered on an annually-renewable basis thus far, it will be an essential goal to interest new contributors in order to continue and expand the scope of the current budget. This task will be set to the coordinating body and in turn will be in position to appropriate those funds according to the SRRI master plan.

4. **Involve student body in research.** Rutgers University has a diverse pool to draw from: fields of study pertinent to this project with regard to environmental concerns, development, design, economic analysis, and policy and a wealth of eager students anxious to apply the skills they have learned to practical use. The SRRI is currently establishing a research studio for the Spring '10 semester, further research and planning classes should be utilized.

2. Research on Costs/Benefits

Background

Cost-benefit analysis is essential to discovering the feasibility and dimensions of any restoration or development project. True cost assessment should represent an integration of not only initial expenses, but should accurately predict and include phased, long-term costs and benefits in the final plan.

Identified Constraints

Common obstacles involved in cost-benefit analysis will emerge in the SRRI process, as will dilemmas specific to this project's goals. Identifying and addressing these obstacles early is crucial to the success of a project of this scope. Cost assessment errors are often due to the use of similar, but divergent models, the misuse of available data or incomplete data, and a group's failure to identify all cost drivers.

Constraints specific to the Raritan Basin restoration and redevelopment cost-benefit analysis include:

1. Master plan cost predictions based on a continuously amended project list.
2. Long-term project costs-of-operation rise over time.
3. Each site will require unique projects and funding accordingly.

Tasks

1. **Develop research body/studio.** Rutgers University's Bloustein School for Public Policy and Planning is scheduling a research studio regarding SRRI goals for Spring 2010. This will make for an excellent source for research in the Raritan region with regard to collecting data, identifying constraints, and integration of concepts. This is a good pilot for future studios to come.
2. **Research existing fiscal assessments/proposals for the Raritan region and statewide development projects.** Existing resources to use as fiscal assessment models are the Listokin/Bloustein report "Who Lives in NJ?", "The NJ State Development and Redevelopment Plan", reports from NJWSA and MCIA, and others. This will aid in discovering and creating incentives for developers and investors.
3. **Develop a fiscal panel within SRRI.** Enlist planning, development, ecological, and fiscal experts to properly aggregate the various cost drivers and predicted returns on investment (ROI) into a definitive comprehensive plan. This panel will face challenges in an unprecedentedly voluminous task. It must address the common, as well as project specific fiscal concerns, as stated above in *Identified Constraints* by properly projecting site costs into the regional scope of the SRRI.

3. Successful Balanced/Sustainable Models

Background

Examples of successful sustainable, or balanced, community development are surfacing across the U.S. Developers are becoming aware of the cost benefits (return on investment, or ROI) of ecologically considered design. 'Smart design' enables developers and landowners the ability to charge higher rental and resale rates, enjoy lower utility and maintenance costs, and fuller and more quickly replaced tenant capacity.

Identified Constraints

Of the criticisms toward this new balanced development concept, is the dilemma of increased, and sometimes unforeseen and underestimated, initial investment in order for the successful, but long-term ROI to satisfy the investor in this type of development. Education and proper consultation is mandatory to adequately 'build in' the actual cost of development into the initial planning. This will prevent projects from incurring fatal errors in the planning process that may compromise the scope and effectiveness of the original design.

Tasks

4. **Promote multi-disciplinary consultant approach to planning.** By incorporating various public entities (RU, NJDEP- Brownfields, Land Use, Stormwater, C&E, Remediation; USEPA; USACE; County Planning agencies, etc.) and the diverse specializations of private organizations throughout the state (NJWSA, MCIA, EWA, Princeton Hydro, etc.) the SRRI can promote comprehensive planning strategies and consultation to prospective developers in the Raritan Watershed region. Coordination of these organizations is crucial to avoid conflicts with permitting, other organization's existing projects (between profits and non-profits), and the larger goals of the SRRI before planning is complete for each site; and to ensure consistency. This approach will also help to avoid degradation of water and land quality through development and use. One of the non-monetary incentives for businesses will be free consultation, which works two-fold in this case.
5. **Promote benefits to businesses for smart growth.** This is discussed in the *Education and Outreach* section of this paper. The SRRI must set up education and awareness campaigns in order to interest and enlist organizations, both public and private, for-profit and non-for-profit alike. These programs promise to have a snowball effect on developers and communities and to expand the balanced concepts organically through interest and application.
6. **Utilize existing research on the Raritan Basin and NJ.** The idea of not 're-inventing the wheel' emerged during the 'Balance' task group meeting process. This refers to the wealth of data and extensive planning that already exists for the Raritan Basin (NJWSA, MCIA, SBWA, Rutgers Bloustein School, NJOSP, etc.). SRRI will utilize and credit this pre-existing research, along with newly acquired and updated site specific data, to begin and carry through the planning process. Credit to and advice from

current 'balanced' projects in the region will be sought in order to more accurately understand and endeavor these goals.

7. **Develop a pilot project.** Though regional vision is the overall strategy for the SRRI, it is the site specific research and planning that will propel this project forward in application. Therefore, choosing a pilot restoration/redevelopment site is suggested. This will:
 - A. Be a launching point for the individual projects proposed.
 - B. Create a working example to interest new developers/investors/communities.
 - C. Prove that sustainable/balanced development is possible in NJ with regional approach rather than lone communities.
 - D. Demonstrate the application of new concepts that others are not yet exposed to.

4. Education and Outreach

Background

Currently there is an explosion of information on restoration science, innovative technologies for contaminated sediment remediation and the cleanup of waterways and drinking water supplies, environmentally friendly development strategies, alternate energy production and energy efficiency. The developments in these areas directly relate to each of the other four task groups which are the focus of SRRI. Much of this is being fueled by the movement toward a "green economy" and the new administration's focus on stimulating the economic system by promoting sustainable businesses and practices that will simultaneously reduce environmental impacts such as global warming. This movement is focused on the largest industries, from chemical manufacturers and automobile makers all the way down to private homeowners, who can reap tax benefits by improving the energy efficiency of their homes and reducing their own carbon footprints. All of these developments and associated information will inform the effort to balance restoration and redevelopment on the Raritan.

Identified Constraints

Despite the availability of information and the "green revolution," there is currently a lag, a disconnect or disjointed approach in the dissemination of information to stakeholders: those private and government concerns that are doing the current on-the-ground work to fund, plan, zone and initiate development/redevelopment or modify/start existing and new business operations. Throughout the state and in the Raritan Basin, it is unclear whether the economic activity is consistently being informed by information on sustainability that is currently available and that will become available as additional advances are achieved in all of the SRRI task group areas. In addition, the forums and vehicles to disseminate information specific to the Raritan basin are fragmented at best and may not even yet exist. The information sources that do exist may not yet have an established reputation for expertise in the area of sustainable practices.

Progress on the Raritan in the areas of 1) Greenways and Public Access, 2) Habitat Restoration, 3) Water Quality and Quantity and 4) Remediation and Prevention of Contaminants will not be made unless the stakeholders from the building, development and business communities are

engaged and “unless they can see a direct relevance to themselves...” and the economics of their operations (“Raritan Project Needs and Resources Assessment,” Rutgers Center for Environment Communication, pg. 5). Establishing a mechanism for education and outreach will be they key to building support for balanced and sustainable approaches in the Raritan Basin. Successful education and outreach will foster stakeholder involvement but this will require a planned and strategic approach. “Most approaches make use of organizational structures to help [stakeholders] understand how to be involved...and to structure their interaction in a way that benefits...the initiative.” (New Jersey Water Supply Authority “Issue Paper for the Raritan Basin Watershed Management Project, October 2000, pg 4). Education and outreach to support balancing restoration and redevelopment will require a specific communications strategy directed to each distinct group of stakeholders up and down the river.

Tasks

1. **Identify the stakeholder groups in the Raritan Basin.** In addition to the municipal, city and county governments in the watershed, identify the relevant utilities, commissions and authorities that work in the basin as well as the programs in state agencies such as Departments of Environmental Protection and Community Affairs that have an important role in working towards a sustainable Raritan. Stakeholders will also include representatives of the major industries remaining in the basin, the chambers of commerce and the developer community active along the Raritan. Finally, the non-governmental organizations that actively work in the region should also be included.
2. **Assemble experts to develop educational and outreach materials tailored to stakeholders.** Select practitioners in all of the relevant disciplines including but not limited to urban/integrated design, economics, green building, municipal land use, environmental regulation/permitting, water infrastructure, remediation and land preservation to assist in organizing the compiled research and models of sustainability that will be used to develop educational materials for each stakeholder group. Conduct facilitated meetings to help develop these materials and engage Rutgers staff and students to assist in this effort.
3. **Conduct educational forums and provide a vehicle and clearing house for disseminating information.** Plan targeted regional forums to strategically engage stakeholders and build support for balanced approaches in the basin. Provide educational materials on how to balance and integrate environmental protection with economic interests geared to each of the stakeholder groups (i.e. Conduct a forum for developers and builders to inform on the upfront costs and financial returns of balanced and sustainable development using the models and examples that were compiled, and a forum for municipal officials to regarding zoning and ratables associated with balanced approaches)

4. **Undertake major outreach efforts at strategic annual forums and on a smaller scale, in each community in a prioritized targeted manner throughout the basin.** Attend the NJ Builders Convention, the League of Municipalities annual forum, ANJEC's annual meeting, and any business/industry related conference to disseminate information. Develop a prioritized schedule for visiting municipalities and counties

5. Regional Approach with Local Project Areas

Background

The 1,100 square miles of the Raritan River basin and the 1.2 million people living in its watershed present a diversity of businesses/development, environmental conditions and communities.

Identified Constraint

What may be relevant to the northern reaches of the river in terms of balancing restoration and development may not be relevant to the middle and lower reaches of the river. Even adjacent municipalities within one region of the river may have very different needs and conditions – some will be pro-growth and some will be restoration/conservation focused. Considering the diverse conditions within the basin, it will be necessary to institute a regional approach to promote the balancing effort. To promote early successes it will also be necessary to step down a regional approach to a more local level. All of this work will require a concerted effort on the part of appropriate experts in a range of fields. It will also be necessary to identify and develop funding sources and financially based incentives.

Tasks

1. **Identify and apportion the river basin into appropriate regions.** It will be necessary to organize a group of land use and planning experts to propose the establishment of regions of the Raritan River basin that would facilitate a strategic approach to balanced planning.
2. **Undertake a regional approach to planning.** This will require the development of a vision for balancing that is geared to the identified regions of the basin. A model to assist in developing this regional approach will be NJDEP Brownfields Program provisions of Brownfield Development Areas ("BDAs"). The provisions for establishing a BDA could be amended to develop a regional approach to incentivize balanced redevelopment, use and funding of multiple sites in a region of the river basin. With the help of appropriate experts it may be possible to revise this brownfields/BDA approach to incorporate and integrate actions that will address the identified issues for the Raritan in the particular region, including stormwater management, water infrastructure, remediation, redevelopment, affordable housing, transportation, open space and habitat preservation and stewardship. Through the SRRI, a new planning region designation called a "Raritan Environmental and Economic Development Area" or "REED" could be proposed with specific criteria to encourage the practices that encourage a balance of redevelopment and restoration.

3. **Identify funding sources, existing incentives and develop new incentives.** A critical piece of the effort will be to research the availability of funds that may be applied to balanced regional planning and local projects. Opportunities among federal funding sources for sustainable planning may include the Water Resources Development Act administered by the US Army Corps of Engineers, EPA and NOAA grants and the current “Stimulus” bill. Research into federal and state tax credits should also be undertaken as well as other State of New Jersey based funding opportunities. New Jersey’s program to recover funds for natural resource damages could be tapped for specific projects if certain criteria were met. In addition, the state’s environmental enforcement programs have provided opportunities to fund “Supplemental Environmental Projects” which can include appropriate balancing projects in a region of the Raritan.

4. **Implement projects on a local scale.** On-the-ground work will have the best chances of succeeding if it the regional approach is applied and implemented on a very local (i.e. municipal) scale. Therefore it will be necessary to identify and categorize municipalities that want growth and those that are interested in restoration or conservation only. Selecting the appropriate projects in the appropriate localities can proceed after the establishment of a regional plan but does not have to. It will be important to select projects to achieve early successes so they may be used as examples or models in the watershed to promote additional balanced projects.

6. Opportunity for Policy and Regulatory Support

Background

Most current federal and statutory law is at worst silent on requiring sustainable practices and as best vague due to the relative novelty of the movement. In addition, the opportunity to influence amendments or even new legislation is rare and very difficult when available. However, as with every state and federal agency, NJDEP, NJDCA and other agencies with programs influencing activities on the Raritan are continually amending and updating their regulations and policies. The early stages of the administrative process to make amendments presents opportunities for institutionalizing requirements for sustainable practices to be applied in the basin and elsewhere. On the local level, opportunities exist to present amendments to existing zoning ordinances or propose new ordinances that promote sustainable practices.

Identified Constraints

The process to amend and promulgate regulations is cumbersome. In addition, due to the numerous chapters of complex regulations now currently on the books, most agencies have a long list of rules waiting to be updated and significant time may pass before a regulation that can influence sustainable practices is up for amendment. Even when the opportunity exists to influence a regulation and maybe its permit process, it is necessary to have the right experts to commit to what can be an arduous task. In the local arena, tracking new municipal ordinances

or those that are under amendment is a daunting task considering the sheer number of municipalities just in the Raritan Basin alone.

Tasks

- 1. Build the capacity for expertise in the regulatory process.** To participate in the process to amend any regulatory program requires experience and time commitment. Seeking to make amendments that will promote or require sustainable practices will require a specialized knowledge base. It will be necessary to build a cadre of experts to undertake a meaningful approach to amending regulations and ordinances as they become available.
- 2. Research the current regulatory programs that are both facilitating and hampering sustainable practices in the Raritan Basin.** Identify and track those regulations that promote and prevent sustainability in order to be prepared to defend favorable regulations or amend unfavorable regulations when they are up for amendment or proceeding through re-adoption due to “sunsetting.” Seek to push regulations that require amendments that will support sustainability to the top of an agencies list.
- 3. Propose new regulatory programs and model municipal ordinances and participate in the administrative process.** Draft and submit amendments and new regulatory language to agencies for consideration and prepare model ordinances for municipalities. Make experts available to answer questions and participate in the rule drafting process. More importantly, provide experts to participate and provide oral and written testimony in the public comment process as new rules are proposed and also in township meetings as new ordinances are vetted at the local levels.

Conclusion

“Conservation is a state of harmony between men and land... In short, a Land Ethic changes the role of *Homo sapiens* from conqueror of the land-community to plain member and citizen of it.” (Leopold, 1949) Finding opportunities to promote a balance of redevelopment and restoration in the Raritan River will work to get us closer to that state of harmony in the New Jersey’s largest watershed. When successful strategies to simultaneously benefit the economy and the environment are put into place on the Raritan, more citizens will embrace the effort to sustain the river community and the natural resources which are the foundation of our economy. In addition, the rest of New Jersey and other states will look to the Raritan for examples to accomplish the same. As set forth in the general policies of New Jersey’s State Plan: “the future environmental and economic integrity of the state rests in the protection of these irreplaceable resources...”

APPENDIX I. Balancing Redevelopment and Restoration Subcommittee Members

Martin McHugh, Subcommittee Chair	NJDEP
Hank Mayer, Subcommittee Chair	Rutgers University
Bill Kibler, Subcommittee Chair	South Branch Watershed Association
Michael Baker	Hoagland Longo
Mirah Becker	Middlesex County Planning Authority
Cindy Ehrenclou	Upper Raritan Watershed Association
Brandy Forbes	Township of Edison
Mark Gallagher	Princeton Hydro, LLC
Karl Hartkopf	NJ Dept. of Community Affairs
Marta Lefsky	Township of Woodbridge
Chris Obropta	Rutgers University, SEBS
Carlos Rodrigues	Regional Plan Association
Edward Samanns	Louis Berger Group
Lauren Theis	Upper Raritan Watershed Association
Calvin Tien	Louis Berger Group
Nicholas Tufaro	Middlesex County Planning Authority
Dan Van Abs	NJ Highlands Council

For More Information

The Sustainable Raritan River Initiative
Rutgers, The State University of New Jersey
Environmental Analysis and Communications Group
E.J. Bloustein School of Planning & Public Policy
33 Livingston Avenue
New Brunswick, NJ 08901
www.raritan.rutgers.edu
848.932.2711