



# Department of Planning, Housing, & Community Development

**Mayor, Richard C. David**

*Acting Director, Jennifer Taylor*

TO: City Council Members  
FROM: PHCD Staff  
DATE: May 9, 2014  
RE: Comprehensive Plan and Main & Court Corridor Plan – Public comments received 05/03/14 through 05/09/14

---

**Comment 1: Received during the 5/5/14 Planning Commission Public Hearing from Ed Crumb**

[see attached]

---

**Comment 2: Received during the 5/5/14 Planning Commission Public Hearing from Beverly Rainforth**

[see attached]

---

**Public testimony from 5/5/14 Planning Commission Public Hearing:** Beverly Rainforth, Diane Cranston, Ed Crumb, Lou Sebesta and Stephen Bard

**Public testimony from 5/7/14 City Council Public Hearing:** see Council notes

---

**Comment 3: Received via email on 5/9/14 from D Thomas ([DThomas13760@aol.com](mailto:DThomas13760@aol.com))**

I have little hope for revitalization when the mayor did not enthusiastically embrace the developer who wanted a casino on the old Stow Flats property (an ey sore for the ages, I guess), or a city that can have hundreds of millions of State & Federal dollars spent on the kamikaze curve solution without lobbying for a direct connection to the North Shore Drive.....which is the only logical premier entry to downtown. If tearing down a few Front Street properties is their vision, not much can be said.

Keep up the fight for new ideas but don't spend too much time indulging these visionaries.

D Thomas

*questions, comments and suggestions of.*

EDWARD F. CRUMB  
P.O. Box 3067  
Binghamton, New York 13902-3067  
e-mail: <EdCrumb@juno.com>

on the March 24, 2014 draft Chapter V[D] for the  
City of Binghamton *Comprehensive Plan* update (“draft CP update”)

page

188 I suggest **clarifying** the penultimate sentence by adding the wording shown in italics so as to reference both sanitary sewers and storm sewers, which have very different functions:

The Water and Sewer Department oversees the water treatment plant, water distribution services, water meter services and sewer collection services *which include sanitary, storm, pumping, and combined sewers overflows (CSO) discharge facilities.*

189 All references to “water treatment plant” should be revised to “water filtration plant” (the facility’s given name) **for accuracy**. This includes the photograph’s caption.

189 Correct the **misspelling** of “Olmstead” Street in the sixth line.

189 The last sentence of the first paragraph should be corrected **for accuracy**: the Town of Dickinson and Village of Port Dickinson also “regularly” purchase water from the City.

189 The description of the “Water System” contains no **acknowledgement** of the following:

- a) A fundamental purpose of the City’s water storage and distribution systems is for fire protection: this should be acknowledged/noted within the Comprehensive Plan’s narrative.
- b) The substantial portion of the City water supply drawn from the Susquehanna River contains detectable mercury concentrations resulting from aerial deposition of mercury (as well as other pollutants) emanating from “smokestack industries” to the west (both in the United States and Canada), which mercury comes to rest in the Susquehanna River watershed upstream of the City’s water intake and subsequently leaches or is carried-into the river. Water purification processes to remove mercury to less than U.S. Environmental Protection Agency (EPA)-allowable limits for “finished drinking water” are thus a necessary cost factor in the Water Filtration Plant’s operation and maintenance budget (for example, approximately 443 wet tons of chemically-laden, mercury-laced sludge was a byproduct of the purification process in the 12 months ending November 30, 2013 [*source*: Binghamton-Johnson City Joint Sewage Board IWWPP surcharge billings to the City’s Water Filtration Plant]). This sludge must be properly collected and disposed-of in accordance with EPA regulations.

page (continued)

...189... In the not-to-distant past, former City employees have been prosecuted and convicted of environmental crimes involving illegal disposal of sludge from the Water Filtration Plant [see, URL: <<http://www.newyorkparalegalblog.com/2010/05/kevin-e-transue-and-daniel-e-rose-have.html>>, a copy of which is attached as Appendix A].

Accordingly, I urge that the City's draft CP update be revised to contain an expressly-stated policy recommendation that the City fully support and urge conscientious implementation and enforcement of the EPA's *Clean Air Act* regulations such as the EPA's *Clean Air Interstate Rule* (CAIR) and the EPA's *Cross-State Air Pollution Rule* (commonly called the "Transport Rule"), the latter of which was recently upheld by the United States Supreme Court (see, *EPA v. EME Homer City Generation, L. P.*, Docket No. 12-1182 [slip opinion], April 29, 2014). Both of these regulations are designed to protect downwind communities such as ours from the adverse environmental impacts associated with air emissions upwind from us.

c) Based on the City's Annual Water Quality Report, orthophosphate (PO<sub>4</sub>) is a compound added to the City water supply for corrosion control, including to minimize potential lead leaching into water while in distribution or plumbing [see, URL: <<http://www.binghamton-ny.gov/sites/default/files/documents/files/Drinking%20Water%20Quality%20Annual%20Report%20-%202013.pdf>>]. On the urban water cycle's "backside", phosphorus is a "pollutant of concern" specifically regulated by the EPA in its December 29, 2010 *Chesapeake Bay Total Maximum Daily Load for Nitrogen, Phosphorus and Sediment* (or "Chesapeake Bay TMDL" [see, URL: <<http://www.epa.gov/reg3wapd/tmdl/ChesapeakeBay/tmdlexec.html>>]). I believe that – as a matter of strategic planning – the draft CP update should specifically address whether it is a technologically-effective "best practice" and/or, on an overall basis, the most cost-effective approach to [i] add phosphorus-containing compounds to water distributed via the City's water system, and then have to [ii] remove excess phosphorus as part of the wastewater treatment process at the Binghamton-Johnson City Joint Sewage Treatment Facilities. If this analysis shows that, on an overall basis, the present practice either doesn't make sense or isn't cost-effective, viable alternatives should be listed/recommended in the draft CP update so that the City's policymakers can decide what the best course of action is.

189 I believe that the words "reduce the" will prove to be inaccurate. For accuracy, consider "control" instead.

190 Correct Figure 49 ("Water + Sewer Infrastructure") for accuracy, including but not limited to:

► The Pennsylvania Avenue Pump Station (sanitary, having a 255HP/26 million gallon per day [MGD] pumping capacity) does not appear on the map (although a storm water pumping station [? – which might not exist] is shown in that location in Figure 49); for further information, see Section 1.2.5 (on page 3) and Table 1-1 (on page 4) in the City's

page (continued)

...190... October 2013 *Capacity, Management, Operations, and Maintenance (CMOM) Plan*, an excerpt of which is attached as Appendix B.

- ▶ Also missing from Figure 49 is the 3HP/300 gallons per minute [GPM] Sanitary Lift Station at 9 Olmstead Street; for further information, see Table 1-1 (on page 4) in the City's CMOM Plan.
- ▶ Figure 49 shows three Sanitary Lift Stations west of the Chenango River on or near Main Street that are not identified by the City in its October 2013 CMOM Plan – suggest verification of this portion of the map with the City's Collection System Bureau Chief.
- ▶ Likewise, Figure 49 shows one Sanitary Lift Station south of the Susquehanna River on Conklin Avenue near John Street which was not identified by the City in its October 2013 CMOM Plan – also suggest verification of this portion of the map with the City's Collection System Bureau Chief.
- ▶ A Sanitary Lift Station is shown in Figure 49 in the vicinity of Laurel Avenue and Bennett Avenue, but was not identified as such by the City in its October 2013 CMOM Plan – this might be a storm water pumping station – and should also be verified with the City's Collection System Bureau Chief.
- ▶ The Sanitary Lift Station at 8 Cheri Lindsey Park appears to be mis-located in Figure 49 approximately two blocks (0.2 miles) to the east of its actual physical location.
- ▶ Figure 49 shows ten Combined Sewers Overflow (CSO) discharge structures, but the first paragraph on page 191 references “nine”. It is believed that the CSO shown north of the I-81/NYS-17 Interchange (a/k/a “Kamikaze Curve”) is erroneous and should be deleted.

191 The first sentence is inconsistent with the City's collection system description provided in Section 1.2 (on page 1) and Section 1.2.7 as well as Table 1-1 (on page 4) in the City's October 2013 *Capacity, Management, Operations, and Maintenance (CMOM) Plan*, an excerpt of which is attached as Appendix B. It should be checked and corrected for accuracy, including but not limited to:

- ▶ The City's CMOM Plan states the City owns and operates approximately 460 miles of sanitary sewer (vs. the draft CP update's mention of 175 miles [70 of which is combined with the storm sewer]). *It may be the case that the drafter of the CP update has not included trunk and/or interceptor sewers. Alternatively, perhaps the City's CMOM Plan may include in its inventory privately-owned building sewers and/or sewer laterals.*
- ▶ The City's CMOM Plan states the City owns and operates 10 sanitary or combined sewage pump stations (vs. the draft CP update's mention of 14). *When adding the 10 sanitary or combined pump stations to the 14 storm sewer pump stations noted in the last*

page (continued)

...191... paragraph on page 191, the correct total of 24 is obtained (as reported in the CMOM Plan).

Also of note in describing the City's sewer collection system is the data presented in the table following the first paragraph of Section 1.2 of the City's October 2013 CMOM Plan: half of the system is 63 years old or older, with 30% having been installed 88 or more years ago.

191 The last sentence of the first paragraph should be corrected for accuracy to reflect the City's 54.8% ownership of the Joint Sewage Treatment Facilities (i.e., including the remotely-located Terminal Pumping Station serving the western and northern portions of the service area tributary to the Joint Sewage Treatment Plant).

191 The second paragraph is substantially erroneous and should be corrected for accuracy. The following suggested revised wording is offered (grouped into four paragraphs):

The Joint Sewage Treatment Plant (Plant) is presently permitted by the New York State Department of Environmental Conservation (DEC) to discharge a maximum 12-month rolling average hydraulic flow of 35 million gallons per day (MGD) treated effluent into the Susquehanna River. The Plant is designed to receive and provide treatment for a peak hourly wet-weather hydraulic flow rate of 60 MGD. Even though the Plant is operationally capable of receiving and providing treatment up to these maximum rates and capacities, the actual flows received at the Plant for treatment are ordinarily much less than the Plant's hydraulic capacity. For example, through December 31, 2013, the Plant's five-year average daily operating flow was 18.68 MGD, which is 53.4% of the DEC-permitted maximum rolling average flow.<sup>1</sup>

Exceptions to these norms occur during significant wet-weather events and high groundwater table conditions when the additional volume of infiltration and inflow (I/I) – the largest component of which is inflow from storm water in the remaining combined sewers of the City's sewer collection system – is mixed with sanitary sewage, and the resulting flow volume overwhelms the operational capacity of the City's sewer collection system to convey all accumulated combined sewage to the Plant. To prevent damage to the sewer collection system, as well as minimize sewer system back-ups, all or some of the City's nine Combined Sewer Overflow (CSO) discharge structures activate during significant wet-weather high flow conditions and, after performing screening and floatables control, discharge partially-treated combined sewage into the rivers. (For example, during 2009 some or all of the City's nine CSOs were reported to have discharged during 26 different significant

---

<sup>1</sup> - For reference/support of this suggested wording (i.e., this data is not intended for inclusion in the CP update's narrative), please note that the average daily hydraulic flow was 16.85 MGD in 2013 [48.1% of the permitted maximum], 16.31 MGD in 2012 [46.6% of the permitted maximum], 25.19 MGD in 2011 [72.0% of the permitted maximum, albeit in an "historically wet" year during which the Plant was operated for only 362 days], 17.67 MGD in 2010 [50.5% of the permitted maximum], and 17.45 MGD in 2009 [49.9% of the permitted maximum].

page (continued)

...191... wet-weather events an aggregate 282,155,100 gallons of combined sewage into the rivers. On average, this equates to 10.85 million gallons combined sewage discharged into the rivers per significant wet-weather event distributed amongst those of the nine CSOs that discharged during a given wet-weather event. The remaining 4,839,150,000 gallons of combined sewage were delivered by the sewer collection systems of the City, Binghamton University, and the Town of Vestal to the Plant's Binghamton Flow Side Headworks for treatment and disinfection. This includes all combined sewage flows from the City on 111 "wet-weather days" in 2009 during which CSO discharges did not occur.)

In May 1987, the DEC reclassified the Susquehanna River to be a Class "A" waterway (from Class "C") between Conklin and the Broome/Tioga line, leading to more stringent requirements, regulation, and enforcement of water quality, including a new discharge Permit for the Plant with more restrictive limits. Over a period of 22 months between January 1, 1989 and October 31, 1990 – when the Plant's permitted maximum average daily hydraulic discharge was 20.0 MGD – the DEC alleged that 86 violations of the Plant's discharge permit had occurred, including violations for excessive flow, excessive biochemical oxygen demand (BOD) material, excessive suspended and/or settleable solids, excessive trace metals, and inadequate chlorine residual. On April 6, 1992, an Administrative Consent Order was entered-into by the City, Village of Johnson City, and the Binghamton-Johnson City Joint Sewage Board to settle the pending enforcement proceeding. The Consent Order imposed interim discharge limits less stringent than those required by the permit, but required evaluation of plant operations and facilities to determine whether and, if so, what, upgrades were necessary so that final, more stringent discharge limits could be satisfied going forward. A schedule for compliance was also established. As part of the settlement, the City, Village and Board agreed to upgrade the Plant in accordance with any recommendations of the consulting engineer retained to perform the evaluation. Upgrades were made to the CSO discharge structures of the City and Village, and additional capacity, new secondary and tertiary treatment processes have been added to the Plant in the past decade to comply with the Consent Order.

Despite completion of these CSO and Plant capacity upgrades, the DEC continued to express concerns about the system's compliance given the frequency and volume of ongoing wet-weather discharges into the rivers from the CSOs. On December 10, 2007, the City, Village, and Sewage Board entered into a Third Modification Consent Order with the DEC which required that flows received by the Plant from the Municipal Users' sewer collection systems be evaluated and managed so as to not overburden the Plant (either its hydraulic design and/or treatment capacities) or cause violation of the Plant's discharge permit. Specifically, the Third Modification Consent Order required preparation of a *Flow Management Evaluation Report* and a *Flow Management Plan*, focusing on the goal of stabilizing annual average flows at a volume less than the Plant's hydraulic and pollutant loading design flows. The Third Modification Consent Order did not require any specific quantitative or qualitative reduction in inflow or infiltration. The Board oversaw the Flow Management Process and was successful in demonstrating to the DEC's satisfaction that, as

page (continued)

...191... of 2010, the sewer collection systems of the City and Village were in compliance with minimum requirements under the EPA's national *CSO Control Policy*. This determination allowed the Board to follow an innovative, non-capital intensive, proactive approach in developing the *Flow Management Plan* focusing on the goal of maintaining "balance" given the reality that the aging sewer infrastructure in the municipal collection systems will degrade over time. Future growth and expansion are balanced with wet weather flows and existing dry weather capacity through four "cornerstone" programs, including a New/Modified Sewer Connection Application Program, an I/I Offset Program, a CMOM Program requirement, and Treatment Management Plan. The I/I Offset Program includes a Flow Credit Bank and one-to-one offset requirement *applicable prospectively after December 31, 2012* to new or modified sewer connections adding more than an average 2,500 gallons per day net new sanitary wastewater flow to the sewer system. Municipalities can be allocated new Flow Credits, which can then be sold or granted to developers, through successful planning, construction, and documentation of I/I Remediation Projects that remove infiltration and inform from the collection system, including pipe and manhole leak and crack repair as well as separation of combined sewers into storm and sanitary sewers.

Selected references are attached as Appendix C for information pertinent to historical flows (*for example, monthly variability in flow volume; decline in "billed flow" [based on water consumption] which drives increases in unit costs for treatment; and general increase in "unbilled flow" in proportion to "billed flow"*). The 20-year trend of a compounded 2.04% decline in "billable flows" drives the need for an average 2.08% per year rate increase, all other factors being equal.

191 In the first sentence of the third paragraph, **for accuracy** the words "storm flow" should be expanded to "storm water inflow and other infiltration".

191 **For accuracy and completeness**, I suggest that the last three sentences of the third paragraph be reworded, as follows:

Over time, the City has separated approximately 60% of its combined sewers. Including retroactive credits for work completed back through 1999, the City has been granted 1,994,364 Flow Credits, which equate to gallons per day, presently valued by the City at slightly less than \$8.975 million. The City of Binghamton holds 84% of the Flow Credits existing in the Joint Sewage Board's I/I Offset Bank as of early 2014, with the balance being allocated among the 10 other Municipal Users of the Plant. This gives the City an overwhelming advantage in attracting new development projects given that all Municipal Users discharging to the Plant are subject to the regulations governing new or modified sewer connections. Nevertheless, given that 2.5 billion gallons, or 55.85%, of the influent flow received at the Plant on the Binghamton Flow Side in 2012 was "non-billable flow" largely attributable to inflow and/or infiltration, much maintenance and remedial work remains to be done on the City's sewer system – half of which is 63 or more years old with much of this sector near or beyond its expected useful life – while it continues to "degrade in place".

page (continued)

- 191 **For completeness**, I suggest adding to the last paragraph wording pointing-out that the City does not tax its property owners for the cost of operating and maintaining the storm water collection system. Instead, the costs of operating and maintaining the storm sewer system – including the cost of meeting increasingly stringent federal and state municipal separate storm sewer system (MS4) requirements – via its enterprise Sewer Fund, which is funded based on billed water consumption. While this approach incentivizes water conservation, it offers no reward to property owners who implement green practices that reduce storm water runoff from their properties.
- 194 **For completeness**, I suggest adding the word “alone” at the end of the first paragraph.
- 195 **For completeness**, in the last paragraph I suggest adding the words “by making it more financially self-sufficient” after the words “is run”.
- 197 The listing of Internet providers in the first paragraph may be incomplete. **For completeness**, I believe that this page should also acknowledge the presence and extent of the City’s wi-fi network (which renders the first sentence on this page inaccurate) as well as the presence of other mobile communications (supported by cellular telephone, mobile data, and other wi-fi antennae throughout the City [i.e., downtown as well as “on the hills”]).
- 197 It’s both surprising and disappointing that no description or assessment is given of the City’s bridges, streets, street lights, and traffic signal lights. These should be included **for completeness**, including the challenges posed to truck traffic, pedestrians, commerce and public celebrations (e.g., parades) by the downtown roundabout. At a minimum, street lights should be noted in order to support Recommendation 3.8 (page 216). Further, to promote efficiency and user-friendliness, mention should be made of the extent to which City traffic signal lights are synchronized to promote and enhance smooth traffic flow as well as “peaceful coexistence” as between vehicles, bicyclists, and pedestrians.
- 202 In the first paragraph, would “multi-pronged” be a **more reader-friendly** word choice than “multi-valented”?
- 205 In relation to 1.5, consider noting that steps taken to disconnect the building sewers, laterals and City sewer mains formerly serving bought-out properties in the floodplain may – if properly planned, carried-out, and documented – entitle the City to Flow Credits under the Joint Sewage Board’s I/I Offset Program to the extent infiltration and inflow are removed from the sewer collection system.
- 206 The second sentence is **false** given that the City’s CSO discharge structures were not the root cause of the flooding. During the 2011 Tropical Storm Lee event, 9.45” precipitation fell over three days (September 6-8, 2011). The inundation from this storm (1.64 billion gallons over the City’s 10 square mile surface area, only 40% of which is served by combined sewers according

page (continued)

...206... to the third paragraph on page 191), including runoff from upstream communities transported by the rivers and streams, caused the damage. That the City's CSO discharge structures are not equipped with pumping systems that would have enabled them to "pump out" against the back pressure from the river does not make them the "cause" of the flooding resulting from the natural flow of excessive precipitation into and along the rivers. The same would be result would have occurred if the City had no CSOs – the storm sewer system would have been incapable of transporting accumulated storm water (including overflows from the rivers where they overtopped the City's flood walls) into the flooded rivers.

- 206 The phrase "reduced City budgets" in the first paragraph is not historically correct. For accuracy, consider "constrained City budgets" instead.
- 206 In the first paragraph, for accuracy change "CSO flooding" to "flooding" – as noted above, the City's CSO discharge structures were not the root cause of the flooding in September 2011.
- 206 In the first paragraph, for completeness add ", including storm water discharges," after "water quality".
- 206 In 2.2, to be more reader-friendly replace "affect" with "result in additional".
- 207 The lower portion of Figure 56 is not accurate. For accuracy, replace "separate sewers" and "separated sewers", respectively, with "separate storm sewers" and/or draw a separate sanitary sewer pipe (so readers are not confused that sanitary sewage is being "ground-infiltrated" [a practice that would be DEC-prohibited within the portions of the City having access to the sanitary sewer system]).
- 209 I support Recommendation 2.4 as one tool/method/approach for strategic planning purposes (but it can't be the *only* tool/approach), especially given that 2.5 billion gallons, or 55.85%, of the influent flow received at the Plant on the Binghamton Flow Side in 2012 was "non-billable flow" largely attributable to inflow and/or infiltration<sup>2</sup>. Removing sources of inflow and infiltration can help contain sewer system and treatment plant operating costs by reducing the pumping required as well as electricity, chemical and maintenance costs. The lower the extent of inflow

---

<sup>2</sup> - For reference and further support (i.e., *this data is not intended for inclusion in the CP update's narrative*), please note that 37.17" of liquid-equivalent precipitation were measured at the Plant during 2012, and in other years on the Binghamton Flow Side into the Plant there were:

- ▶ 4.9 billion gallons "non-billable flow" (or 70.6%) during 2011 [with an historically-high 66.36" of liquid-equivalent precipitation];
- ▶ 2.8 billion gallons "non-billable flow" (or 57.3%) during 2010 [with 36.02" of liquid-equivalent precipitation];
- ▶ 2.8 billion gallons "non-billable flow" (or 56.8%) during 2009 [with 35.03" of liquid-equivalent precipitation];
- ▶ 3.6 billion gallons "non-billable flow" (or 61.7%) during 2008 [with 40.69" of liquid-equivalent precipitation];
- ▶ 3.3 billion gallons "non-billable flow" (or 58.4%) during 2007 [with 40.07" of liquid-equivalent precipitation];
- ▶ 3.2 billion gallons "non-billable flow" (or 57.0%) during 2006 [with 43.91" of liquid-equivalent precipitation];
- and
- ▶ 2.8 billion gallons "non-billable flow" (or 52.6%) during 2005 [with 42.48" of liquid-equivalent precipitation].

page (continued)

...209... and infiltration conveyed by a fixed-size sewer pipe, the greater the volume available to support new development projects.

210 In my opinion, Recommendation 2.5 should be considered as one potential tool/tool/method/approach for strategic planning purposes (but it can't be the *only* tool/approach, especially given that available technologies and the state of the art in sewer maintenance continue to evolve). To account for this reality, as well as for accuracy, consider re-wording this recommendation for accuracy and flexibility, as follows:

**2.5 Consider incorporating trenchless rehab alternatives when appropriate and cost-effective to reduce infiltration and inflow into sewers**

Trenchless technology techniques are in most cases less expensive than an open cut trench. Instead of digging a trench and replacing the existing pipe with a new one, manholes and other smaller dug holes are used to access pipes and add liners inside the existing pipes, such as cured in place pipe (CIPP), spiral wound pipe, pipe bursting, etc. This process also causes less disruption to traffic as streets do not need to be completely closed down for work. The cost savings associated with trenchless technology could allow the City to perform rehabilitation on a greater length of sewer infrastructure each year in comparison to sewer main replacement requiring open cut trenches.

Trenchless technology can also be used to reduce the amount of infiltration and inflows (I/I) into the sewers under the City's Capacity, Management, Operations, and Maintenance (CMOM) Plan. Building sewers and laterals, which are roughly equal in length to the City's sewer system but privately-owned and maintained, collectively contribute I/I to the sewer system as well, such that trenchless technology may be a cost-effective means for a property owner to address sewer maintenance. Reducing I/I should also reduce the discharge volume of combined sewer overflows (CSOs) into the rivers during wet weather events, thereby helping the City continue to comply with its EPA-mandated CSO Long-Term Control Plan (LTCP). When planned, carried-out, and documented in accordance with Article 13 of the *Rules and Regulations Relating to Use of the Binghamton-Johnson City Joint Sewage Treatment Plant*, the City can earn Flow Credits for I/I reduction in accordance with the *Flow Management Plan* adopted by the Binghamton-Johnson City Joint Sewage Board (BJCJSB) and endorsed by City Council (as well as by the Johnson City Village Board).

Flow Credits can be sold to developers in support of new projects within the City built in the same I/I Remediation Basin upstream of a CSO discharge structure in which the Flow Credits were earned. Because the cost at which the City would sell its Flow Credits correlates to the City's cost for the I/I Remediation Projects that created them, trenchless technology could also reduce the cost for new development in an I/I Remediation Basin that did not have any available Flow Credits, but which involved addition of wastewater flows great enough to require offset by I/I reduction equal to the wastewater flow the new development project would add to the Basin.

page (continued)

...210... Even with these wording changes, there may still be limits on the extent to which the City can implement these practices given that the “means and methods” of carrying-out a given public works project are generally left to the successful contractor awarded the work after a competitive bidding process. Further, trenchless technology cannot be used for sewer separation projects, which involve addition of pipelines to convey storm water. For the benefit of readers of this comment submission not familiar with trenchless technology techniques, the following *You Tube* videos may be instructive:

Small Bore Pipe resin-based Cured-In-Place Pipe Rehabilitation (uploaded: 10/23/2007)

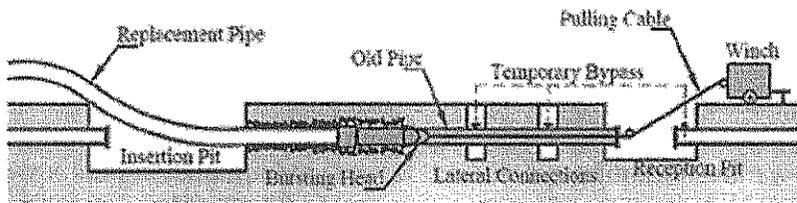
URL: <<http://www.youtube.com/watch?v=MhE8UhWOnM0>>

Big Bore Pipe resin-based Cured-In-Place Pipe Rehabilitation (uploaded: 10/24/2010)

URL: <<http://www.youtube.com/watch?v=s0RK4r--bc4>>

Pipe Replacement using Pipe Bursting Technology (uploaded: 09/28/2011)

URL: <<http://www.youtube.com/watch?v=MhE8UhWOnM0>>



Pipe replacement by pipe bursting. Credit: Wikipedia (URL: <[http://en.wikipedia.org/wiki/Trenchless\\_technology](http://en.wikipedia.org/wiki/Trenchless_technology)>)

- 210 It is unclear what the photographs at the bottom of the page are attempting to portray and/or how these relate to trenchless technology. (The photograph on the left is a street reconstruction project “in progress” showing the placement of pavement “base” coarse asphalt [note level of pavement top in relation to curb top in both photos] prior to placement of “top” fine asphalt [as shown in the photograph at the right]). Why not include relevant photographs for comparison of traditional “trenched” reconstruction, on one side, and trenchless on the other?
- 211 The acronym “MS4” in the last paragraph should be spelled-out for the benefit of readers unfamiliar with it.
- 212 Regarding the reported 30-40% water tracking loss, note that some of it may be accounted for via the last paragraph and footnote 2 on page 8 to the extent that a water main leak could infiltrate down into the sanitary or combined sewer beneath it (by code, sewer pipes must be installed deeper than water pipes as a means of protecting against water contamination).
- 214 Regarding Recommendation 3.4, see comment for page 212, above. Also worthy of note is that older water meters tend to “slow down” due to wear and accumulation of sediment (rust [iron

page (continued)

...214... oxide]) which impinges the metering gears/wheels. Thus, newer water meters have the potential to provide more accurate readings upon installation, which may assist the City in recognizing revenue for the correct amount of water provided (whereas a property-owner with an older “slow” meter presently receives a “break”/discount by not being charged for all water consumed. Municipalities such as the Town of Dickinson and Village of Johnson City which have recently taken advantage of grant funding from New York State to update water meters can confirm this based on their experiences.

215 In Recommendation 3.6, for accuracy replace “keep” with “control” and delete “from rising”.

215 The Water Filtration Plant does not have an anaerobic digester, so for accuracy, the last two sentences should be deleted from Recommendation 3.7. (For what it’s worth, the Joint Sewage Treatment Plant does have three anaerobic digesters [two 35’ diameter and one 70’ diameter]. Beneficial use of the digester gas [ADG] is designed into the digesters’ mechanical systems to fuel process boilers and heating systems. Even with grant funding, however, the “break-even payback point” on ADG-to-electricity systems can be in the range of 21-23 years given the cyclical generator engine maintenance and replacement made necessary due to wear and tear caused by the level of siloxanes typically present in ADG. Accordingly, ADG should in no way be viewed as a “quick fix” approach/solution.)

216 In the last sentence of Recommendation 3.9, I do not believe that the words “including considerations for landscaping and tree planting” should be part of the discussion of the Curb and Sidewalk Assistance Program, especially given the potential for tree roots to displace and unlevel nearby sidewalks.

217 Recommendation 3.10 is already being done in large part, so perhaps for completeness the narrative should include wording to the extent of “continuing and expanding” this existing practice.

217 Regarding Recommendation 3.11, the City should ensure that its sewer infrastructure data is maintained in a form that is digitally-compatible with the Broome County GIS sewer infrastructure overlay supported and funded by the Joint Sewage Board for its sewer service area tributary to the Joint Sewage Treatment Plant (albeit that this sewer service area is slightly less than four [4%] percent of the County’s total geographical area). In this way, the City’s sewer system can be incorporated to the maximum extent possible into the hydraulic sewer system model developed for the Joint Sewage Board as part of the Flow Management planning process.

Thank you for reviewing and considering this input on Chapter V[D].

Respectfully submitted,



MONDAY, MAY 24, 2010

## Kevin E. Transue And Daniel E. Rose Have Been Convicted

BINGHAMTON, NY (May 24, 2010) - Attorney General Andrew M. Cuomo today announced that a former city water filtration plant superintendent as well as a plant employee were convicted of illegally dumping sludge into the Susquehanna River. The river is the primary drinking water supply for Binghamton, Johnson City, and other downstream communities.

Daniel E. Rose, 31, of Port Crane, a former filtration plant employee, was found guilty by Broome County Court Judge Joseph F. Cawley after a non-jury trial on one count of knowingly discharging pollutants into state waters (class E felony). Kevin E. Transue, 55, who currently resides in Florida and is the former filtration plant superintendent was found guilty of three counts of violating a New York State Department of Environmental Conservation permit that had been issued to the plant by failing to file a required annual report with the DEC (class A misdemeanor). Rose faces a prison term of up to 1 1/3-to-4 years and Transue faces up to two years in jail. Sentencing is scheduled for September 8th.

"The failure of these public employees to do their jobs properly resulted in a preventable, and ultimately criminal, discharge of sludge into the Susquehanna River," said Attorney General Cuomo. "Environmental crimes impact all of us and my office will have zero tolerance for anyone who violates the laws that protect the land and water."

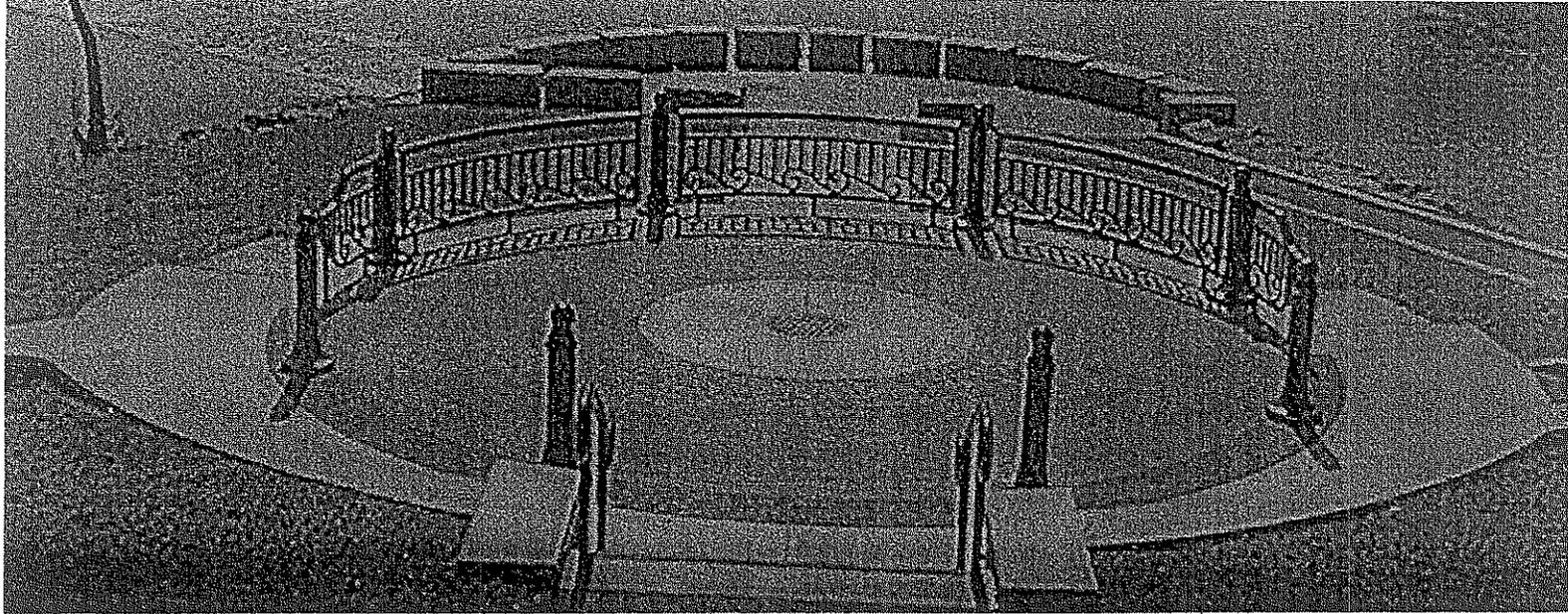
Video shot by DEC investigators that was presented at trial clearly shows a sludge discharge directly into the Susquehanna River while Rose was on duty. The judge also found that Transue failed in his duties to monitor and report discharges. The discharge is contrary to the DEC permit that was first issued to the plant in March 2001. The permit only allows for the discharge of water into the river under specific limited circumstances.

As part of the purification process at the Binghamton water filtration plant, chemicals are introduced to water drawn from the river, which combine with sediments and other impurities, and then settle to the bottom of sedimentation basins. The remaining water is then further treated for public consumption. The separated chemicals and sediments, referred to as "sludge," are then drained to the sewer system where the sludge is treated and legally disposed of.

The Susquehanna River is one of the longest rivers in the United States, and the longest on the Eastern Seaboard. It runs from Otsego County through Pennsylvania and parts of Maryland before emptying into the Chesapeake Bay.

The Attorney General thanked the DEC for its assistance in the investigation.

This case is being prosecuted by Assistant Attorney General Nicholas DeMartino, of the Criminal Prosecutions Bureau, under the supervision of Deputy Bureau Chief Richard Ernst and Bureau Chief Gail Heatherly. The investigation of this matter was conducted by Department of Environmental Conservation Police Investigator James Boylan and DEC Lt. James Masuicca.



**-- EXCERPT --**

# **City of Binghamton, New York**

## **Capacity, Management, Operations, and Maintenance (CMOM) Plan**

October 2013

### **1.2 Background**

The City was initially incorporated as a village in 1834 and grew into a city by 1867. It experienced substantial population growth in the 1800s and 1900s, and peaked at 85,000 in 1950. The current population is approximately 47,000. The City owns and operates approximately 460 miles of sanitary sewers and combined sewers over a service area of approximately 10 square miles. The age of the collection system is generally as follows:

<b>Years</b>	<b>Percentage of System Constructed</b>
Pre-1925	30
1925 - 1950	20
1951 - 1975	20
1976 - 1990	20
1991 - 2010	10

13-1

The City's sewage collection system is primarily comprised of 9 permitted combined sewer overflows (CSOs), 3 main interceptor sewers, several trunk sewers, and 10 sanitary pump stations. A general description of these assets follows.

### **1.2.1 Combined Sewer Overflows**

The City sewer system contains nine permitted CSOs. They include:

- CSO 001 Crary Avenue – Located on Crary Avenue at the lower end of the North Side interceptor sewer and serves to relieve excess flow from the interceptor.
- CSO 002 Fourth Ward Basin at Lourdes Hospital – Located on the Fourth Ward trunk sewer at the North Side interceptor.
- CSO 003 Laurel Avenue – Located on the Laurel Avenue trunk sewer upstream of the connection with the North Side interceptor.
- CSO 004 Murray Street – Located on the Murray Street trunk sewer upstream of the connection with Northside Interceptor.
- CSO 005 Pennsylvania Avenue Pump Station – Located on the South Side interceptor.
- CSO 006 South Washington Street – Located on the Sixth Ward interceptor sewer and discharges on the south side of the Susquehanna River.
- CSO 007 New Street - Located on the Sixth Ward interceptor sewer and discharges on the south side of the Susquehanna River
- CSO 009 Conklin Avenue (Rockbottom Dam) – Located on the Sixth Ward interceptor.
- CSO 013 Susquehanna Street – Located on Susquehanna Street upstream of the gravity sewer beneath the Susquehanna River.

### **1.2.2 North Side Interceptor and CSO 001 through 004**

The North Side interceptor is the principal sewer conveying flow from the northern section of the City (approximately 739 acres). The North Side interceptor begins immediately downstream of the Front Street Pump Station. There are no identified overflows above the pump station in the collection system. The area above the Front Street Pump Station includes the First Ward from Clinton Street, northeast to the Chenango River. Parts of the Town of Dickinson (west of the Chenango River) are also tributary to the Front Street Pump Station.

The Murray Street basin (CSO 004) conveys flow to the North Side interceptor. If the interceptor is running at full or surcharged conditions, less flow would be allowed into the North Side interceptor from the Murray Street basin. If the Front Street Pump Station is running at less than peak capacity, more of the Murray Street basin flow will be allowed into the interceptor. Excess flow from the Murray Street basin discharges from permitted CSO Outfall 004.

At the connection point of the Laurel Avenue (CSO 003) basin, the capacity of the interceptor sewer increases. Similar to CSO 004, during heavy rains, flow from the Laurel Avenue basin cannot enter the North Side interceptor because of the interceptor's capacity limitation. This excess flow backs up through the regulator pipe and discharges via permitted CSO 003.

CSO 002 relieves excess flow from the Fourth Ward basin. This is the largest basin on the north side of the City. The regulator control vault on the interceptor sewer effectively limits this flow.

**B-2**

The flow on the lower end of the North Side interceptor is controlled by CSO 001. At this location, the Crary Avenue basin contributes flow, as capacity exists in the crossing of the Susquehanna River and the South Side interceptor. CSO 001 exists as one of the primary relief points in the lower end of the interceptor sewer system.

During sustained wetland weather conditions, the majority of flow in the North Side interceptor will originate from the Front Street Pump Station. The capacity of the station is approximately equal to that of the river crossing regulator sewer at CSO 001 and the North Side interceptor for a significant portion of its length. During peak flow conditions, the regulator sewers at CSOs 002, 003, and 004 may actually experience periods of reverse flow to relieve excessive surcharging in the North Side interceptor caused by the addition of flow from the Vermont Avenue and Chapin Street basins. This is a method used to store as much combined sewer volume as possible before an overflow occurs.

### **1.2.3 Sixth Ward Interceptor and CSOs 005 through 009**

The capacity of the Sixth Ward interceptor is approximately 4.2 million gallons per day (mgd) at its upper end by Rockbottom Dam. At this location, trunk sewers from the Town of Conklin and the southeast portions of the City are connected to the interceptor. During heavy rains, flows in excess of the capacity of the Sixth Ward interceptor are diverted from the system via permitted CSO 009.

The capacity of the Sixth Ward interceptor is increased downstream of CSO 007. The capacity of the Sixth Ward interceptor is increased again below CSO 006 to accommodate flows from the northeastern corner of the City. Approximately 43 mgd can be delivered to the Pennsylvania Avenue Pump Station under normal gravity flow. The interceptor sewer capacity can be increased to over 200 mgd under maximum surcharge conditions.

### **1.2.4 Northeast Corner (Kirkwood, Dickinson, Fenton)**

The northeast corner of the City of Binghamton is served by two main trunk sewers. These main trunk sewers also serve the Town of Fenton, Village of Port Dickinson, Town of Dickinson, and Town of Kirkwood. The north main trunk sewer originates at Bromley Avenue as an 8-inch pipe. It is near this location that the Town of Fenton, Village of Port Dickinson, and the Town of Dickinson connect into the City's system. The north main trunk sewer conveys sewage in a southerly direction towards Susquehanna Street increasing in size from 8-inch to 30-inch pipe. The east main trunk sewer originates at Century Drive as a 15-inch pipe and terminates as a 39-inch by 59-inch brick sewer at the connection with the north main trunk sewer at Susquehanna Street. A force main from the Town of Kirkwood connects to the east main trunk sewer near Alice Street. Once the north and east main trunk sewers connect at Susquehanna Street, they form a 36-inch pipe that conveys sewage in a southerly direction underneath the Susquehanna River and to the Pennsylvania Avenue Pump Station.

### **1.2.5 South Side Interceptor and Pennsylvania Avenue Pump Station**

The Pennsylvania Avenue Pump Station and the South Side interceptor (immediately downstream from the pump station) are the principal conveyances on the southern side of the Susquehanna River. The Pennsylvania Avenue Pump Station has three 6,000 gallons per minute (gpm) pumps that lift flow to the elevation of the South Side interceptor sewer. The capacity of the station with three pumps operating is approximately 26 mgd.

B-3

### 1.2.6 Treatment Plant Influent Sewer

A 54-inch pipe conveys flow from the confluence of the Susquehanna River crossing at CSO 001 and the South Side interceptor sewer from the Pennsylvania Avenue Pump Station to the BJC Plant. The capacity of the 54-inch sewer is 42 mgd when unsurcharged and approximately 69 mgd when surcharged. The collection system can only convey 37 mgd (unsurcharged) and 54 mgd (surcharged) to this point. As such, the treatment plant influent sewer is not restrictive in terms of capacity.

### 1.2.7 Sanitary Pump Stations

The City owns and operates a total of 24 pump stations. Of these, 10 are sanitary or combined pump stations and 14 are for stormwater/flood control. Information pertaining to the 10 sanitary pump stations is listed in Table 1-1.

Table 1-1 Sanitary Pump Stations

Location	Sanitary/ Combined	Pumps	HP / gpm
5 Frederick Street	Combination	Two Myers 4-inch 4VCX150M4-43 with spare	15 / 400
4 Bevier Street	Combination	Two Allis-Chalmers 8-inch 300 NSWV with spare motor	10 / 300
1 Pennsylvania Avenue	Combination	Three ITT/Flygt CP33--665-5061 with spare One Flygt N3301	85 / 6000 (Sanitary)
2 Front Street	Combination	Three Fairbanks/Morse 8-inch D5435WD with spare	40 / 3000
6 Elm Street	Sanitary	Two Myers 3 RHX30M2-21 with spare	3 / 150
3 Lake Avenue	Combination	Three Fairbanks/Morse 8-inch DJ5435WD with spare	75 / 4000
8 Cherilinsy Park	Combination	One Flygt 4-inch 3127.180	10 / 400
21 Charles Street	Combination	Two 4-inch Myers 4 VHX150 M4-43 submersible pumps with spare	15 / 475
9 Omlstead Street	Sanitary	Ebara 80DLKN 62.22 from Stewert	3 / 300
24 Delavan Avenue	Sanitary	Two 10-inch Wilo-EMU FA 25.82Z FK 34.1-8/29 with spare	47 / 4500

### 1.2.8 Planned System Improvements

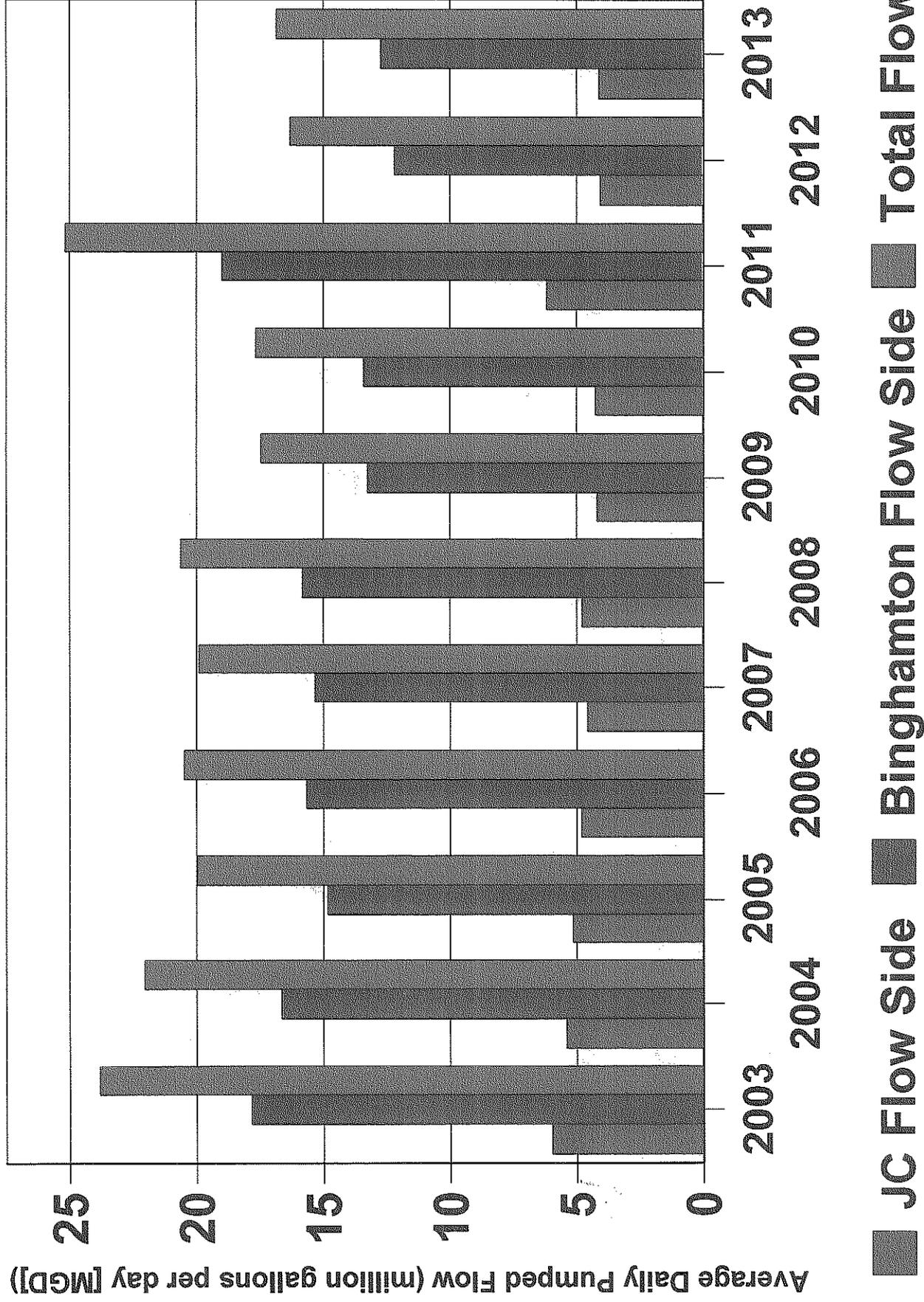
The City has a list of sewer improvement projects scheduled to be implemented in 2014 and 2015. This list is generated by the Water and Sewer Department in coordination with the Engineering Department and Department of Public Works (DPW). The list of planned improvements can be made available upon request.

\* \* \* \*

B-4

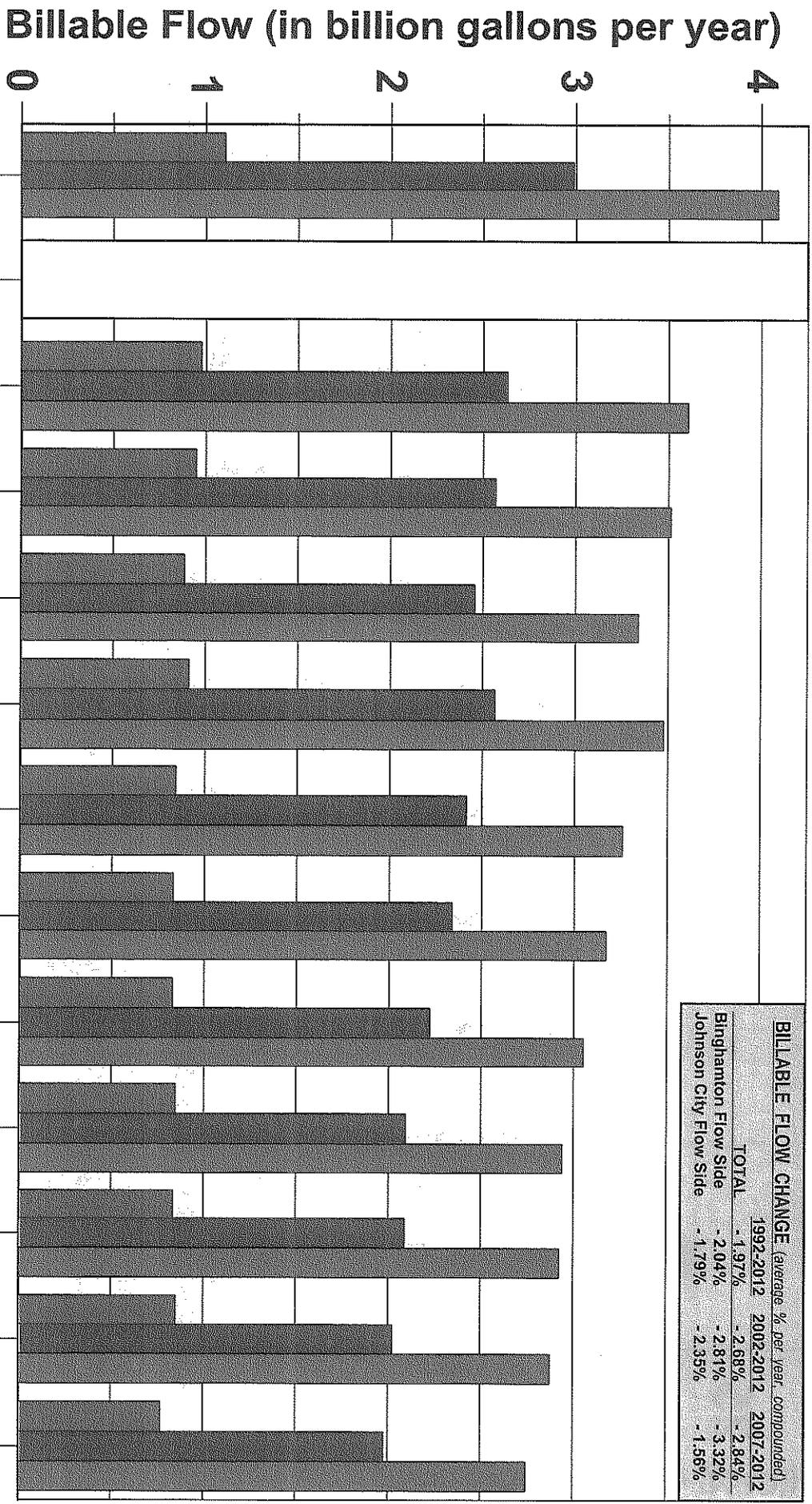
# Binghamton-Johnson City Joint Sewage Treatment Facilities

## 2003 - 2013 Pumped Flow Comparison



# Binghamton-Johnson City Joint Sewage Treatment Facilities

## 1992 & 2002-2012 Billable Flow Comparison



JC Flow Side
  Binghamton Flow Side
  Total Billable Flow

Binghamton-Johnson City Joint Sewage Treatment Facilities

BINGHAMTON FLOW SIDE  
**2005-2012 COMPARISON OF GROSS INFLUENT, BILLABLE and NON-BILLABLE FLOWS**

YEAR	GROSS TOTAL INFLUENT FLOW (gallons)	BILLABLE INFLUENT FLOW (gallons)	BILLABLE FLOW IS "x" % OF TOTAL	NON-BILLABLE INFLUENT FLOW (gallons)	NON-BILLABLE FLOW IS "x" % OF TOTAL	LIQUID EQUIV. PRECIP- ITATION @ JSTP (inches)
2013	4,645,230,000	TBD	TBD	TBD	TBD	38.94 "
2012	4,478,750,000	1,977,402,753	44.15%	2,501,347,247	55.85%	37.17 "
2011 *	6,887,925,332	2,024,820,467	29.40%	4,863,104,865	70.60%	66.36 "
2010	4,893,740,000	2,089,091,861	42.69%	2,804,648,139	57.31%	36.02 "
2009	4,846,625,000	2,093,229,354	43.19%	2,753,395,646	56.81%	35.03 "
2008	5,793,030,000	2,221,793,088	38.35%	3,571,236,912	61.65%	40.69 "
2007	5,603,895,000	2,334,062,687	41.65%	3,269,832,313	58.35%	40.77 "
2006 **	5,615,915,000	2,415,246,110	43.01%	3,200,668,890	56.99%	43.91 "
2005	5,409,915,000	2,566,431,029	47.44%	2,843,483,971	52.56%	42.48 "

NOTES:

\* - the Plant was in operation during only 362 days in 2011 (off-line three and one-half days due to flooding)

\*\* - the Plant was in operation during only 357 days in 2011 (off-line six and one-half days due to flooding)

Binghamton-Johnson City Joint Sewage Treatment Facilities

JOHNSON CITY FLOW SIDE

**2005-2012 COMPARISON OF GROSS INFLUENT, BILLABLE and NON-BILLABLE FLOWS**

YEAR	GROSS TOTAL INFLUENT FLOW (gallons)	BILLABLE INFLUENT FLOW (gallons)	BILLABLE FLOW IS "x" % OF TOTAL	NON-BILLABLE INFLUENT FLOW (gallons)	NON-BILLABLE FLOW IS "x" % OF TOTAL	LIQUID EQUIV. PRECIP- ITATION @ JSTP (inches)
2013	1,505,380,000	TBD	TBD	TBD	TBD	38.94 "
2012	1,491,140,000	769,068,671	51.58%	722,071,329	48.42%	37.17 "
2011 *	2,240,330,717	850,299,222	37.95%	1,390,031,495	62.05%	66.36 "
2010	1,555,150,000	835,394,225	53.72%	719,755,775	46.28%	36.02 "
2009	1,521,575,000	846,516,308	55.63%	675,058,692	44.37%	35.03 "
2008	1,752,980,000	829,300,569	47.31%	923,679,431	52.69%	40.69 "
2007	1,673,925,000	831,980,850	49.70%	841,944,150	50.30%	40.77 "
2006 **	1,726,795,000	843,674,446	48.86%	883,120,554	51.14%	43.91 "
2005	1,877,505,000	911,677,139	48.56%	965,827,861	51.44%	42.48 "

NOTES:

\* - the Plant was in operation during only 362 days in 2011 (off-line three and one-half days due to flooding)

\*\* - the Plant was in operation during only 357 days in 2011 (off-line six and one-half days due to flooding)

## Comments on Blueprint Binghamton

*D Infrastructure*

*E Environment and Open Space*

*F Land Use and Zoning*

from

Beverly Rainforth, 23 Lathrop Avenue, 13905

May 5, 2014

Binghamton has considerable assets, which are essential to inviting new businesses and families and keeping those we have. Too much “belt-tightening” can be as devastating to this community as too much spending, so I urge the City to continue *and increase* investing in our community’s assets, which include –

- Fundamentals, such as public safety, code enforcement, good roads and sidewalks
- Aesthetics, such as attractive buildings, signage, and more trees
- Recreation, such as parks, bike paths & routes, use of the river (e.g., designated canoe/kayak launch areas)

I support the recommendations made in section D, E, and F of the plan.

### **Effectiveness with Efficiency**

Mayor David spoke of improving efficiency in Public Works, which sounds good, but efficiency can only occur when -

- City employees are well-prepared for the tasks to which they are assigned, and
- Equipment also is well-fit to tasks.

During this winter, I observed a *small* city truck trying to plow back snow banks along Chestnut and other city streets; the plow did not extend past the side of the truck, however, so the truck just skidded along the side of the bank and left a wide path of snow in the street. This seemed like a poor use of manpower, equipment, and fuel.

Also this winter, plowing on Lathrop Avenue was accompanied by endless loud banging as though the plow was constantly hitting the pavement. Now gouges 2-3 feet wide every 2-3 feet are evident in the crown of the street, which was rebuilt only 4 or 5 years ago. Whether or not the skids needed adjustment, the driver certainly needed more training to drive a large city plow.

### **Bike Routes & Paths**

- Explore options to complete a bike *path* between Cheri Lindsey Park and Otsiningo Park; the Chenango Street “detour” is problematic for young and casual riders.
- Commit to maintenance of designated bike *routes*, such as maintaining lane markings, filling potholes, and removing hazards (collections of sand/gravel, trash, vegetation, low branches); what is inconvenient for a motorist can be life-threatening for someone on a bicycle.
- Clarify whether bicycles may be ridden on sidewalks in all parts of the city, including downtown, city bridges, and bike routes.
- Correct the curb cut from east of the Memorial Bridge to the Washington Street Bridge so eastbound cyclists can enter the bike path safely; currently the turn is almost 90 degrees, which requires slowing considerably amid heavy traffic racing through the intersection.

### Walks, Runs, & Bike Races

Events scheduled for Sundays have routinely interfered with travel to the seven churches on Main Street, and perhaps to other Binghamton churches. Drivers have been directed to drive the wrong way down one-way streets, sent on detours of several miles, or just stopped (sometimes rudely) with no help at all. These issues could be greatly reduced if –

- the City required race/walk organizers to include a plan for access to all churches on their route, and
- the City provided the plan to the churches *OR* required the race/walk organizers to do so, at least 2 weeks before the race/walk so the congregation could be informed.

### The Rivers

Although scenic, there is far more potential.

- Get the Rock Bottom dam removed or rebuilt so it is not so dangerous!
- Establish canoe/kayak launch areas.
- Work with local organizations to clean up the rivers.
- When construction is done near the rivers, require *daily* cleanup of construction sites. (When the Memorial Bridge was rebuilt, construction workers routinely left trash on the banks and then it all got washed down the river.)

### Overlay District

- For all areas of the city –
  - Crack down on slumlords
  - Clarify and/or strengthen ordinances related to noise and parking
  - Increase cooperation with BCC and BU to deal with students who persistently create problems (For BU students, the most severe penalty for violation of campus housing codes is to be expelled from student housing, passing their problem off to the community; colleges can impose more dire consequences.)
  - Until such time as an “overlay district” may be created, enforce our housing ordinances. Signs on houses and Craig’s list advertise “student housing -- \$xxx per bedroom” suggesting that landlords simply disregard the law, regardless of neighborhood.
- For the proposed overlay district –
  - Assess if/how new housing on and off campus has affected demand for housing.
  - Consider the interests of resident homeowners in the district.