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Liquid Assets

In 1988 the City changed the method for collecting water and sewer charges from a system based on the amount of building frontage, to a system based on metered charges determined by actual water usage. It would have been fair to presume that this change would distribute the cost of using water equitably and encourage conservation of a scarce natural resource. In reality, however the cost of water now has less to do with the amount consumed and more to do with the enormous cost of the infrastructure required to deliver it. By 2009 approximately 46 percent of the average water and sewer bill will reflect actual usage costs, while 45 percent represent the cost of infrastructure maintenance and construction¹. In two years infrastructure costs will exceed operating costs and will continue to grow through 2020. As a result, if water usage declines, the cost to the users (or rate payers) actually must rise to keep pace with the capital infrastructure costs.

Further, since only property owners make up rate payers, 79 percent of the costs of water and sewer charges are borne solely by residential property owners. Within this category 27 percent of housing units are in one and two family homes and 73 percent are in multiple dwellings. While the owners of multiple dwellings are directly responsible for payment when water rates rise varying market conditions or regulatory restrictions limit their ability to pass the increased costs on to tenants.

Most residential tenants are unaware of the costs of water and sewer or of how much they consume, and few understand how increasing water charges affect the rent that they pay. Perhaps more troubling, there seems to be little understanding of the regressive nature of this tax and its potential impact on the financial viability of the City's existing, rent regulated multiple dwelling stock. While the average cost per unit of water and sewer for pre-war rent

stabilized buildings is \$444, a closer look at building location and median household income reveals a more troubling picture. While the average apartment in Southern Manhattan (below E.96th St. and below W.110th St.) pays 8 percent less per housing unit than the Citywide average for similar buildings, Northern Manhattan buildings pay 11 percent more than the Citywide average per unit. Bronx buildings, with median household incomes of \$25,000, pay 8 percent more than the Citywide average. Low Income Housing Tax credit supported housing pays even more.

Since only property owners pay for water and sewer, the broader based tax system (income tax, sales tax, hotel taxes, real estate tax, and others) is not paying for the system at all. As a result the "tax" base for paying for water and sewer is a artificially restricted portion of the New York City tax base. That tax base includes a disproportionate number of properties which are owned by or rented to lower income households (51.8 percent of New York City households are below 80 percent of median income as of 2004).

Further, infrastructure costs of the water and sewer system are increasing dramatically and there is little incentive for insuring that the costs are kept as low as possible. The net result is that New York City home and residential building owners had an 11.5 percent increase in water and sewer charges last year, face a 14.5 percent increase in water and sewer charges this year, and can expect double digit annual rate increases for the rest of this decade and possibly longer. If PlaNYC meets its goal of reducing consumption by 60 million gallons per day, rate payers can expect an additional rate increase to make up the lost revenue.

To avoid a deleterious impact on the City's residential property owners, and multiple dwelling owners in particular, it is time to reconsider who pays for the water system and how its infrastructure planning and costs are managed.

1. Of the remainder 7% is the rental payment to NYC, and 2% is miscellaneous.

How The System Is Financed

What’s driving these double digit increases? Quite simply, the huge capital cost of new facilities for the water and sewer system.

The March/April 1998 Urban Prospect (available on CHPC’s web site at http://www.chpcny.org/pubs/UP_Water_Sewer.pdf) described the capital needs of the system whose regulatory requirements had already driven huge capital investment. A decade later, the system continues to have increasing capital needs which will extend at least for another decade.

In the early 1980’s New York City’s financial crisis rendered it unable to regularly borrow money in the capital markets to fund the huge capital needs for a water and sewer system whose maintenance and upkeep had been grossly delayed. Those needs then included the construction of a third water tunnel, vital to protect the City’s water supply, as well as the construction of a system of sewage treatment plants which were required by new Federal mandates to protect the quality of the City’s drinking water and to stop the dumping of untreated sewage into the surrounding waters.

To insure reliable financing of these capital projects, the City created a funding process outside of the normal system of using general tax revenues to pay for general obligation municipal bonds. The new process was designed to shift, over time, the entire capital and operational cost of the water and sewer system to the rate payers of the system.

Money would now be borrowed by the Municipal Water Finance Authority (MWFA) which was given the capability to issue its own bonds to fund these critical projects. This change removed a large burden from the City. For example the City’s General Obligation bonding for the period 2008-2012 is projected at \$28.55 billion. MWFA bonding for the same period is projected to be \$10.76 billion, *more than one-third of the cost for all other city financed construction.*

To set water and sewer rates in order to insure payment of the new bonds and to operate the system, the New York City Water Board (Water Board) was created at the same time. The Water Board leases the water and sewer system from the City’s Department of Environmental Protection (DEP) and uses the fees that it collects to pay DEP to operate the system and construct new facilities. The Water Board sets the water and sewer rates so that they are sufficient to operate the system and to pay to the MWFA whatever is needed to pay its outstanding bonds.

In 1988, rate payers paid for 48 percent of the capital needs of the water and sewer system. The balance was paid

for by City and Federal subsidies. By 1993 rate payers paid for 97 percent of the systems capital needs and all of its operational costs. Currently rate payers are paying about 95 percent of total system costs, a number that will increase as capital costs increase through the decade. The City has effectively ended its subsidies to the system and is left with only a small trickle of federal funds into the system.

This new system of financing had the added benefit of freeing the spending on water and sewer infrastructure from political oversight. Decision making had been effectively transferred out of the political realm and into the hands of the Water Board and City DEP. Revenue was insulated from the ups and downs of tax collections, thus insuring that future budget cuts would almost never impact the water and sewer system’s capital program, unlike any other capital spending agency.

These were innovative decisions which were designed to protect the funding for such critical long term capital needs. However, over time it has led to an insular process, far from the public scrutiny associated with most municipal capital spending. It also creates little incentive for cost controls. Public scrutiny is further lessened by the fact that most construction for the water and sewer system takes place upstate, underground, or at the periphery of the City. Unlike the rebuilding of the World Trade Center, most New Yorkers never see what their water and sewer charge is building.

New Projects

Following the initial capital investment in the 1980’s debt service costs remained steady from 1997 to 2005. However, once again the capital needs of the water/sewer system are on the rise. Between 2007 and 2018, capital investment in the water/sewer system is expected to total \$23 billion. The high point of the spending is to occur during the three year period between 2007-2010, with spending projected at over \$3 billion per year.

Major projects include:	2007-18 Cost
Filtration of water from the Croton Reservoir	\$1.9 billion
Water Quality Preservation	\$2.7 billion
Various Water Pollution Control Projects	\$9.4 billion
Third Water Tunnel	\$.68 billion
	(\$5.4 billion already spent)

Figure 1.

Source: MWFA prospectus October 2007

It is this planned increase in capital spending that is largely responsible for the double digit increases rate payers are now facing. And these increases may, in fact, be underestimating the future costs of the investment.

In 1998, the estimated cost of the Croton Reservoir filtration project was \$861 million. DEP's current estimate has more than doubled to \$1.9 billion. And the recent discovery of ground water problems at the proposed site give reason to believe that number may increase substantially again.

Why Do Rates Rise

Figure 2 shows the two main cost components of the water and sewer system that must be paid for by the water/sewer rate payers. First is the Total Operating Expense which covers all of the costs of actually operating the water/sewer system. Second is the Total Debt Service which covers all the debt service which must be paid each year to amortize the bonds that have been issued. Together these add up to the Total System Expenditures which must be covered by the Total Revenues.

As the chart makes clear, while Total Operating Expense is increasing at a moderate rate, Total Debt Service is increasing at a very high rate. Since the rate payers are fully paying for the capital needs in the Total Debt Service,

it is the sharp up trend in the capital program that is driving the increases in the Total System Expenditures. Total Revenues, then, must be increased to cover Total System Expenditures.

Such assistance as NYC does get comes in the form of a revolving loan fund known, in New York State, as the Environmental Facilities Corporation (EFC). The EFC makes soft loans to water and sewer systems throughout the State of New York. The EFC revolving loan fund was seeded by the Federal government with contributions by the state. In 2007 the EFC received about \$124 million from the Federal government for the entire State of New York. The EFC subsidy though, only covered 5.3 percent of Total System Expenditures for New York City in 2007 and is projected to decline as a percentage in the future. This reflects the fact that Federal assistance has been on the decline.

The Rental Payment

Another component of the increase in costs is the rental payment made by the Water Board to the City of New York. The rental payment represents a charge paid by the Water Board to the City for leasing the water infrastructure that was built by the City prior to 1984. Prior to 2005 the Water Board paid the City annually whatever the City was paying on debt service for constructing the pre-1984 infrastructure.

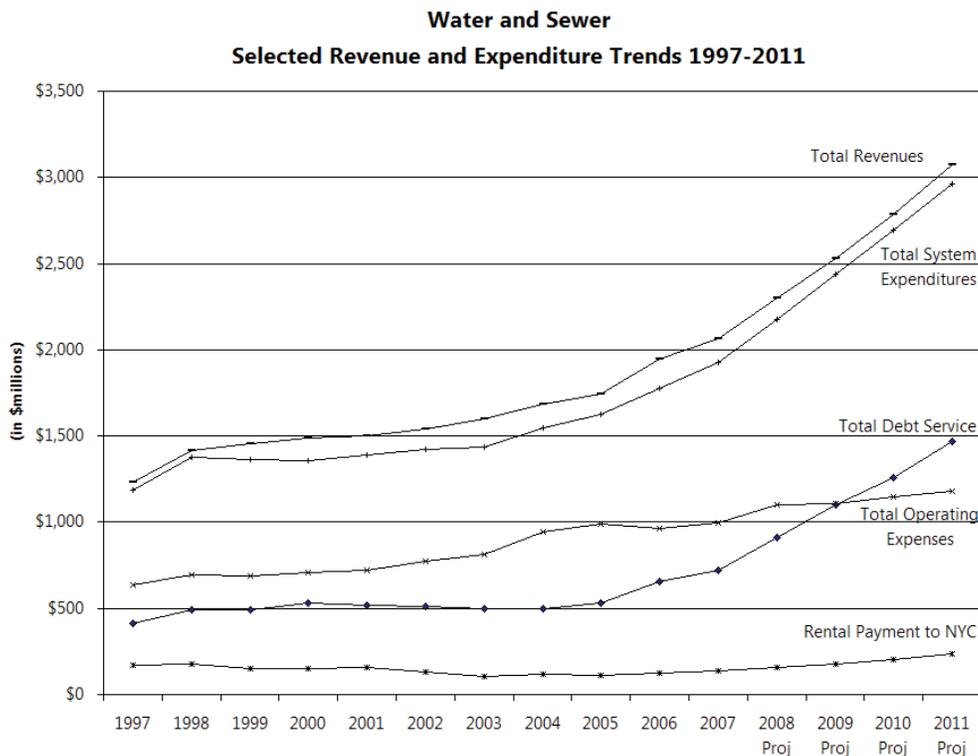


Figure 2.

Source: NYC Water Board Blue Books 1997-2007 and MWFA Prospectus October 2007

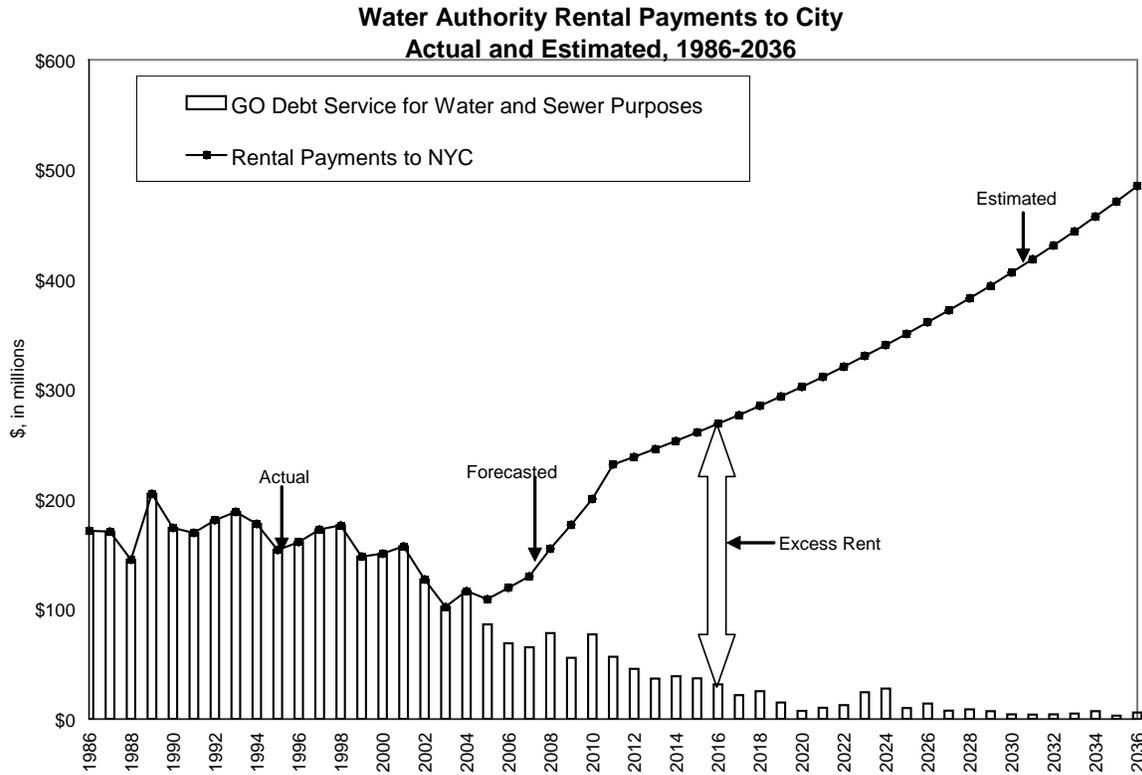


Figure 3.
 Courtesy Office of the Comptroller, City of New York
 Based on 2007 Projections

In 2004, that payment totaled \$115 million.

After 2005, however, the City invoked a provision of the lease agreement requiring the Water Board to pay an amount equal to 15 percent of the interest and principal paid by the Water Board on the total outstanding MWFA bonds. The lease payment to the City now bears no relation to the cost of the leased infrastructure, and is increasing as the amount of outstanding MWFA bonds increases. In 2006 the payment had increased to \$124 million. By 2011, it's projected to reach \$235 million, even though by that time the debt service cost of the original water/sewer infrastructure will be less than half what it was in 1985. The difference between the cost of the pre-1985 bond that the City has to pay and the value of the rent payment is the “excess rent payment” to the City. That excess rent payment is growing and will continue to grow.

According to the MWFA, the rental payment is protecting the bond rating for its bonds, by providing an additional margin of safety for repayment, and compensating the City for police and other costs of the system (similar to a payment in lieu of taxes). However, the ever increasing capital needs and the corresponding increase in the amount

of outstanding bonds issued by the MWFA insures that this payment will only continue to go up – and not necessarily in proportion to the value of the risks that the City has undertaken or the services provided. Figure 3, shows the projected increase in this excess rental payment.

For the City the rental payment is a reliable source of revenue into the Expense Budget which can be increased without the need to go to the City Council or the New York State Legislature for a tax increase. Were the Rental Payment to be reduced, it would help to contain future rate increases. While it might only make a few percentage points difference in the adopted rates, it is at least one part of the equation.

Use Less, Pay More

While a core guiding principle of the rate structure is that users should fully pay for the water and sewer system (a principle known as “full cost pricing”), another goal is to promote water conservation and decrease the need for future capital investment.² With the City’s population projected to increase by one million by 2030, the latter goal is clearly

2. See 2008 *Blue Book*, page 26. Available at http://www.nyc.gov/html/nycwaterboard/pdf/blue_book/bluebook_2009.pdf.

critical. One of the primary arguments for metering water has been that users would decrease usage to avoid increased costs and thus reduce the need for expensive new facilities.

To a large extent, that has happened. Water usage in New York City has decreased from 1.512 billion gallons per day in 1979 to 1.086 billion gallons per day in 2006. Despite the addition of about one million residents since the 1970's, no new reservoirs or other water sources have been required. Many observers believe that these savings have largely been the result of fixture improvements, building code requirements, and rebate programs that have increased the usage of low flow toilets and shower heads.

However, for rate payers, reducing water usage has not decreased costs. This is a serious flaw in the effort to conserve water. DEP is about to commission a study

Regressive Taxation

The water and sewer charge is one of the more regressive taxes in New York City.

The Rent Guidelines Board, using data filed with the New York City Department of Finance, reports on the costs of operating rent stabilized buildings. Water and sewer charges, broken down by borough (within Manhattan, Manhattan South, below W. 110th St. and E. 96th St. and Manhattan North above those streets), are part of this data set. Pre-1947 rent stabilized apartments of 10 units or more reveal a surprising variation in the costs of water, as set forth in Figure 4.

Low income neighborhoods pay more. In 2006 for the universe of pre-1947 rent stabilized apartments of 10 or more units, the Citywide average cost for water was \$444 per housing unit. But in Manhattan South water cost only \$408

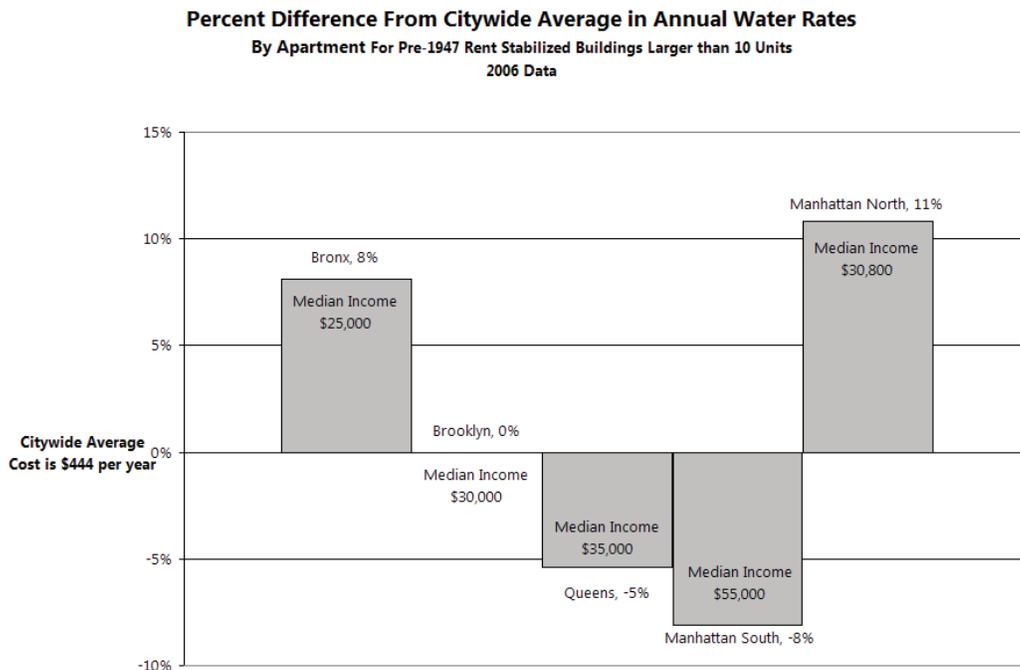


Figure 4.

Source: Rent Guidelines Board RPIE Data, 2006

to reconsider the rate structure. In order to achieve actual savings, any new rate structure must actually reward those who save water with a real cost saving. This will require a rate structure that removes part of the capital cost from the rates so that savings in usage are not offset by higher debt service payments.

per unit. In Manhattan North water cost \$492 per unit. And in the Bronx it cost \$480 per unit.

One reason for this disparity is that apartments that house lower income households have a higher occupancy rate, and thus, a higher need for water in their homes and apartments. For instance the lower usage in Manhattan South correlates well with known occupancy statistics. According to the 2005 New York City Housing Vacancy Survey, apartments in Manhattan south of West 106th St., and

south of East 96th St., have an average occupancy of 1.57 persons per apartment, well below the citywide average of 2.26 persons per apartment. Another reason for higher costs for low income households is that lower income households, with less disposable income, vacation away from home less frequently than higher income households.

This is bad news to the affordable housing stock in New York City.

One funder of tax credit housing, which contains very low income households, reports that water costs their buildings an average of \$633 per unit per year, almost \$200 above the average reported by the Rent Guidelines Board.

For owners and developers of affordable housing, including privately owned, non-subsidized affordable housing, it means that they must bear a disproportionate burden of building the water and sewer system. And it is a cost that is rapidly rising.

Improving Collection to Reduce Rates

One way that DEP has indicated rates could be reduced is through better collection of outstanding water and sewer debts. However so far these efforts have fallen short of their goal. By 2007 total delinquent accounts for the water/sewer system exceeded \$500 million. In 2007 the City Council approved DEP's long sought authority to allow for the sale of freestanding water and sewer liens. DEP also announced a program for the shutoff of small homes that were delinquent (along with an amnesty plan for those small homes).

How much these efforts will actually collect, and help reduce rate increases, remains unclear. A report done by Booz Allen Hamilton, suggests that 67 percent of the outstanding delinquent liens are uncollectable. Worse for DEP they are starting this effort in the face of a weakening real estate market thus reducing further the probable collection rate. It seems unlikely that these new collection efforts will have much impact on holding down rate increases.

Recent reports from DEP and the Water Board, while not complete, do seem to show success in reducing the growth of delinquent accounts. However arrears collection is still weak and raise serious questions as to whether DEP will meet its collection goals.

Rate Setting and Capital Projections

In its listing of important objectives, the Water Board states that the rate structure should provide a reasonably stable and predictable flow of revenue.³ Similarly building owners

3. See 2008 *Blue Book*, page 26. Available at http://www.nyc.gov/html/nycwaterboard/pdf/blue_book/bluebook_2009.pdf

need to be able to predict with reasonable certainty future rate increases. They have an interest in seeing that increases will be both moderate and smoothly spread out over time. This enables them, and the entire rent stabilization system, to adjust to changes without sharp and unexpected rent increases.

There has been a wide variation in projected and actual expenditures on the capital program. For instance, the 2006 and 2007 Blue Books, (the revenue and expenditure projections that are used by the Water Board in setting rates) varies by about \$2 billion in the projected capital expenditures for 2008 (\$1.6 billion projected as 2008 expenditures in the 2006 Blue Book versus \$3.5 billion projected for 2008 in the 2007 Blue Book).

This wide variation does not induce confidence in the future predictability of rates and raises questions about the nature of the oversight for the capital program. While the capital expenditures are part of the city capital budget, the ability to simply add additional costs to the rates, raises questions as to how closely the expenditures are monitored. Unlike other city capital proposals, there does not seem to be the same process of weighing alternatives and making choices based on limited resources.

Governance

One of the reasons for that is the unusual nature of governance of the water and sewer system. For all other city agencies the City's Office of Management and Budget (OMB) reviews capital expenditures and sets budget limits for capital and operating expenses. OMB is largely responsible for overseeing the management of agency capital plans and reviewing performance. When there is an overall need to decrease Citywide capital spending, they direct agencies how much has to be cut and can step in and recommend ways to carry it out if need be. With its overall responsibility for the City's budget, OMB has a direct interest in insuring that agencies use their funds wisely and frugally.

However the Municipal Water Finance Authority, although it is chaired by the Director of the Office of Management and Budget and has its offices within OMB has little incentive to keep to keep costs low since its revenue is, essentially, off the books. It's seven members include the Commissioner of DEP, the Commissioner of the Department of Finance, the Commissioner of the New York State DEP, and three public members of which two are appointed by the Mayor and one by the Governor. The Water Board consists of seven members appointed solely by the Mayor.

With OMB acting as a key player in the water and sewer system, and also being the main oversight agency, the result of this structure is that there is less independent supervision of the process than for most city agencies. OMB, DEP and MWFA can usually expect the Board (which has virtually no staff and must defer to the technical expertise of the agencies) to pass whatever rate increases are dictated by expected expenditures. While it is true that the system labors under a series of court orders that mandate between 50 and 75 percent of its capital program, there is still less than the normal amount of incentive to cut costs.

In fact the Independent Budget Office (IBO) reports that in the last round of budget cutting, when virtually all agencies, were asked by OMB to cut five percent of expenses, the water and sewer system was exempted from the cost cutting requirement. The efficiencies and innovation that can actually come from budget cutting exercises are largely absent from this process. With the water system providing a reliable source of income to the city through the lease payments and an ability to pass through any increase in costs directly to the rate payers who do not represent a vocal constituency, this system is largely untouched by outside scrutiny.⁴

What to Do

To the extent that these numbers show us that water/sewer costs are disproportionately borne by affordable housing, we must ask ourselves if this is a good public policy. There is broad agreement that New York City has a shortage of affordable housing. In fact the City funds affordable housing and provides a wide variety of tax benefits to keep housing affordable. A policy of overtaxing housing for water/sewer use is contrary to the overall policy to support affordable housing. Our objectives for water/sewer pricing should be:

- *End the excess rental payment as a first step to reducing unnecessary expenses.*
- *Improve capital spending projections and oversight to insure predictability in rate expectations.*
- *Attempt to spread out the costs of the needed infrastructure investments so as to reduce the burden on homeowners and multiple dwelling owners.*
- *Increase conservation by providing real cost reductions for those who conserve.*

⁴ The notable exception is when large capital construction projects encounter local neighborhood objections. However the objections are largely focused on the land use impact of the proposed projects not on whether or not the costs are justified.

End the Excess Rental Payment

There are clearly steps that can be taken to restructure revenues to more evenly spread out the costs. The most obvious is to reduce the rental payment to the City. The ever increasing rental payment represents an “off the books” revenue source to the City. While the City may be concerned about exposure to contingent costs from the water and sewer system, the City should bear the risks of such costs as they do any other contingent cost of the City.

Comptroller Thompson has proposed that the excess rental payment (the difference between the cost of amortizing the pre-1985 bonds and the payment based on the outstanding MWFA bonds) be returned to the water/sewer system to be used for capital and operating expenses. It is a recommendation that would help to reduce the burden on the rate payers and should be adopted by the Water Board.

The rental payment though is only a small portion of the cost problem. The bigger question is what to do about the increasing capital costs. As noted above, this is a problem that is nationwide, although New York City is one of the more severe examples. As with many other infrastructure problems, (e.g. roads, bridges, rail, airports, education, etc) the federal government should provide more assistance. Current and future budget problems, though, raise serious doubts as to how much additional assistance will be available from that level of government.

Improve Capital Management

One solution is to transfer the entire water and sewer capital program to the NYC Department of Design and Construction, which has been remarkably effective since its creation under the Giuliani Administration as the City’s prime construction agency. DDC already has a portion of the construction work to the extent that it overlaps their street construction responsibility

Another part of the solution is to ensure that whoever is making the final fiscal approvals has the technical expertise to independently evaluate the merits of proposed projects. Right now that would mean giving the Water Board a permanent technical and fiscal staff to make them a true overseer of the system.

Share Infrastructure Costs Equitably

The capital costs of the water/sewer infrastructure system should be borne equitably through New York City’s larger tax base. This can be done by having the City borrow and pay for a portion of new capital infrastructure or have the City

simply make a direct payment to the MWFA for payment of debt service.

This argument is compelling for several reasons. Capital costs represent what it costs to have a water system. The marginal cost of delivering another gallon of water is trivial compared to the cost of laying the pipe that delivers it. The cost of filtering the water from the Croton reservoir is mostly represented by the cost of building the plant – not the operating cost of filtering each gallon. Just like any other major infrastructure that the city builds - roads, bridges, fire stations, etc. – the water system is a basic requirement of having a city. Its burden should not fall solely on property owners.

Encourage Conservation

If the users were only paying the operational costs, then continued reduction in water usage would be rewarded with decreasing costs for those who conserve water. We should have a system that rewards users who reduce usage with lower costs. While PlaNYC states that conservation is an objective for 2030, there is no real strategy to achieve it. Without a change in the rate structure users will pay more if they conserve. By removing at least part of the capital costs

from the rate payers, they would be able to actually reduce their bills when water usage decreases. Under the current system, reduction only leads to higher rates.

There may be benefits to the existing MWFA/Water Board system. Insulating the water and sewer system from political and economic swings; ensuring a source of funds for capital projects; encouraging long term capital planning. However it is now time to rethink how we plan, borrow, build and pay for our water and sewer system to ensure that we protect our housing stock, achieve equitable distribution of costs, plan and build an efficient and cost effective infrastructure and support conservation of a critical natural resource.

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