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# Bronx River Restoration: Report and Assessment

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# Bronx River Restoration: Report and Assessment

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November, 2001

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## **1. Background:**

*A: New York City's Urban Ecosystem:*

Contrary to popular belief, New York City is more than a gigantic metropolis where major financial transactions take place, tourists flock, great theater is viewed and skyscrapers are admired. In fact, it is the home of many valuable and threatened species, including twelve pairs of peregrine falcons and fifteen pairs of piping plovers. Great-horned owls, scarlet tenagers and wood thrushes struggle to thrive amidst the incessant development occurring in these highly populated regions. However, the damage that has been done is severe; seventy five percent of historical wetland resources in New York and New Jersey have already been lost.

In response to the trauma on the environment, the New York/New Jersey Harbor Estuary Program developed a strategy called the Comprehensive Conservation and Management Plan. Among its many goals are the restoration of an ecosystem that will allow biodiversity to thrive, preservation of open space, increased public awareness, accessibility to the watersheds and a decrease in pollution in the watersheds.

Unfortunately, due to development and human pressures, it is difficult to acquire land for such purposes, and even when restoration and mitigation are feasible, there is large debate that what finally is accomplished is often too little and/or too late. Thus, the Habitat Workgroup, hired to implement this plan, developed a more conclusive five-year monitoring program to survey the biomass, soil, fish, and birds. This will indicate where and what needs fixing. The project proved hopeful in that by 1999, sixty acquisition sites and eighty-eight restoration projects were identified. Hundreds of millions of dollars are currently being put into these projects on federal, state, and city levels. The good news is that New York City has now acquired more than 1500 acres of natural land in HEP

priority watershed, now part of the NYC Parks. Millions of dollars have recently been promised for New Jersey wetland improvements and delegates have, in the past, requested monies from President Clinton. The future looks promising. The bad news, however, is that while the long intricacies of this beaurocratic process are negotiated, habitat destruction continues. Violators are not severely punished, if at all, for harming our delicate ecosystems and existing laws are not strict enough as they stand now. Thus, damage carries on.

#### *B. Water and Ecosystem Quality in the Bronx River*

To take a more in-depth look at the damage inflicted upon New York City's ecosystem, we look specifically at the Bronx where severe threats to water, land, and air quality are adversely affecting its residents. From a survey done by the Environmental Protection Agency, it has been found that (of conditions studied) watershed use, fish and wildlife consumption, ambient water quality, and wetland loss are all in a serious state. Of the vulnerability indicators, urban runoff potential and air deposition ranked among the highest risk. Population change and hydrologic modification showed be of moderate concern.

#### *C. River History*

Having discussed the ecosystem of New York City in general, and more specifically, the problems within the Bronx, we now focus on the Bronx River Parkway, a 23.9 mile long highway constructed in 1907-1925 in Westchester and between 1946-1950 in the Bronx. It important to know a bit about the history of the Bronx River Parkway due to the pollution and destruction that it causes in and around the Bronx River. Named after the first European settler in Westchester County, Jonas Bronck, the Bronx River has a long history of pollution, dating back from records in 1909 as noted in

a Bronx Parkway Commission Report. As an incentive to attract tourists and to preserve the communities through which the river runs, policies were suggested when constructing the parkway. Among these suggestions were the very obvious; the parkway should accommodate a large amount of traffic, bridges should be carefully designed in harmony with nature, preservation of existing trees should be considered, reforestation and landscaping treatment along natural lines, and anything unnatural to the valley should be hidden. The report stresses the desire for the parkway to have beautiful vistas, “broad enough that he who runs (or rides) may see; with intimate bits for those who wish to pause; with material prevailingly indigenous, but always suitable to the situation of its requirements.”

After the parkway was completed the hope was that the attractiveness of it would make the 15.5-mile long road famous. Jay Downer, chief engineer and secretary of the Bronx River Commission describes an experience across the parkway as moving “swiftly over the smoothly paved 40-foot drive following an alignment of ever-varying graceful curves with gentle undulations of grade.” The engineers designed the parkway exactly as had been expected, keeping the natural beauty of the river visible at all times and incorporating the natural surroundings with precision and care. So, where and why did everything go wrong? Anyone who has driven on the Bronx River Parkway now cannot help but laugh at the description of “graceful curves” and “smooth pavement.”

The answer is simple. By the 1920’s, with the advances in cars and technology, the Bronx River Parkway was no longer enough to accommodate the needs of the many, and continually increasing, number of travelers. Furthermore, the parkway did not have median separation and breakdown shoulders, and curves were too sharp. When Robert

Moses, the arterial coordinator and parks commissioner for New York City came into the picture, he designed many improvements to the existing parkway and, in 1931, began the construction of the Bronx section of the Bronx River Parkway. It was finished in 1950.

Bronx River Parkway restoration efforts were underway by 1991, when 13.2 miles of the river (the junction with the Sprain Brook Parkway and Kensico Dam) were placed on the National Register of Historic Places list, hoping to gain significance as a historical sight and thus getting more leverage for immediate improvements. By this point, the parkway was already in bad shape. The pollution, vandalism and exhaust fumes had turned what was once a beautiful dream into a nightmare.

There have though, been many recent reconstruction efforts. Beginning in 1992 and lasting three years, the southernmost 2.3 miles of the parkway in Westchester County were reconstructed, a large accomplishment since this part of the parkway was part of the National Register of Historic Places list. Moreover, the much-needed reconstruction of the Woodland Viaduct, a 270-foot long concrete arch structure, was finally accomplished, after much debate over the huge monetary commitment involved. The project was successfully completed in September 2000 and the structure now not only meets structural standards, but also complies with historic preservation criteria.

The improvements continue and future endeavors are in place. For example, \$59 million has been allocated for bridge rehabilitation along the Bronx section of the Parkway; construction of a new exit ramp in Yonkers is scheduled, and construction of the Bronx River Greenway through the Bronx is in the works. These projects should all be completed over the next few years.

More promising though, is the community involvement. A one-day bike rally on the parkway to raise money for muscular dystrophy has now become a weekly event. From April to October, every Sunday seven miles of the parkway are shut to automobile traffic and open to bikers. Each week 3000 people participate in the program.

#### *D. History of Restoration Efforts*

Restoration efforts are prevalent beyond The Bronx River Parkway and the Bronx River. In fact, there are innumerable organizations that focus on environmental injustice and urban ecology in and around New York City. Many different groups work on the restoration of the Bronx River and other streams by replanting and organizing various clean-up days and clean-up groups. Some include the Bronx River Restoration Group (run by the City Parks Department), the US Army Corp of Engineers, the NY State Dept. of Environmental Conservation, Westchester County Department of Environmental Planning, New York City Restoration, and the Fordham University Community Service Program. Some groups work on urban ecology via the development and maintenance of community gardens. They grow organic vegetables, provide food for the needy and educate children and the public about the necessity of greenery for community development. Such programs and organizations include the Bronx Green-Up Program at the NY Botanical Garden, and the Greenthumb Program of the City Parks Department. Still other groups work on upgrading and greening city parks. They set up hiking and biking trails through many boroughs of New York City. Lastly there are many environmental groups designed to educate the public on all levels about environmental concerns such as wildlife conservation, environmental injustice, conserving, and recycling. With education comes the possibility of improving health due

to environmental hazards, or at the very least making people aware of how and where to get help.

On a positive note, these are only a few of the many environmental activist groups. However, there is considerable debate as to their success in the overall scheme of things. I argue that while small non-profit organizations may not be making huge legislative changes, they are succeeding in making people more aware of the current situation of our environment. Furthermore, they get people in the community involved, which provides hope for future generations.

One group whose sole purpose is restoring the Bronx River through education and outreach projects is called the Bronx River Working Group. The Urban Resources Partnership and the Partnerships for Parks founded it in 1997, in response to the poor water quality, habitat loss, and sewage problems of the river caused by rapid urbanization. With monetary help from the US Department of Transportation and EPA Wetlands Protection, the Bronx River Working Group is a compilation of over 50 community groups, nonprofit organizations, businesses, and others. Five action teams have been developed to maximize success. It has been working in that many projects have led to significant improvements including bettering water quality, habitat restoration, and increased public access to the watersheds. This has been achieved via public outreach projects such as Adopt-The-River Program, whereby gaining community involvement—the crucial part of significant river cleanup.

#### *E. Current USACE Restoration Project*

Though improvement of the river has been noticed, the hope is that the process will continue and grow over time. The US Army Corps of Engineers recognizes the



Bronx River to be in imminent danger. According to a general investigation by the US Army Corps of Engineers, the Bronx River Basin has the potential to cause severe flood damage due to the large amounts of sediment that the river carries. The costs to fix this are high, but the risk of not restoring and preserving the river are potentially higher.

The US Army Corps of Engineers has devised a fact sheet that highlights the important issues that they are dealing with involving the Bronx River. They estimate a 700,000 cost for the federal government to study the feasibility of the program that will ultimately include; a basin-wide management plan to structure restoration efforts, proposed restoration of natural channel and mixed floodplain for Fisher Lane Pond, proposed restoration of 40 acres of tidal wetlands, coastal meadows, and upland forests at Soundview Park. The preliminary restoration plan focuses on 18 projects sites for intervention and ecological restoration. Like many other groups, the plan aims to improve water quality, habitat restoration and ecological restoration in general through a comprehensive plan of management strategies and regulatory intervention.

## **2.Conflicting Values and Uses**

Question—Is cleaning up one river, namely, the Bronx River, worth the money and effort being put forth?

### *Policies/Values*

- Side A:** \*Minimal current Maintenance/Restoration  
\*Spend federal money only when absolutely necessary  
\*The funds can be used for something else  
\*People should suffer if they destroy their environment  
\*Freedom of consumption, transportation, and technology that often pollutes the river  
\*People can move if they don't like the river or parkway  
\*This is not the greatest happiness for greatest good

**Side B:** \*Aggressive Restoration

- \*Minority communities suffer disproportionately from pollution in river
- \*Right to clean water, recreation, and access to watershed
- \*Right to health and happiness
- \*Preservation of biodiversity, nature
- \*Educational, aesthetic, religious value of nature

*Stakeholders*

**Side A:**

- \*Developers in suburban areas
- \*Businesses/Corporations
- \*People who do not live in the communities at risk
- \*Taxpayers
- \*Public officials

**Side B:**

- \*People near the Bronx River
- \*Minority and poor communities
- \*Environmental groups
- \*Environmentalists and animal rights activists

*Judgment*

**Side A:**

- \*Communities clean their own rivers
- \*Only use federal money when necessary, i.e. restoring parkway
- \*Minimal Intervention

**Side B:**

- \*Federal money needed
- \*Comprehensive and intelligent restoration programs
- \*Important for health and moral reasons to take initiative
- \*Pollution should be eliminated from river
- \*Stronger regulations and policies should be implemented

*Problem:* The Bronx River is in imminent danger. The River is contaminated with chemicals, pollution and garbage. Habitats are threatened and human health is at risk. The only way to better this situation is via major community involvement, education and funding. Where will this come from and how does it get started?

*Explanation of the Diagram:*

Side A argues that the environment is important but there are other important issues that need similar resources. If we put too much money into river restoration, we are taking away from the money that would be spent on other important projects.

Community organizations should not receive federal money, because cleaning up their own community is not the greatest good for the greatest number of people. Individuals are responsible for their community, and if they destroy it, they should clean it up or suffer the consequences. Federal money should only be given when damage was through no fault of the community such as natural disaster. In response to suburban sprawl as a factor in the pollution of the river, proponents of Side A would probably agree that those who use the Bronx River Parkway do contribute to the garbage that directly affects the Bronx River. However, they would argue that if people living there are adversely affected by the pollution, they could move. They would use the right to transportation and commerce to support traveling on these highways. The stakeholders are many and varied ranging from developers in suburban areas who have vested interest in suburban sprawl to taxpayers and public officials. If pollution in the river was curbed by halting suburban sprawl, businesses and corporations would be at risk. This would hinder one's right to commerce, and the democratic ideals of the American society.

Side B would argue that minority and poor communities are suffering from environmental injustice. Parts of the Bronx River are located in poor and minority areas and are thus overlooked. They would argue that all people have the right to clean water, recreation and the other freedoms listed above, because these too, are the ideals in our democratic American society. The only way to solve this vicious cycle of environmental oppression is through education and outreach projects. This needs to be catalyzed by the federal government because the community simply does not have the funds to do so. After the federal government funds the program, it can phase out and the community can eventually take full control of the restoration project. Thus, the stakeholders are people

of the community, environmental organizations, and people concerned about health and the environment in general. Animal rights activists would argue that restoration must occur to fix the habitats of valuable species affected. The ultimate judgment would be that, since the general population (along with the communities) cause the pollution problem in the river, the federal government needs to take action and support restoration through considerable funding.

### **3.Value Frameworks For Policy Making**

#### **Humanistic Framework:**

*Side A: Baxter vs. Side B: Norton/Hawken*

#### *Metaphysics*

**Side A:** Arguments from species selfish human nature, enlightened egoism, correspondence of human and nonhuman goods, lack of communication with nonhuman, amoral character of nature

**Side B:** Justification of moral principle by its practical effectiveness

#### *Ethical Principle*

**Side A:** \*Maximum efficiency in satisfying human wants, needs, and consumption demands

**Side B:** \*Duty to traditional human values, which involve appreciation of nature and harmony with it

#### *Values*

**Side A:** \*Freedom, dignity, no waste, incentive and opportunity

**Side B:** \*Aesthetic and Religious value of pristine nature

\*Educational value of nature

\*Distributive Fairness and justice in distribution of natural resources and environmental benefits to individuals of present generation

\*Allocative Fairness of resources for people of future generations...sustainable development

#### *Rules/Policies*

**Side A:** \*Consume and use what you want, no intervention

**Side B:** \*Environmentally sensitive behavior, policies and rules

The Bronx River Restoration can be looked at from many approaches including humanistic, animal welfare, or biocentric. When looking at it from a humanistic

framework, one can examine two sides of the environmental theory namely that of Baxter and that of Norton/Hawken. The latter two are viewed collectively because they are very similar.

Baxter would solve the moral conflict at hand by limited the use of federal and other outside funds to restore the Bronx River, thus taking a minimal restoration and maintenance approach. He would argue that people have the right to consume as much as they want and to take all measures to achieve this. Therefore, he would be a proponent of suburban sprawl if it enhances economic opportunity. Since suburban sprawl is a major cause of the degradation of the river, Baxter would probably think that it is unfortunate, but not right to change our behavior to better the river. It is after all, only a river and many more people would be adversely affected by curbing suburban sprawl. Furthermore, Baxter would argue that hindering suburban sprawl would take away financial opportunity from businesses who develop in suburban areas, thus infringing on their right to free enterprise and economic prosperity.

Baxter would argue that the river is a resource for people to use at their leisure. If they destroy it, while unfortunate, it is their prerogative. Moreover, when federal money is spent on community projects such as Bronx River restoration, it is taken from other areas. Nothing should slow down the economy and nothing should hinder the right to economic freedom and prosperity.

Norton and Hawken, on the other hand, would argue (also from a humanistic perspective), that necessary measures must be taken to clean up the Bronx River. They would use the principle of distributive and allocative fairness. This states that environmental factors such as the right to clean water and a healthy watershed for

purposes such as religious, educational and aesthetic, should be distributed equally.

Thus, Norton and Hawken would solve this moral conflict on the basis of environmental injustice, which has been inflicted upon minority and poor communities in that they do not have access to clean water. The government must aid in the restoration and preservation of the Bronx River because minority and poor communities have suffered too long from adverse and unequal environmental hazards.

Using the Norton and Hawkin framework, one would advocate treating the environment with care and harmony. Although they advocate this because it is advantageous to humans, this type of mentality in turn benefits all other living creatures in and around the river. By appealing to human health and human rights to a clean environment, one is also appealing to the biocentric and eco-friendly mindsets of other philosophers. Principally though, from the Norton/Hawkin viewpoint, allocative fairness and distributive justice are the major underlying reasons for substantial government aid and aggressive action of restoration of the Bronx River.

#### **4. Policy Recommendations:**

As a Bronx resident, I have had many encounters with the Bronx River. With the Parks Department, I was afforded the opportunity to canoe the river, and I must say, the sights were appalling. Cars, refrigerators, washing machines, sewage and garbage were prevalent in the river. You would not want to touch the water, let alone swim in it.

I firmly believe that there are many reasons why the Bronx River has become so dirty, why relatively little has been done in the past to fix it, and why immediate restoration efforts are necessary. First, many parts of the Bronx River are located in poor and minority areas. Huge garbage sites and metal landfills are located in these places. The

sights are atrocious and thus, the attitudes of the people living under these conditions are affected. Furthermore, the garbage disposal systems in these areas are insufficient. Thus, much of the garbage from the area and from the metal plants ends up polluting the river. This sparks a perpetual cycle. If a place is already dirty, there is little effort or incentive among the people in the community to keep it clean. When an individual has no pride in his/her surroundings, he/she becomes discouraged and loses the incentive to fight for change.

Second, the pollution in the Bronx River stems from the uses of many automobiles on the Bronx River Parkway. It is no wonder that, with over 220,000 vehicles on the highway daily, exhaust and parts from cars also deposit in the river.

I agree, therefore, with Norton and Hawkins theory. Something must be done about this before it is too late. People are equal and should receive equal access to environmental rights such as the right to clean water and the use of nature for many purposes. If we initially followed this principle, resources would have historically been allocated equally and extra funding would never have been needed to clean up the river. But, since poor communities have not had equal opportunity to clean water, the problem has perpetuated and now government intervention is necessary. More importantly, though, basic human health relates to pollution and toxic waste. We must, therefore, limit what leaches into our drinking water and our land by limiting what goes into the river. The only sure-fire way to do this is to limit consumption. If there was a fundamental change in mentality from wasting to saving, people would not take their things for granted and would not dispose of them in the river. Norton's principle is also

valid in that we want to preserve the environment for future generations simply because they too deserve these rights.

Baxter's theory is neither logical nor feasible. First, there is nothing that gives us the right to consume all we want and destroy the ecosystem. Second, greed and consumerism are the source of the problems that have led to environmental destruction. It must be stopped.

This is why a comprehensive plan is essential. Some recommendations for future policies are as follows. 1. Environmental education needs to be integrated into the school curriculum from early years of grammar school up through and including high school. In college at least one environmental course should be part of the general requirements. While this is already beginning, it must take place in all schools. It should be mandatory for every elementary school class to become involved in a project that directly affects the students. For example, students in the Bronx could work on the River restoration. They could organize clean-ups, raise money for projects, or plant trees in the area. At the very least, they may take some of what they learned home with them, spreading the awareness to their parents and relatives. Knowledge and education is key. 2. Bring officials and policy makers in to the river to see what it is really like. Often, unless people actually see with their own eyes the state of the river, they are unlikely to care much. I think that if the New York City Mayor or governors saw some of the junk in the Bronx River, they would be more inclined to supply the environmental organizations with funding to help in the plight of restoration, as did Governor Pataki. 3. Although the Parks Department does arrange canoeing trips once in a while along the river, more of these types of things need to be done. People in the community need to see



that the river has the potential to be used for leisurely and exciting recreational purposes. Perhaps organizations could publicize “canoeing in the river” fundraisers at local churches and community centers. 4. Get all local environmental groups focused on the same issues. Often, there are several small environmental groups with limited resources trying to do similar projects. Little is actually accomplished because the resources in each group are small, but if they all combined forces, significantly more progress could be made. 5. Research other areas in which restoration projects worked very well. Display these as “before” and “after” pictures as incentive for people to clean up the Bronx River. If individuals see that change is possible, that it has been done against all odds elsewhere, they will have more of a desire to help in their own community. 6. Write to policy-makers. We need children to know that their words matter. Sometimes young people have a lot of influence and do not realize it. By using their desire for a clean place to play and clean water to swim in, we can get to the hearts of legislature. Pictures of children in the dirty river may make the policy-makers see more than dollar signs. They will at least be a bit more hesitant when denying the funds. Like everything else, it is easy to say no to something in general but when stories become personal, they take on a different meaning. 6. Make laws more strict and punishments more severe for those who damage the delicate ecosystem. We need to set examples by punishing violators.

## **5. Concluding Remarks**

In conclusion, the Bronx River is of immediate concern to hundreds, if not thousands of people who live in the area. It should also be of concern to people everywhere because this type of environmental injustice is an injustice to all. For many years, the river has been used and abused. It is time to take a sincere, strong, and comprehensive initiative to

fix the damage that has been done and prevent any further destruction from taking place. While some may argue that restoring the Bronx River does not solve any of the major environmental problems at hand, I argue that this “pass the buck” attitude is what led to the destruction in the first place. We cannot stop at restoring one river, but we can use it as stepping-stone to solving much greater problems such as global warming and over-consumption. Environmental awareness must begin in the lives of individuals. The only way to do this is to solve a problem that directly affects them. When one sees that life is better when his/her personal environment is clean, he/she will be more inclined to listen about other, perhaps graver, environmental problems.

Moreover, these larger problems, especially that of over-consumption, cannot be solved if people do not change their lifestyles. People will not change their lifestyles unless they see a reason to do so. A clean river in a Bronx may seem like it does not affect over-consumption or global warming, but in an indirect way, this willingness to change and become more educated will spark a desire to make a difference and will hopefully be the start of a better future.

People want to know why I bother working on environmental tasks that seem so huge. They call me naïve and idealistic to think that I can save anything or anyone. I think *they* are naive to think that they can go about their merry lives, turning a blind eye to the fact that they are part of environmental and human destruction. Giving up surely is not the answer. I keep fighting with the belief that people are inherently good and with the hope there will be a shift in mentality from that of greed to that of responsibility for our mother earth and all of its creatures.

