Strategic Planning? Imagine Life Without It

by Robert E. Game

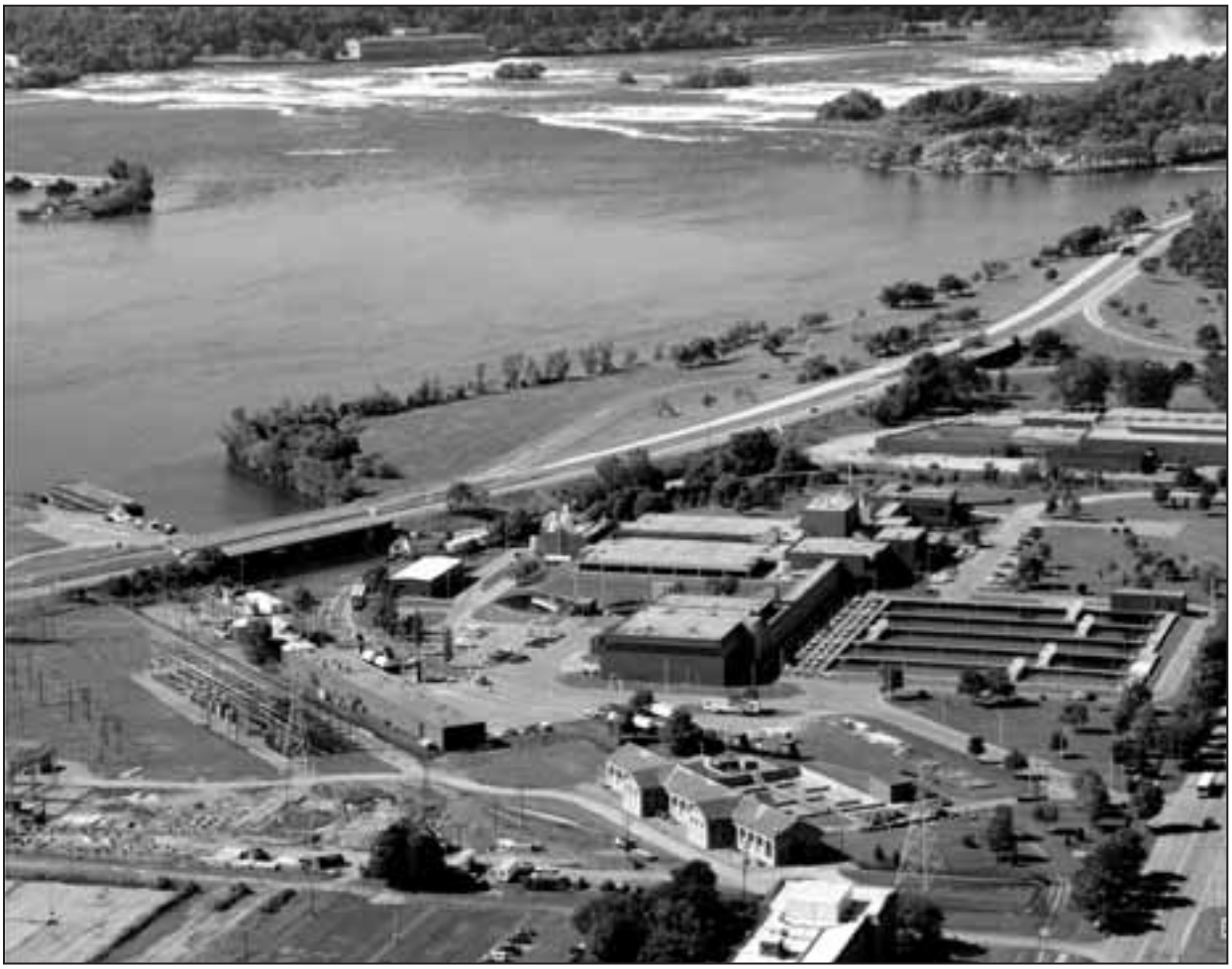
It is a well-known fact that strategic planning is an extremely useful tool, especially in a growing community. But what happens when a city has experienced significant economic decline for the past several decades, along with almost a 50 percent drop in population since 1960? In a case like this, is there anything to plan for? With most of its decline due to the massive loss of its chemical manufacturing industrial base over the past several decades, Niagara Falls, New York, is in this predicament.

A common reaction may be, "So what's new? Most rust belt cities have experienced the same type of problems and survived." Perhaps so, but Niagara Falls, located in the Buffalo-Niagara metropolitan area of western New York, is an economically depressed region that has failed to experience the same level of prosperity as the rest of the United States over the past 15 years. And in fact, the situation is even less promising, especially when one compares Niagara Falls to three of the region's other cities of similar size.

The following demographics provide a stark picture of how Niagara Falls has unfavorably matched up with these three other nearby municipalities over the past several decades. Niagara Falls suffers from 150 percent greater population loss, 60 percent higher poverty levels, 20 percent more senior citizens on fixed incomes, median household income levels that are 24 percent less, 137 percent greater loss of the industrial base, 66 percent higher unemployment rates, and 21 percent higher combined residential water and sewer bills when compared to median household income.

Specifically, with regard to the water and wastewater utility, the City of Niagara Falls government faced huge rate increases to make massive debt service payments on its new water treatment plant in the late 1990s. Also, in the early part of the 21st century, major capital improvements were looming at its quarter-century-old wastewater treatment plant.

So is it all doom and gloom? Well, not entirely. As the old saying goes, "Necessity is the mother of invention." After evaluating several options, such as utility privatization, refinancing debt, and creating a separate public water authority, the Niagara Falls Water Board (NFWB) assumed operations in September 2003 as a state public benefit corporation. This momentous event allowed the existing heavy debt load to be refinanced and spread out over time, which in turn immediately improved near term cash flow. This action reduced the rate of user charge increases, which under the city government struc-



Aerial view of Niagara Falls wastewater treatment plant, which will require $143 million in rehabilitation over the next 20 years

ture would have necessitated a 75 percent increase in one year alone. Other associated advantages of forming a separate entity included the ability to focus on utility-related issues exclusively and to adequately invest in utility infrastructure to ensure system sustainability.

Although the formation of the NFWB allowed the utility to get a fresh start, there were still many constraints to deal with, especially from a financial perspective. The persistently declining rate base created by a long-standing, stagnant economic climate dictated that a prudent approach be employed to ensure the long-term viability of the system. As a result, a collaborative atmosphere was encouraged with the intention of aligning all efforts towards the development of a long-range plan. Perhaps, in the end, this approach will prove to be one of the foremost factors in securing the success of the utility.

By mid 2004, a multifaceted strategic plan was developed to urgently address the multitude of intertwined complex issues facing the organization. The first step involved creating a vision for the organization. In order to accomplish this, a cross-section of employees worked painstakingly to craft a document that would take into consideration a "balanced scorecard" approach to address customer, staff, infrastructure, regulatory, and finance issues facing the organization.

The following is the "vision," which resulted from that effort:

"The goal of the Niagara Falls Water Board is to become a first-class, competitive utility in the next five to seven years. To achieve this vision we will

- continually invest in our infrastructure to maintain our facilities and provide overall customer satisfaction,
- provide our employees a safe and supportive work environment,
- invest in our employees' professional development and growth to increase productivity, and
- apply technology and redefine management and work practices to control the cost of providing quality services to our community."

With this "vision" in mind, simultaneous strategic plan initiatives were identified (figure 1). Each component of the plan is described below:

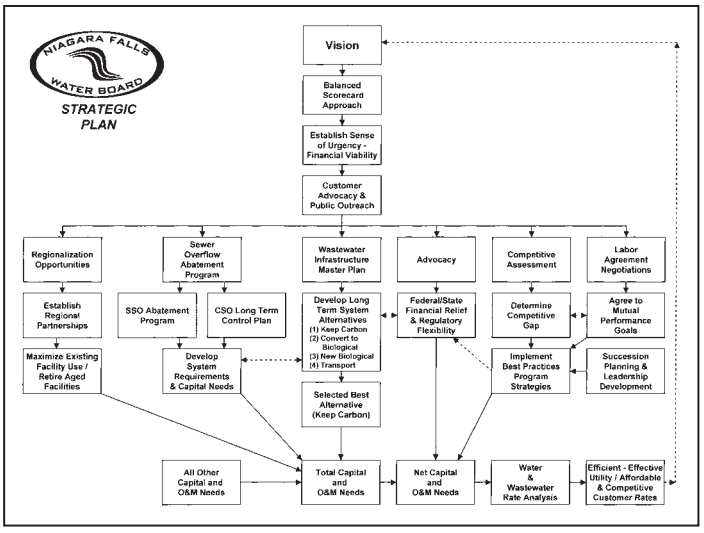


Figure 1. Schematic of Niagara Falls Strategic Plan

Establish a Sense of Urgency

The new executive director of the NFWB met with small groups of employees to solicit their feedback. Major issues raised included concerns on how the NFWB was formed, poor communications, loss of institutional memory due to the aging workforce, poor condition of infrastructure nearing the end of its useful life cycle, safety and security matters, status of negotiations for four union contracts set to expire, and last but not least, the overall financial state of the utility.

In order to improve the situation, employee communication forums were scheduled on a three-week rotating basis in order to give all employees, especially those on swing shifts, the opportunity to attend and interact with management. These forums were used to present the financial status of the utility, and to establish a "sense of urgency" throughout the organization to get everyone on the same page, recognizing the challenges affecting the financial viability of the utility. These forums continue to this day.

Customer Advocacy and Public Outreach

The financial model for the new NFWB called for modest annual rate increases for the extended future. In order to inform the ratepayers and seek their support as advocates, a first-stage public relations program was initiated and included guest views in the local newspapers and occasional use of a local public relations firm. As one might expect, regular rate increases are not popular with customers, especially in a community facing such arduous economic circumstances. To improve this relationship with the public, education efforts through community outreach initiatives will continue.

Regionalization Opportunities

Due to population contraction and infrastructure underutilization in other local municipalities, opportunities exist for consolidation and regionalization. Efforts have been made to establish regional partnerships with other cities to have an open dialogue on this issue. Such an endeavor could maximize the use of existing facilities and potentially result in phasing out antiquated facilities. Discussions have occurred on the possibility of conducting a study to evaluate consolidation alternatives, which would at the very least help determine the most cost-effective future options. It is not clear at this time whether the community as a whole is ready for such a venture, but hopefully it will be a future consideration.

Sewer Overflow Abatement Program

As is the case in almost any city, the NFWB faces environmental and regulatory compliance issues involving sewer overflows. In regard to sanitary sewer overflows (SSOs), several system improvements have been made and an ongoing abatement program has been developed and is presently under review by regulatory agencies. Also, a combined sewer overflow (CSO) long-term control plan is currently being developed and is expected to be completed during 2006. Both the SSO and CSO programs will require additional investment in infrastructure. Once the system requirements are known, the cost for capital improvements can be factored into the rate model to determine the impact on customer rates.

Wastewater Treatment Plant Infrastructure Master Plan

The original facilities plan for the Wastewater Treatment Plant (WWTP) was based on the concept of centrally treating both heavy industrial wastes and domestic sewage at the same location. The large manufacturing base that existed in Niagara Falls in the late 1960s called for a specialized type of treatment process to handle the chemical nature of the waste streams discharged to the sewer system. Thus,

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a physical-chemical activated carbon process was constructed in the mid-1970s. Following startup, a structural failure of the carbon bed under-drain system occurred, which resulted in the city government entering into a consent order with the United States Department of Justice in the early 1980s. Consequently, the system was redesigned, rebuilt, and restarted in 1985. Today, it is the largest application of the physical-chemical activated carbon process in the U.S. and is one of only a very few that have successfully operated.

Given the considerable reduction in industrial discharges to the WWTP occurring over the last few decades, and the reality that the plant was now 27 years old, it seemed prudent to revisit the applicability of the carbon process to today's conditions and to evaluate any long-term system alternatives that could possibly replace the process. As a result, a master plan was completed in early 2005 to determine wastewater treatment needs for the next 20 years. Alternatives evaluated included (1) keeping the existing carbon system, (2) converting the plant to a biological process, (3) constructing a new biological treatment plant, or (4) transporting the wastewater to another community for treatment. In the end, the feasibility analysis showed that the best option was to retain the existing carbon process but to consider downsizing it to adapt to reduced current and future needs.

It should be noted that one key part of the analysis with regard to downsizing was to consider the interaction the WWTP might have with the overflow abatement programs and the ability of the plant to accommodate those overflows. Therefore, at this time, the peak hydraulic capacity of the plant (85 mgd) will be preserved and utilized in overflow abatement planning.

Even though the decision to keep the carbon system was the most cost-effective alternative, the cost to rehabilitate the WWTP over a 20-year period was estimated at $143 million, an expenditure that is expected to have a major impact on customer rates.

Advocacy

As a result of the community's critical economic status, it is clearly evident that the citizenry and remaining industry will have extreme difficulty paying for these infrastructure improvements without some kind of federal or state assistance. In conjunction with the reduced industrial flows discharged to the WWTP have come corresponding reductions in waste strength. Despite these reductions, there has been no easing of stringent environmental discharge standards by regulatory agencies, which necessitate maintaining excessive wastewater treatment capability. In addition, the purpose of the activated carbon process, which was specifically designed to treat heavy chemical industrial wastes, has been effectively neutralized by the industrial pretreatment statutes enacted in the late 1980s and 1990s. In other words, the WWTP, which is not an inexpensive process to operate, has been prevented from treating the very wastes it was intended to handle in the first place. What was intended to be an expensive process used by many has become a very expensive process used by few.

Consequently, it is incumbent that the NFWB pursue alternatives to ensure the viability of the WWTP and protect ratepayers' interests. These alternatives include (1) relief in the form of regulatory flexibility to selectively allow local industry to discharge into our unique facility without pretreatment, (2) assistance to investigate the potential for utilizing the plant to treat the groundwater legacy remaining from previously departed industries, with the intent being to clean up federal and state Superfund sites, promote brownfield redevelopment, and identify a revenue source, and (3) granting $75 million in

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federal funding to help rehabilitate the WWTP and reduce the excessive and unfair burden that will be put upon the local ratepayers without such funding. Various high-profile professional advocacy firms are being considered to promote this effort.

Competitive Assessment and Best Practices Program

In early 2004 a competitive assessment was conducted to compare the NFWB to the best-run utilities in North America. A 27 percent competitive gap was identified, which in essence meant that the operating budget could be reduced by $5 million annually, from $18.5 million to $13.5 million, and that staffing levels could be reduced from 137 people to 77 people over a five-year period. Naturally, proposing such a dramatic drop in personnel was a shock to employees; however, the NFWB has made a commitment to reduce staffing levels through attrition, with layoffs being an absolute last resort.

On the other hand, even though reductions in staffing levels could significantly reduce costs, the concomitant loss of institutional knowledge due to the aging demographics of the workforce (figure 2) may well impair the organization's ability to operate effectively in the short term. Within the next five years, 30 percent of the staff is eligible for retirement. In the subsequent five years, another 38 percent of the staff is eligible (figure 3). Like many other utilities facing this dilemma, managing this delicate balance between reducing costs through attrition and maintaining and enhancing the quality of the workforce will be a difficult challenge.

Figure 2. Age distribution of Niagara Falls Water Board employees

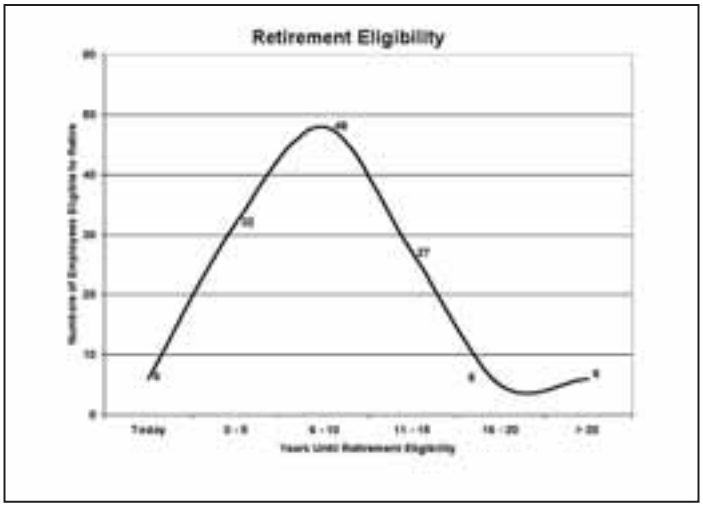

Figure 3. Retirement eligibility status of Niagara Falls Water Board employees

In the meantime, to counteract these potentially negative impacts on the organization, a best practices program has been implemented. To date, a leadership team, steering team, and seven work practice design teams have been formed to improve productivity. The seven design teams, which represent each area identified for improvement in the competitive assessment, include (1) water plant, (2) wastewater plant, (3) pipes, (4) laboratories/industrial monitoring and compliance, (5) administration, (6) technology, and (7) work force flexibility. The first five of these teams have completed their work practice designs and have made presentations to the steering and leadership teams.

The next step is to charge one pilot team with the responsibility of actually implementing the recommended changes in the field. The wastewater team was chosen for the first pilot, primarily due to the fact that the WWTP comprises the oldest sector of the NFWB workforce and is in possession of the most institutional knowledge, which needs to be preserved before retirements accelerate. Furthermore, as evidenced by the aforementioned master plan, the WWTP requires immediate infrastructure improvements, including technological enhancements; hence, an ideal situation exists to coordinate improved work practices and capital upgrading through the best practices effort.

Also, in connection with the best practices initiative, a succession planning/leadership development program has begun and is expected to continue through the middle of 2006. Approximately 18 employees are involved in the program to improve existing leadership attributes and to cultivate future leaders for the organization.

Labor Agreement Negotiations

At the end of 2004, three contracts with the United Steelworkers union expired, along with the agreement between the NFWB and the local trades union. Contract negotiations have commenced and are currently proceeding. By conducting the competitive assessment and identifying the benchmark for utility operations prior to beginning union negotiations, the end goal became visible for everyone to see without any hidden agendas. It is anticipated that all parties, including ratepayers, will benefit from the negotiation process. An amicable conclusion to this course of action, along with all the other previously discussed initiatives, will help set the NFWB on the proper course for the foreseeable future.

Inputs to an Effective and Efficient Utility

All of the above strategic plan initiatives are intended to help the NFWB determine and meet its future needs. Some of the initiatives define capital and operating costs, while others ascertain current and future savings. In the end, the objective is to determine the net effect on the bottom line and ensure the long-term viability of the utility. Once the net capital and operating needs are determined, revenue requirements can be established, allowing the rate analysis to proceed.

With the inputs known to date, the NFWB has been able to forecast the effect on future rates. Unfortunately, these projected rates are higher than the 3 percent median household income (MHI) ceiling, the standard industry benchmark used to determine what a community can reasonably afford. Current projections show compound rate increases of another 475 percent by 2020, in addition to the previous 75 percent increase, which occurred over the eight-year period

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from 1997 to date. In total, cumulative rate increases would amount to 500 percent over 23 years, an astronomical 22 percent per year.

Thus, an effort to seek external funding assistance for the wastewater treatment plant, the most significant future cost affecting the viability of the NFWB, must occur to ensure customer affordability, system sustainability, and compliance with environmental and regulatory obligations (figure 4).

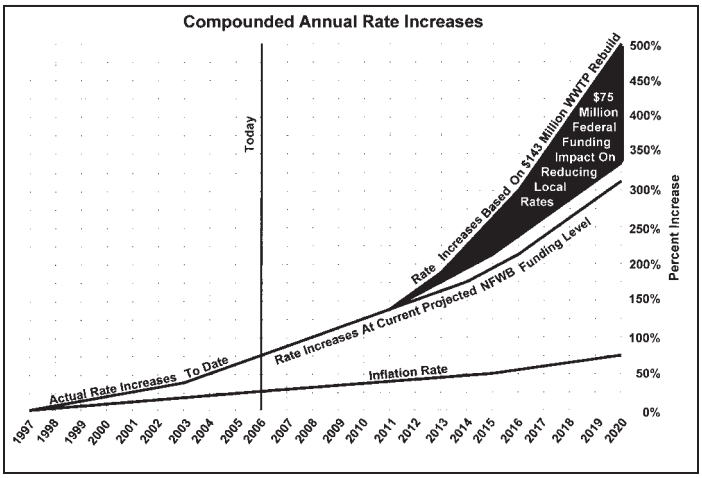

Figure 4. Cumulative effect of Niagara Falls Water Board rate increases

Continuous Improvement Process

The NFWB strategic plan is not a static document. It has already been updated and amended as more information is discovered and as situations evolve. It will continue to be reevaluated and revised as necessary well into the future.

Conclusion

The Niagara Falls Water Board was created out of necessity. Since its inception, it has faced, and will continue to face, multiple challenges. Those challenges would have been unbearable if a well thought out long-range plan had not been established. The NFWB strategic plan affords the organization that opportunity to evaluate the entire utility landscape, as well as approach the future with a holistic and balanced perspective. Despite what seem like insurmountable barriers ahead, imagine how bleak the future would be without such a strategic plan in place.

Robert E. Game is the first executive director of the Niagara Falls Water Board. He has held similar positions in Paducah, Kentucky, and Shreveport, Louisiana, and has 33 years of experience in the public utilities field. He can be reached at rgame@nfwb.org. For information on the statute, visit: Public.leginfo.state.ny.us. Search on* Laws of NY, *select 10B.

Functions of Water Board and Water Authority

WATER BOARD	WATER AUTHORITY
• Owns the System • Operates and maintains the System • Responsible for System improvements • Sets rates and collects revenues • Pays debt service on bonds • Pays Authority and Board expenses	• Issues debt • Provides proceeds of debt for the Capital Improvement Plan • Provides oversight regarding adequacy of revenues and System conditions