

**THE LAKE CHAMPLAIN BASIN SCIENCE CENTER:
A FLAGSHIP PROJECT
IN THE BURLINGTON WATERFRONT REVITALIZATION**

"Water. It grows sugar maples, tulips and tomatoes. It fills our lakes and rivers and seas. It's rain and fog, ice and snow. Farmers need it and children need it; spaghetti, washing machines and toothbrushes need it. It's home to trout and a livelihood for a ferry boat captain. It comes in waves and ripples, trickles and tears, stormy or as smooth as glass. Upon it you can skip a stone, ten times if you're good. You can skate it, row it, sail it, swim it, motor it, fish it, dive it, and most of all, drink it. Drink it with a wedge of lemon. Drink it pure. You and I are mostly water. Seventy-five percent, give or take.

In an effort to preserve this vital and fragile resource within the Lake Champlain basin, we are seeking to construct a world-class research facility and public education center on the shores of Lake Champlain in Burlington.

This project is dedicated to the water common to all of us."



Betsy Rosenbluth

January 13, 1995

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(Lake Champlain Basin Science Center Capital Campaign brochure)

EXECUTIVE SUMMARY

For more than a decade now, the City of Burlington has fought for community access and control over one of the City's most important assets -- the Lake Champlain waterfront. At the heart of the waterfront, isolated behind barbed wire fence, sits the U.S. Navy Reserve Center. The facility is used one weekend each month and otherwise remains dormant and locked. For more than ten years, the City has pursued relocating the Navy to open up the site for public use.

Finally, in 1995 we are on the brink of converting this underutilized building to a Lake Champlain Basin Science Center--a dynamic, hands-on museum dedicated to demonstrating the ecology, history and culture of the Lake Champlain basin. By better understanding our past -- how Lake Champlain has affected human activity and how our actions have impacted the lake, we can make better choices for our future. The Science Center serves as a flagship project for the entire Burlington waterfront revitalization, cementing our goal of public access for ALL residents to this spectacular resource.

Although the ultimate goal for the Lake Champlain Basin Science Center is a ribbon cutting on New Years 1997, much progress has been made in the last 17 months. In between writing up my final project and completing the 501(c)(3) application to the IRS to incorporate the new organization, we have a signed conceptual agreement between the City of Burlington, the University of Vermont and the Science Center Board. We have a capital campaign underway in its quiet stages with our sights set on launching a public splash this summer. We have moved 180 degrees from creating two separate facilities of research and a museum into one integrated museum where the research itself becomes an exhibit interpreted for a public audience.

We have better defined the scope of the Science Center's program, at least conceptually. Our plan is to integrate the ecology, culture and history of the Lake Champlain Basin into a program that will teach all age visitors about how the Basin was formed, how we have come to know this, and what our place is within it. We have successfully secured a U.S. Department of Housing and Urban Development grant to buy the City out of the project and cover the City's debt so that the non-profit will no longer be strapped with an annual debt. We have completed conceptual drawings for a brand new 40,000 square foot facility, and have received nothing but positive responses from many different groups in the community about the project thus far. We have two part-time staff people, including myself, hired to keep the project moving.

HISTORICAL CONTEXT

But even to get to where Burlington's waterfront is today has taken several acts of Congress and landmark decisions by both the Vermont and United States Supreme Courts -- and we are still far from done. Let me describe a little bit about Burlington. It's the largest city in one of the smallest states in the country. It's the dominant city on Lake Champlain, which at 110 miles in length, is the largest freshwater body in the United States outside of the Great Lakes. Burlington has some of the most spectacular sunsets in the world, but it also has the poorest neighborhoods in Vermont; 32% of our Old North End residents live below poverty level, one fifth of our community overall. Ten percent of our job base has disappeared in recent years--victim to the shift away from a manufacturing economy. Severe poverty among women in our community is only worsening. Almost fifty percent of mother-led families in the Old North End live in poverty, a 386% increase since the 1980 census. The success of our waterfront revitalization will be measured in how well it can meet the community needs identified by the residents of the City.

The origins of the City of Burlington are based on access to Lake Champlain. During the late 1800's, Burlington was the third largest lumber port in the nation. But in the 20th century, commerce and transportation activities focused away from the lakeshore to inland locations and newly constructed highways. Burlington, like communities all across the country, turned its back on the Waterfront, and the urban shores of Lake Champlain became the dumping ground for an array of undesirable land uses--oil terminals, junk yards, power plants, sewage treatment, and storage.

Burlington's entire western boundary is Lake Champlain, with nine miles of shoreline abutting the Lake. If you include the river frontage, 80% of the boundary of the City is waterfront. The waterfront core is 120 acres of land. Remarkably, 90 acres, or 75% of the core, is now under public ownership or control, including 4 uninterrupted miles of shoreline. But it wasn't always this way. In the late 1970's and early 1980's, land developers proffered numerous plans to privatize the waterfront. Their proposals ranged from condominium and hotel developments to commercial marinas. One after another, they each failed, mostly when voters declined to support the bonds necessary for public improvements.

Many of the community leaders today got their political feet wet by organizing residents around development issues. And for Burlington, the political landscape radically changed in 1981 with the election to Mayor of Bernie Sanders, a self-avowed Socialist, who won by ten votes on a platform that said, "the waterfront is not for sale." (Bernie is now Vermont's sole Congressman and the only "independent" representative in the U.S. Congress). The 1981 mayoral election was a turning point in Burlington's Waterfront revitalization.

But political rhetoric and the will of the public were not sufficient forces to bring about a rejuvenated waterfront. There were thorny and challenging obstacles that would have to be overcome, replaced by new opportunities that would need to be identified and realized by the community. Among the barriers:

- * a proliferation of industrial uses, many of which impeded public access;
- * a railroad that owned and restricted 62 acres of property, had private development plans of its own, and that dissected the waterfront in half;
- * dozens of fuel tanks contaminating both the soil and the views;
- * a practically non-existent waterfront infrastructure;
- * a key parcel of waterfront real estate, protected from public access by a barbed wire fence, and used but one weekend per month for training purposes, that appeared unbreachable.

And add to these the following, no less formidable development constraints: steep topography; a land mass largely paved over; an abandoned electrical generating plant; a smelly wastewater treatment plant with beaches frequently closed as raw sewage washed onto shore; and a contaminated EPA Super Fund site.

But significant progress was made in spite of these overwhelming obstacles. This was a strategy that was at times deliberate and at times learned with 20-20 hindsight vision. The lessons learned have now become part of our goals for waterfront development:

(1) The best way for the community to control development is to own the land.

Traditional land use regulations can protect natural resources, but if the land is really important to the community, then the community must find a way to own it outright. Acquisition allowed the City to control and direct its economic development future. And it will allow community consensus to determine the ideal mix of open space, public, and private uses in this vital area well into the 21st century. But even short of ownership, the City was able to make progress. The Burlington Community Boathouse was constructed on a barge docked off the shore since the public owned so little land at the time.

(2) Ensure public access.

Public access to the water's edge must be a condition for any development. Access must be defined and must be forever.

The public's desire for park area is extremely strong in the City. The problem was that one landowner, the Railroad, owned most of the land that could be developed for park space. In the mid 1980's, the City pursued the Public Trust Doctrine as a way to gain control of the land owned, but no longer actively used, by the Railroad. It took a landmark decision by the Vermont State Supreme Court to determine that, while the land was owned by the Railroad, its uses had to be public, and that the State Legislature would decide what could constitute public use. We then went to the Vermont State Legislature to argue the allowance of park land as public use.

We pursued this tack even though we never owned the land, and the Railroad (having many friends in the Legislature) obviously opposed our initiative. In the end, the Bill passed by just one vote in the Vermont State Senate. The Governor, a friend of the waterfront park, postponed imminent departure from Vermont to circle over the State in a plane during the momentous vote. By remaining in Vermont air those precious extra minutes, Kunin retained gubernatorial status, thus ensuring a tie-breaker vote by the Senate's President, who otherwise would have had to abstain while acting as Governor in her absence. These actions ended years of litigation between the City and the Railroad, and a settlement agreement allowed us to purchase 11 acres for a waterfront park and option another 45 acres for an urban reserve.

One of the key parcels on Burlington's Waterfront is owned by the U.S. Navy. This blue box building surrounded by high barbed wire fencing has been a major blight in the core of our Waterfront. More than ten years ago, the City began to investigate the title of the land owned by the Navy. As it turned out, the City had donated the land for the Navy to build the facility and actually had reversionary interest. From that time forward, we pursued their relocation, particularly since the Navy, by treaty with Canada, is not able to operate any boats on the Lake. Ten years of negotiation and several Admirals went by and finally, after two acts of Congress, the City of Burlington was able to pay the Navy \$600,000 toward their relocation. The agreement states that the Navy will vacate the property in April of 1995.

Landmark Supreme Court decisions have saved the day on more than several occasions in Burlington. Yet another judiciary decree upheld the federal Rails-to-Trails Act to complete the Burlington waterfront bikepath, which now runs along the entire 9 miles of shoreline and attracts over one hundred thousand users each year.

(3) Avoid the temptation of doing it all now.

We've put aside 45 acres of land into an urban reserve for future generations to debate and decide what development, if any, should occur on the site. There's been a deliberate attempt to avoid a colossal project driven by just one developer. Burlington's historic downtown and neighborhoods were built piece-by-piece by many people and that decentralized approach has been our tradition. We are letting the waterfront development evolve, allowing it to proceed in several small stages and promoting balanced, incremental development.

(4) Achieve political consensus where you can.

Political consensus has been very important in developing the waterfront. Consensus is hard to create, but you need to pay attention to the range of constituencies in the community. We were successful, if not in reaching consensus, in reaching a balance of public, private and open space uses that the vast majority of City residents could live with. The one group perhaps most unhappy with the waterfront plans are developers, mostly suburbanites, themselves, who have cried discrimination in regards to putting the needs of low income residents first.

(5) The Waterfront cannot compete with downtown or the adjacent neighborhoods.

The two must be strongly linked with a focus on neighborhoods near the Waterfront. In Burlington, we cannot have success on the waterfront if revitalization causes the displacement of nearby residents and businesses. We deliberately avoided spending dollars targeted to the neighborhoods (like CDBG) on waterfront projects, but relied on different sources of financing. We have targeted affordable housing programs like the land trust to neighborhoods adjacent to the waterfront to mitigate gentrification with the waterfront's redevelopment, but still we need to do better. (Land use law seems to work against us in this effort). We have promised that waterfront development will not impose a significant burden on the property taxpayer and that the waterfront will complement, but not compete with, downtown uses.

(6) Create the public spaces, streets and parks first.

This sets the tone for the public claiming the waterfront space. Because you have created a market with all the public activity, it is lucrative for private development to follow. Finally, it makes it easier for home owners to understand they are buying into an active, public, urban neighborhood.

It is equally important to create safe pedestrian improvements while minimizing the intrusion of the automobile through innovative public transportation.

(7) Create housing for a range of incomes.

Our Inclusionary Zoning law, (which is now a deed restriction on 45 of the waterfront acres) requires that at least 25% of any housing project be affordable housing, provided on-site. The first new housing on the waterfront was 15 land trust units, perpetually affordable. The housing under construction today has both \$80,000 units and \$300,000 units in the same development.

(8) Development should meet resident's needs regardless of their income, age, ability or lifestyle.

Generous parkland and open space must be balanced with year-round indoor uses. If the waterfront appeals to local residents, then tourists will find it a more interesting place to visit. No development should provide a physical or economic barrier to its use.

(9) Citizen participation is a prerequisite to a shared vision.

To date, waterfront plans have been developed with intense citizen participation. This has included over 15 public referendums in the last 10 years. Numerous public meetings with over 1,000 residents participating and several public opinion surveys have also guided our plans. The success of this effort is seen in the polls; over the decade, voters have supported a total of \$20 million toward waterfront revitalization efforts, from the sewage clean-up (\$13 million) to a revenue bond for the re-use of the Navy facility (\$1.9 million). The Waterfront Plan states that City Council shall approve no financing methodology for the implementation of the Plan without first securing the approval of a majority of the voters. Public votes are perhaps the most democratic method of participation, engaging the greatest number of residents compared to hearings, phone surveys or other methods. This emphasizes the importance of all constituencies turning out to vote.

(10) Control the political agenda.

By winning the Mayor's seat, CED organizers have had access to a range of federal, state and municipal resources unavailable in the past.

(11) Preserving the natural environment IS an economic development strategy.

The economic future of the City depends on a clean and vital Lake Champlain waterfront. This is what makes Burlington able to compete with suburban malls and Walmart. So using this strategy, all it took was a \$52 million investment in upgrading our sewer plant to clean up our Lake and our beaches. This was a first step in the revitalization of the waterfront.

(12) Develop a Comprehensive Plan to serve as a road map.

In 1990, the voters approved a Plan for Waterfront Revitalization by a 2:1 margin. This Plan was made up of 13 projects, almost all previously supported by the community. To implement this Plan we used Vermont's Urban Renewal Law, even though it carried a terrible history of neighborhood displacement from the 1960's. The main advantage was that it required voter approval for any change in plans, thus binding future Mayors and City Councils to the voters' will. It also allowed the City to purchase land for conservation purposes and it opened up new financing mechanisms for a City that is 98% dependent on a regressive property tax.

PROJECT GOALS

The project goal was to convert a restricted and under-utilized property on the Burlington waterfront, the Naval Reserve site, to a community resource through a process both consistent with the entire waterfront revitalization and with community economic development principles.

In the months leading up to the project, an intense community process identified the most significant needs and a shared vision for the future of the waterfront. The challenge then became developing a strategy to implement this vision at the Navy Reserve site where the community could control the development of its resources.

For several years, we have gone through a public process of identifying the best re-use of the Naval Reserve site. We began with public support for the relocation of the Navy and then sought voter approval of revenue bonds to finance the project. A citizen advisory group was formed, representing youth, arts, environment, business, adjacent low income neighborhoods, government and others. We then invited both ideas and proposals from the public-at-large for how they envision the site. Time after time the committee and the public articulated the desire for an interactive public facility to learn about the Lake Champlain basin.

In September 1993, 17 months ago, the concept for the Lake Champlain Basin Science Center was recommended to City Council by the citizen advisory group. This group's last action was to recommend that a new nonprofit organization be formed to convert the Naval Reserve station into a self-supporting, nonprofit public education and research facility of the highest quality. Through exhibits, education and outreach programs, research and building design, the Center would: encourage reflective thought on our role as stewards of the lake basin and what choices we can make to guide the future; open a window to science in progress; foster new partnerships in the basin between policymakers, researchers, nonprofits, businesses, educators, and the general public and; promote lifelong learning while offering a fun, dynamic experience for families and individuals.

The task then became deciding how to implement this project in a manner consistent with the goals of the broader waterfront revitalization effort. We hoped to have a ribbon cutting for the new facility on July 4, 1996.

METHODS AND RESULTS

As minimum objectives, I had hoped to have the nonprofit organization fully empowered, with staff, and to be well into the Capital Campaign. I also had hoped to have all of the design work complete for the building, exhibits, and programs. Lastly, I had anticipated having generated enthusiasm and support for the project throughout the region among many constituencies and partners. The following are the specific outcomes that I set out to achieve in 17 months, the methods I used to realize them and their status as of January 1995:

Objective 1: A new incorporated nonprofit organization to develop, manage and oversee the Science Center.

My first step was to take the recommendation of the citizen advisory group to create a new board of directors. This group was formed and began meeting as the new nonprofit organization, although they never formally incorporated. They received their authority only through the support of City Council.

This board, however, quickly ran up against an insurmountable barrier when it became clear that the University, as the most significant player in the project, still was not committed to the project. Our attempts to pressure UVM through political channels (including the support of U.S. Senator Leahy) still failed to get their full commitment. We then proposed that an outside facilitator step in to negotiate between the City, the University and the Board. This proved to bring us further along with the University than any action to date.

Surprisingly, in the course of this process, the negotiating team proposed incorporating themselves as the new nonprofit organization. They agreed to operate on a consensus basis such that either the University, City or the community representative at any time could block a decision. Having veto power provided the University a comfort level that enabled them to move forward. In the meantime, the former, informal board members became part of the program committee to serve as advisory to the new board.

We convinced the board, now 3 members, to expand to 6, reflecting greater community participation. Currently, I am filing the IRS application for 501(c)(3) status. The board has agreed to expand by three new members every 6 months up to 18 members. As the Capital Campaign proceeds they will need additional board help.

Objective 2: A signed agreement between the City, the new nonprofit and the University of Vermont.

So far the project has required two Acts of Congress, tri-partisan City Council support, voter approval and relocation of the U.S. Navy, and we still cannot get an absolute commitment from the University. On a positive note, on November 20, 1994, after years of working with the University on the project, the three principals signed a Memorandum of Intent for a partnership in the Lake Champlain Basin Science Center. Our goal is to have a detailed agreement as soon as possible. Although the University has finally agreed in concept and is fundraising for the project, until significant funding is generated, their commitment remains tenuous.

In the meantime, partnerships with other institutions are growing. Both the Lake Champlain Maritime Museum and Shelburne Farms have committed staff time to assist in our efforts and to develop programming. The Lake Champlain Management Conference (including New York State support) will consider making a three- year

financial commitment to the project next month. Their Education and Outreach Committee has already granted three years' funding for program development and staff support.

Objective 3: A successful \$10 million Capital Campaign

Certainly the success of the project depends on our fundraising efforts. In the last 17 months we have secured \$25,000 from the Lake Champlain Management Conference and \$25,000 from the federal Enterprise Community designation. But the project would have come to a grinding halt if Senator Leahy had not met our request for a \$1.5 million HUD Special Purpose grant. We held our first fundraiser in November to try to find a private donor to match this grant. Three private foundations and a local bank have recently expressed interest in funding our summer program.

Early in the process we had a major setback when a local developer joined the board and pledged a \$500,000 gift. Two weeks later he withdraw all his support for personal reasons. We continue to have a very difficult time finding a donor willing to "go first" on the project. Perhaps the intense public and political debate on the waterfront and the footing of the project in grass roots support rather than in the business community has made it more difficult. We have discussed the possibility of a very unorthodox capital campaign that generates the public support first, and then asks for a large donor to step in to make it happen.

Sobering news came with the election in November. Democratic Senator Patrick Leahy has lost some of his influence. In addition, federal agencies that we were counting on for \$2-3 million dollars -- the National Science Foundation, EPA and NEA -- have frozen their budgets and face severe cuts. Even the \$1.5 million HUD grant is shadowed by the threat of rescision.

Objective 4: Successful integration of science research with a hands-on museum.

Through the years, the University and their researchers have resisted mixing public, hands-on exhibits with a world class research facility. We began the project by designing two separate buildings. We met this resistance by locking away the University's architects with the museums' architects, and through a long creative process, we have all agreed on a plan for an integrated facility that everyone considers impressive. Key research scientists have been convinced that the public having access to observe and understand their research can only benefit them with greater support in the long run. We still have the difficult but groundbreaking task of defining the interface between research and the public to provide a quality experience for visitors.

Objective 5: Development of a comprehensive Science Center program

Two concept papers for the Science Center have been completed. The program committee is now working to translate these concepts into an exhibit and operations plan by March. Toward this end we have begun a process that includes researching other museums in the country, visiting sites, hiring a consultant to assist us, and holding focus groups with the public. We have found that no single institution successfully integrates science with social impacts and displays "science in progress" through a research component. We appear to be breaking new ground and may someday serve as a model for others.

Objective 6: A successful membership drive

The purpose of the membership drive was to maintain the sense of public ownership in the project. Not knowing exactly what our fundraising success will be, we have chosen for the time being to involve the public through numerous presentations, focus groups and the media. As soon as we make significant progress in the Campaign, we will launch public events and a grass roots fundraising effort.

Objective 7: A financially self supporting project

The original financing for the project was a City revenue bond with lease payments from the museum to cover the annual debt service. Early in the year it was clear that an alternative had to be found to both avoid strapping the museum with an unrealistic annual payment and to provide site control. Eventually, we agreed that the board will pay off the City's expenses (\$600,000 to relocate the Navy and \$200,000 in related costs) using the HUD grant. We then developed an operating budget that relies on a mix of revenue generating activities and ongoing public and private support. This operating budget will be continually revised as more specific plans develop.

Objective 8: Construction documents for a new 39,000 s.f. facility.

We have completed conceptual drawings for the project and are on hold until the program and exhibits are designed. Several innovative proposals are underway. We have planned the building itself as an exhibit, a model of alternative energy and conservation. Even a certain amount of wastewater from the facility will be treated on-site in a wetlands exhibit. In addition we will be using local and recycled materials as much as possible.

Objective 9: A feasibility study that indicates how the project will be successful

We have yet to formally test the market for the project. Using comparable attractions as a guide, the estimate of 100,000 - 200,000 visitors appears conservative.

ANALYSIS AND CONCLUSIONS

The first part of my analysis is a test of the consistency of the development of the Lake Champlain Basin Science Center with the objectives of the waterfront revitalization.

Community Control and Ownership

An earlier fundraising feasibility study for the Science Center indicated that if the project remained a City project, then private donations were unlikely to be forthcoming. Most donors implied that the City's taxing authority and the unpredictability of shifting political winds were impediments to private financing. They recommended removing the City from direct involvement and supplanting it with a community nonprofit organization. Our dilemma was how to maintain the public's interests after having struggled for ownership of the property for over a decade.

The solution is manyfold. First, the City will retain ownership of the land, extending a 99-year lease to the University and the nonprofit board. We are developing performance standards that must be met in order to keep the integrity of the lease agreement. Among these standards are a requirement that the property and the facility remain physically, economically, and programmatically accessible to the residents of Burlington. The activities of the University must be part of the larger public education effort and not isolated on the site.

In addition, the make-up of the board of directors of the Science Center includes representatives from the adjacent neighborhoods. The University will be one partner of many in the nonprofit organization that controls the site.

Avoid Doing It All Now

This perhaps is our weakest point right now. The strength and excitement of our vision, coupled with how long it has taken to get to this point, make it difficult to phase or scale down the project. We are reluctant to lose momentum. If we are unable to raise another \$3 million dollars this spring, than we will need a back-up plan to phase in the project. Our first step has been to develop a summer program budget of \$300,000 to clean up the site, tear down the barbed wire fence and provide public access, and run a boat building program for underserved Burlington youth. It is possible that we can start with fantastic programming and work toward a new \$10 million facility over time. We have not pursued this strategy because of the University's pressure to construct the entire building now. It looks as if we will be forced into reconsidering this approach.

Public Access

The most important goal of the Science Center is threefold access, physical, economic and educational.

One objective of the Science Center programming is to provide access to science and scientific discovery in a nontraditional learning environment that all will find exciting. Visitors will learn by using all of their senses, taking chances, having fun and discovering new ways to see and explore our environment. By experiencing "science in progress", visitors can understand the role and relevance of scientific discovery in our everyday lives.

There is a wealth of information on how science museums provide successful learning experiences for youth and adults where traditional institutions have failed. This is particularly true with girls experiencing science. The youth who do best in a museum setting that stresses nonverbal learning are typically not the same youth succeeding in school. The Lake Champlain Science Center can also open up new opportunities for young people in our community through positive role models, apprenticeship programs, job training, skill building and new learning models.

The project will convert a restricted site into a publicly accessible indoor and outdoor facility. Outdoor exhibits and programs will be available free to anyone who passes by. Inside the museum will be a "free zone" where educational resources, multi-purpose space and visitor amenities will be available.

Beyond being designed to accommodate visitors with disabilities, the exhibit experience of using multi-senses -- touch, smell, sight and sound to learn can provide a very powerful experience for everyone.

The programs of the Science Center will also reach beyond the waterfront site. Partnerships with community schools, youth centers, senior centers, public housing and others will allow us to reach an even greater audience.

Achieve Political Consensus Where You Can

The spirit of partnership is at the heart of this project. The Lake Champlain Basin Science Center's statement of purpose includes the clause, "to create a cooperative, active partnership among New York, Canadian, and Vermont institutions having complementary objectives, each partner enabling assistance to and promotion of the other partners, each filling a particular niche within public education, and no partner competing with another." The project represents a number of unique partnerships that have never been tried in our community.

Perhaps the most visible of these is the partnership between the University of Vermont and The City. For years these two institutions have battled over student housing, neighborhood encroachment, transportation issues and biotechnology research. The Science Center has drawn the two together to the degree that we now have a joint fundraising campaign, joint staff, a board of directors that operates on a consensus basis, and even a single building that integrates the research scientists with visiting school kids. This partnership has taken most of the 17 months of this project. We began with two separate buildings and a University decidedly lukewarm about the project. We now have become a priority of the University development office, and finally a public handshake has taken place.

There are other unique partners as well. Through the process I have been appointed by the Governor of Vermont to the Lake Champlain Management Conference, a New York/Vermont/EPA partnership charged with the task of developing a pollution remediation plan for the lake basin. This organization is slowly coming to see the Science Center as a key vehicle for carrying out their educational mission.

Anticipating a potential conflict with other museums, we brought together the Executive Directors of all the related museums to determine an appropriate niche for the Science Center so that we could best become a "good partner." We've agreed on the concept of the Science Center as a "gateway" to the basin, providing visitors with a preview of what other museums located throughout the area can offer. We also hope to provide joint programming, exhibits and admissions with these partners.

While we have been very successful in forging new partnerships between the community, educators, foundations, museums and government, we have had less success with our business partners. This is a significant challenge that we hope to address in the coming months.

Don't Compete with Downtown and the Neighborhoods

One of the first grants applied for was \$25,000 through the federal Enterprise Community designation. This was a lengthy "bottoms-up" planning process that tested the appeal of the project to the low income neighborhoods of Burlington. The process confirmed the residents' interest, particularly as it related to working with youth. The grant intent is to ask neighborhood schools and residents to design a program for the funds that best meets their needs. It is important that the first programs of the Center serve this neighborhood, to initiate what I hope is a long precedent.

In addition we are looking to fund the project almost entirely through private fundraising and federal grants.

Create Public Spaces First

The completion of the Science Center will establish a significant indoor year-round attraction on the Burlington waterfront to solidify its renaissance. Since all of the existing public improvements are outdoor uses such as the waterfront park, bikepath and boathouse, the Science Center will attract many more of our residents who are unable to brave the weather and enjoy the waterfront. The Center also hopes to attract 100,000 - 200,000 visitors annually, again providing a strong market for private business.

Control the Political Agenda

In the midsts of the project, Burlington Mayor Peter Clavelle, who first initiated the relocation of the Navy in 1982, was voted out of office. Through a difficult six-month process, we were able to convince his Republican successor of the project's significance and at least get a commitment that he would act supportive if not provide any leadership on the project. Because of the many partners involved and citizen support, we were able to keep the project moving. However, the City's role and resources steered toward the project were diminished. By organizing City Council and Congressional support we were able to pressure the Mayor to keep on track, though at the expense of a frustrating 6 months.

Preservation of the Natural Environment

The water quality of Lake Champlain is at a crossroads. Years of industrial pollution, phosphorous run-off and urban wastewater treatment have degraded the health of the lake. To avoid the problems that the Great Lakes suffered, prevention and clean-up must start today. This begins with public education that both defines the role each of us can play and provides policy-makers with the pressure to make the "right" decisions, decisions that will impact future generations. Research on the lake by University scientists are uncovering the extent of our problems and testing the effectiveness of solutions. By bringing together all of these pieces into one Science Center, the public can see the relevance of this information for making choices for the future of the lake.

Over 90% of the water entering the lake comes from rivers and streams running through small towns, pastures and backyards on 8,234 square miles of land. Every citizen in the drainage basin can play a part in protecting their local water resource. People will come to see that Lake Champlain is what we put into it!

Comprehensive Planning

The development of the Lake Champlain Basin Science Center is not the answer to the entire waterfront revitalization, but it is one key component to a comprehensive strategy. It is essential to continue with other initiatives.

For the most part, development of the Science Center has been consistent with our goals for waterfront revitalization. But the Science Center is still in the concept form and even the agreement between the partners -- the City, University and community representatives is in the form of a Memorandum of Intent, not a binding agreement. The true test and the greatest challenges will come when we convert the conceptual agreements to a commitment that explicitly states who has the authority and responsibility, who is responsible for operations decisions and costs, and the criteria for providing public access and education. The project demands an entirely new attitude and method of operation from the University. Although it is clear that this change reflects what is necessary for institutions to thrive into the 21st century, it has made the task no less daunting or difficult.

In conclusion, the greatest personal challenge for me in undertaking this project was to develop the Science Center with my board and colleagues according to Community Economic Development (CED) principles. In many ways I think we have been able to push the envelope of traditional development projects, and yet again, I believe the most difficult challenges will lie ahead in the coming years. But there are several very clear areas where this project models CED principles.

The Science Center attempts to cross established boundaries through a very interdisciplinary learning model. The content is the process of learning and discovery, not the collections or the facts and information. In this manner, the museum is really a communication vehicle that provides democratic access to learning. In this environment, we are able to both find our commonalities and celebrate our differences because we are freed from the concept or hierarchy of an absolute, objective truth. By removing certain barriers or opening up better access to learning, we can help provide new options for residents regarding their participation in both the economy and in the stewardship of our environment.

This creative process has taken strong leadership and vision, endurance and patience. The Center we are creating is not based on any single, existing model. We are creating a new model and in the process pushing the boundaries of existing institutions. The Science Center is *place* specific and relies on the unique resources of our community without importing from other places. We are looking to our past for guidance in understanding the present and in what choices we can now make to impact our future. Our true success will be that this process becomes a community building process and a source of pride for all the residents of Burlington.