

BACKGROUND DOCUMENT:

Mayors Discuss Urgent Need for New Strategies As Clean Water Act Turns 40

DECADES OF CITY PROGRESS

Cities have made a tremendous investment over the last 40 years to make the Clean Water Act (CWA) succeed; and it has done so with remarkably good results. U.S. waters are the cleanest they have been since well before the Industrial Revolution. Local government is largely responsible for making the investments required to achieve clean water goals, and has done so as a public service seeking to maximize public benefit and not from a profit motivation.

Some examples:

- Waterborne diseases causing sickness and death such as typhoid and cholera have been nearly eradicated, while others have been dramatically reduced and kept in check in our drinking water.
- Limiting water and wastewater rates to affordable levels has fueled growth in the American economy to sustain an over \$15 trillion Gross National Product.
- Healthy rivers no longer catch fire and commercial fisheries are on the rise.

Local government continues to pursue greater improvements in water quality, and success will hinge on smart investments of limited public resources.

THE CURRENT CHALLENGE: SUSTAINABLE PUBLIC INVESTMENTS

Despite struggling with severe budget cuts, local government, more than any other level of government, continues to invest public resources in ever growing amounts to clean water goals: \$50 billion in 1995 to over \$103 billion in 2009; a total of \$1.6 trillion from 1956 to 2008. Meanwhile, the Federal Government provides less than \$2 billion per year to the States who provide loans to local government. Estimates of needed investments over the next 20 years are staggering, and are in the trillions of dollars.

Local government routinely faces the challenges posed by increased investment drivers and a static (perhaps shrinking) pool of public financial resources. Key factors driving up clean water investment needs include: inflation; urbanization and population growth and extending infrastructure to service sprawling development; rehabilitating an aging infrastructure; and an unprecedented capital investment requirement from unfunded EPA mandates such as sewer overflow and storm water controls.

While cities have done an exceptionally good job at increasing public investment for clean water there is a growing recognition that public finances are perilously close to reaching a breaking point. Examining the cumulative cost impacts of water and wastewater rates over the last several years has revealed that ratepayers are ill prepared to afford additional water investments, and that some of EPA's unfunded mandates place a disproportionate fiscal impact on low, moderate and fixed income households. In short, this means imposing enormous rate hikes for taxpayers during

a time when households are barely recovering from the economic recession, and real wage increases are absent.

THE SOLUTION: PLANNING SMART INVESTMENTS TO OPTIMIZE PUBLIC BENEFITS

The EPA's fledgling Integrated Planning and Permitting Policy (IP3) could be a welcome answer to balancing the need to invest in progress toward clean water goals without over taxing the low, moderate and fixed income households in our cities, and avoid starving investment in other public infrastructure and programs. Some potential reforms include:

Amending the Clean Water Act

- **Cumulative Cost Impact:** Require EPA to conduct a peer-reviewed study of the cumulative cost impacts of all CWA and Safe Drinking Water Act (SDWA) regulations on ratepayers.
- **Cap Compliance Costs:** Place a cap on unfunded water mandates cost to ratepayers and local government that takes into consideration all-in costs of water and wastewater (including stormwater) infrastructure and operations and maintenance.
- **Institutionalize Flexibility and Incentivize Smart Investments:** Require EPA to use IP3 regulatory model when issuing CWA and SDWA permits. The IP3 approach should specifically allow for changes to a control plan when innovative technology or cost-efficiencies can be demonstrated.
- **Shield Local Governments that are Actively Pursuing Compliance:** Provide specific flexibility provisions that would shield public sector permittees from third party suits if they are actively engaged (making investments and complying) in addressing clean water goals through the permit process with state regulators and EPA Regional officials
- **Match Compliance Schedules to Local Affordability:** Provide specific flexibility provisions that would extend the schedules to achieve compliance if a local government can demonstrate that shorter term investments to achieve compliance would exact widespread economic and social impacts, and especially when disproportionate fiscal impact on low, moderate and fixed income households are identified.

Adjusting the EPA Regulatory Approach

- **Partners not Prosecutors:** Immediately cease the CSO/SSO enforcement campaign (with some exceptions) and shift to accomplishing clean water and drinking water goals via the normal permitting process.
- **Clean Water should be Measured by Results not Headlines Touting Forced Billions of Investment, Penalties and Fines:** Overly prescriptive CSO/SSO long term control plans that EPA Regional officials promote often results in forced-gray plans that are capital and energy intensive and preclude equal or superior plans that are less costly, less

carbon emission intensive, and less costly in annual recurring operations and maintenance costs to communities.

- **Recognition that Cities are Directly Addressing the Nexus of Human Settlements and Large-Scale Natural Phenomenon:** Planning, designing, building and operating a water or wastewater treatment plant is a discreet exercise compared to dealing with large-scale flooding, periodic and long-term droughts, and critical infrastructure vulnerable to rising sea levels in coastal communities. These are problems that local elected officials cannot fix in the short time frames EPA imposes. Nor do they have the unlimited financial resources to do so. Long-term control plans in the 5 to 20 year range are simply too short for cities to accommodate.

CITY ISSUES/EXAMPLES

Omaha, Nebraska

Mayor Jim Suttle

Population 2010	408,958
No. of Households	163,014
Per Capita Income	\$26,123
Median Household Income	\$46,230
Percent Below Poverty Threshold	15.3%

Combined Sewer Overflow Issue

1. Omaha is formulating a long term control plan as a result of an enforcement action to control sewer overflows.
2. The estimated cost to comply with the Clean Water Act for this one mandate is between \$1.2 - \$1.7 billion.
3. Included in the plan is a \$750 million deep tunnel. Omaha is exploring alternatives to this grey infrastructure solution.

Chattanooga, Tennessee
Mayor Ron Littlefield

Population 2010	167,674
No. of Households	70,146
Per Capita Income	\$23,434
Median Household Income	\$36,675
Percent Below Poverty Threshold	21.3%

Water / Sewer Issues

1. Based on recent experience from comparable communities, compliance with a new consent order to address sewer overflows and other deficiencies will cost \$200 million to \$500 million for a midsize city and possibly an additional \$100 million + for adjacent suburbs. By anyone's measure, these are scary numbers.
2. Water quality is a regional issue – not a local issue – and regulations should be applied uniformly across a watershed – not just within a municipal boundary. Of course, it is legally more convenient to beat up a single city rather than take on an entire region.
3. Chattanooga, like many metropolitan cities, lies at the bottom of a topographic bowl. The unrelenting law of gravity determines that everything flows downhill to the center. Much pollution begins well beyond the city limits. Accordingly, by focusing the expense and requirements of enforcement on the central jurisdiction, EPA is (perhaps unwittingly) contributing to sprawl. Suburban communities often brag about being outside the area covered by the cost and bother of water quality regulations and requirements.
4. Using Federal courts to confirm and establish a plan for environmental compliance is heavy handed, expensive in terms of nonproductive legal costs and not understood by the general public. To quote another mayor: “the local citizens think that we have done something very wrong – something criminal – they don't believe that this is just the way things are done.”
5. Local governments need a partner – not a prosecutor. EPA and its state counterparts should be in the business of identifying, promoting and (sometimes) partially funding best practices. Plans to use green infrastructure were discouraged by some state and federal offices until cities like Philadelphia proved the cost effectiveness of using such measures.
6. Conflicts between states and localities over rights to water and the privilege of development are sure to become more frequent and intense in the future. This is a national issue of immense importance and one that cannot be effectively resolved by contests decided and determined by who can afford to hire the best lawyers. Efforts such as those by Atlanta legislators to move the state line north to the Tennessee River are just the beginning.

Lima, Ohio
Mayor David Berger

Population 2010	38,771
No. of Households	14,618
Per Capita Income	\$15,757
Median Household Income	\$30,525
Percent Below Poverty Threshold	30.3%

Combined Sewer Overflow Issue

1. Lima was in the final stages of an agreement with the state of Ohio for \$60 million to solve their CSO problem when US EPA stepped in and stopped the agreement. Lima has been in negotiations with state and EPA authorities to develop a long term control plan for nearly a decade.
2. Lima has spent approximately \$6 million on engineering studies and lawyers in an effort to develop an affordable set of alternatives to comply with Clean Water Act (CWA) standards and USEPA policy interpretations of those standards. None of that money treated a drop of water!
3. Annual median income is roughly \$30,525, with nearly one-third (30.3 percent) of persons living under the poverty threshold, (\$22,313 in 2010 for a family of four).
 - a. Another 20 percent of Lima households are under the median income level and close to the poverty threshold.
 - b. Additionally, our demographic profile includes aging baby-boomers that comprise a substantial and growing class of fixed income seniors.
 - c. Our low, moderate and fixed income households are particularly vulnerable to increasing costs of basic services.
4. One of the most difficult elements of the negotiations we are holding involves the requirement to reduce CSO events to 4 or fewer. There is no legal requirement contained in the CWA to reduce overflows to this level, nor is it based upon a scientific assessment of any receiving stream. It is a “presumptive” standard that the bureaucrats have decided should be enforced for all sizes of communities on all sizes of receiving streams, but it will impose a significantly high cost on our households.

**Chicopee, Massachusetts
Mayor Michael Bissonnette**

Population 2010	55,298
No. of Households	22,863
Per Capita Income	\$22,829
Median Household Income	\$44,226
Percent Below Poverty Threshold	15.4%

Combined Sewer Overflow Issue

1. Estimated costs for the long term control plan consent decree is about \$200 million.
2. Roughly \$125 million paid out in projects towards this plan by 2015, and ratepayers will be paying the debt for 30 years.
3. Sewer rate increases are already 337% since 2003.
4. The city bills sewer rates separately from water supply, and an additional storm water rate billed each quarter for another \$400 per year.
5. The City has estimated that if they need to reduce nutrients in their stormwater, this will be an additional \$87 million cost.

Hallandale Beach, Florida
Mayor Joy Cooper

Population 2010	37,113
No. of Households	17,616
Per Capita Income	\$24,770
Median Household Income	\$34,953
Persons Below Poverty Threshold	20.3%

Water Issues

The City's primary issue with water supply has to do with salt water intrusion into the City's Underground Source of Drinking Water (the Biscayne Aquifer). The 250 mg/l isochlor line (generally regarded as the salt water intrusion line, where the water contains chloride levels too high to treat for drinking water by conventional lime softening treatment plants) is already west of the City's raw water well field. Out of 8 original production wells, only 2 remain viable. Hence the City is planning to relocate our well field westward approximately five (5) miles at a cost of approximately \$10,000,000 (including 5 new production wells, and a new 24 inch diameter ductile iron raw water main.

The City has recently spent \$19,593,400 to build a Nanofiltration Membrane water treatment plant that produces up to 6 million gallons per day (MGD) of potable water. The plant was designed to be modular, and can easily be modified to add Reverse Osmosis (RO) skids that will enable the facility to treat brackish water, should our remaining wells become salty. The capital cost to add two RO skids is approximately \$6,850,000. While this will solve the water supply issue, there will be an on-going increase in energy costs to operate the RO plant. It is estimated that energy consumption to operate the RO plant will be 15% higher than operation of the Nanofiltration plant, which results in an increase cost of approximately \$137,000 annually (present value). This will of course increase as the price of energy increases.

Wastewater Issues

The City does not own or operate a treatment facility, however sends its wastewater to the South Regional Wastewater Treatment Facility operated by the City of Hollywood. Hallandale Beach's wastewater flows comprise approximately fifteen percent (15%) of the total regional flow. As such, implementation of the proposed numeric nutrient criteria rule will impact the City significantly, as the cost of treatment will rise significantly, and those costs will be passed onto the City by the South Regional host community (Hollywood). Hollywood has estimated

that the capital cost to build membrane bioreactors or similar treatment systems that can treat wastewater to meet the new proposed standard is \$800,000,000. Hallandale Beach's portion of that would be \$120,000,000, or it would cost each utility customer \$3,233 just to cover the initial capital cost of modifying the treatment facilities.

Storm Water Issues

Hallandale Beach does not have a Combined Sewer Overflow (CSO) issue but does have storm water issues. Due to a reinterpretation of an EPA rule, the City is being held responsible for storm water runoff (much of which is upstream) including controlling nutrients. Florida estimates the cost to comply for the entire state to be as much as \$50-\$80 billion. The City is presently designing and construction a storm water collection and disposal system that will have the capacity to handle 100,000 gallons per minute (gpm) (the equivalent of 144 MGD). The cost for the collection and disposal system is estimated at \$15,400,000.

Treatment plant costs for membrane technology capable of removing nutrients from storm water range between \$7 and \$12 per gallon of capacity. Therefore, should numeric nutrient criteria standards be applied to storm water discharges, it would cost the City over \$1 billion in capital costs for the treatment system. Operating costs would run into the tens of millions of dollars annually.

Should numeric nutrient criteria standards be applied to storm water discharges, it could cost each resident in Hallandale Beach over \$27,160 to help pay for the treatment plant that would need to be built.