



Binghamton-Johnson City Joint Sewage Treatment Plant Sewage Operation Costs

Report of Examination

Period Covered:

January 1, 2012 — December 31, 2014

2015M-213



Thomas P. DiNapoli

Table of Contents

	Page
AUTHORITY LETTER	1
INTRODUCTION	2
Background	2
Objective	2
Scope and Methodology	3
Comments of Treatment Plant Officials and Corrective Action	3
SEWAGE OPERATION COSTS	4
Recommendations	6
APPENDIX A Response From Treatment Plant Officials	7
APPENDIX B OSC Comments on the Officials' Response	24
APPENDIX C Audit Methodology and Standards	26
APPENDIX D How to Obtain Additional Copies of the Report	27
APPENDIX E Local Regional Office Listing	28

State of New York Office of the State Comptroller

Division of Local Government and School Accountability

December 2015

Dear City, Village and Board Officials:

A top priority of the Office of the State Comptroller is to help local government officials manage government resources efficiently and effectively and, by so doing, provide accountability for tax dollars spent to support government operations. The Comptroller oversees the fiscal affairs of local governments statewide, as well as compliance with relevant statutes and observance of good business practices. This fiscal oversight is accomplished, in part, through our audits, which identify opportunities for improving operations and Board governance. Audits also can identify strategies to reduce costs and to strengthen controls intended to safeguard local government assets.

Following is a report of our audit of the Binghamton-Johnson City Joint Sewage Treatment Plant, entitled Sewage Operation Costs. This audit was conducted pursuant to Article V, Section 1 of the State Constitution and the State Comptroller's authority as set forth in Article 3 of the New York State General Municipal Law.

This audit's results and recommendations are resources for local government officials to use in effectively managing operations and in meeting the expectations of their constituents. If you have questions about this report, please feel free to contact the local regional office for your county, as listed at the end of this report.

Respectfully submitted,

*Office of the State Comptroller
Division of Local Government
and School Accountability*

Introduction

Background

On July 14, 1965, the City of Binghamton (City) and the Village of Johnson City (Village) entered into an intermunicipal agreement to establish a joint sewage activity whereby the City and the Village, referred to as the Owners in the agreement, jointly own a sewage treatment plant and related facilities (Binghamton plant) located in the Town of Vestal in Broome County. The Binghamton-Johnson City Joint Sewage Board (Board) comprises six members. The City's Mayor appoints three members and the Village's Mayor appoints three members. The Board is responsible for managing the plant's daily operations and developing and monitoring an annual budget to be approved by City and Village officials (Owners). The City Comptroller is the Board's fiscal officer. Additionally, the Board appointed a Plant Superintendent to oversee plant operations.

The plant provides services to the City and Village residents and businesses and also to nine other municipal users, who in turn are responsible for billing the residents of their municipalities. The budgeted appropriations for the plant's operations totaled \$11.3 million for 2015, funded primarily by charges to the municipal users.¹

The plant experienced two significant events in 2011 that have not allowed the Binghamton plant to operate all phases of treatment. In May 2011, the plant experienced a structural failure when a large external wall collapsed in the biological aerated filter cells. In September 2011, the plant experienced major flooding as a result of Tropical Storm Lee. The wall collapse limited the plant's operations and the flooding caused significant damage to the facilities and equipment, resulting in the secondary and tertiary processes coming offline as well as significant changes to the primary treatment process. Under the current operating conditions, the plant is unable to meet its regular permit requirements set by the New York State Department of Environmental Conservation (DEC). In January 2012, the Board and Owners were issued a consent order by the DEC, which required various plant repairs and construction.

Objective

The objective of our audit was to determine if sewage treatment services were provided economically. Our audit addressed the following related question:

- Are the Owners and the Sewage Board officials ensuring that the Binghamton plant is operating economically?

¹ The City, Village and the other municipal users directly bill their residential and commercial users.

**Scope and
Methodology**

We examined the Binghamton plant’s sewage treatment processing costs for the period January 1, 2013 through December 31, 2014. We expanded our scope back to January 1, 2012 to analyze the cost trends while the plant was operating without secondary or tertiary treatments. We also conducted a survey of 59 other sewage treatment plants within New York State with the same combined collection system as the Binghamton plant. Prior to conducting the survey, we discussed the survey questions with the Binghamton Plant Superintendent. Based on the results of our survey, we selected eight of these plants with similar preliminary and primary treatment processes, flows or that had experienced similar disaster events as the Binghamton plant for comparison purposes. Prior to performing the comparison, we discussed our selection criteria with the Plant Superintendent and Board Chairman. Although concerns were raised about the comparability of the Binghamton plant, both officials agreed that the criteria used to select these plants was appropriate.

We conducted our audit in accordance with generally accepted government auditing standards (GAGAS). More information on such standards and the methodology used in performing this audit are included in Appendix C of this report.

**Comments of
Treatment Plant Officials
and Corrective Action**

The results of our audit and recommendations have been discussed with City and Village officials and the Board, and their comments, which appear in Appendix A, have been considered in preparing this report. Officials generally disagreed with our findings and recommendations. Appendix B includes our comments on the issues raised in our report.

City and Village officials and the Board have the responsibility to initiate corrective action. A written corrective action plan (CAP) that addresses the findings and recommendations in this report should be prepared and forwarded to our office within 90 days, pursuant to Section 35 of General Municipal Law. For more information on preparing and filing your CAP, please refer to our brochure, *Responding to an OSC Audit Report*, which you received with the draft audit report. We encourage City and Village officials and the Board to make this plan available for public review in the City and Village Clerks’ and Secretary’s offices.

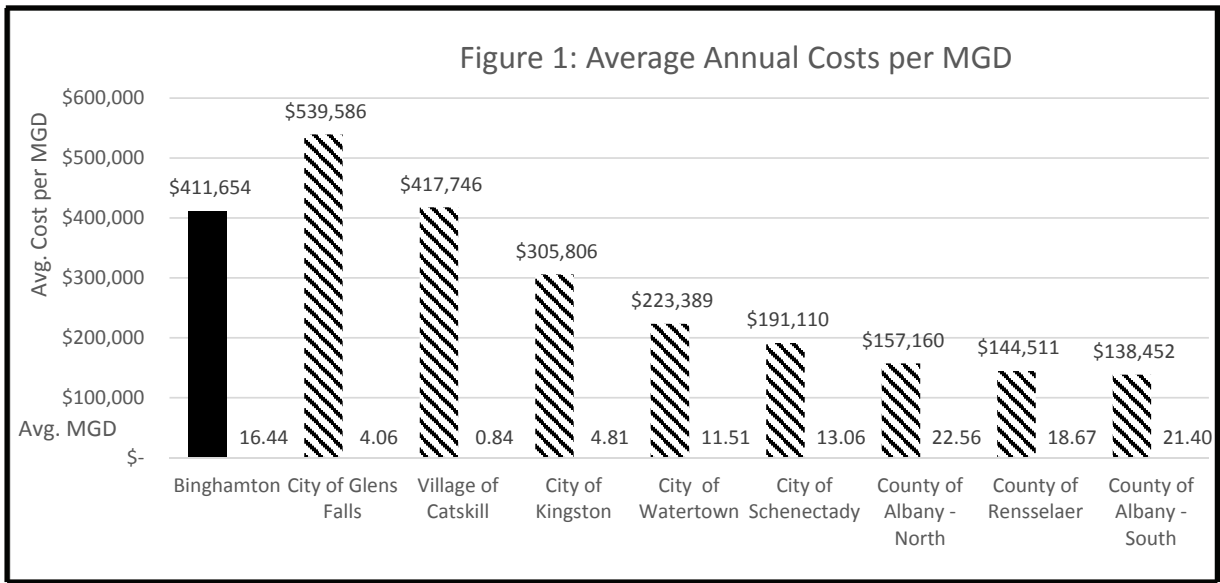
Sewage Operation Costs

The Owners and Board are responsible for providing services to the customers economically. As such, the Owners should ensure the Board has the resources, including a fully operational facility, to promptly meet the Board's responsibilities. The Board is responsible for treating wastewater at the lowest possible cost while still meeting water quality thresholds required by the DEC. When water quality is affected by events, including natural disasters and facility issues, the Board and Owners should work to avoid any unnecessary costs and quickly resolve any issues that impact the processes responsible for the effective treatment of wastewater.

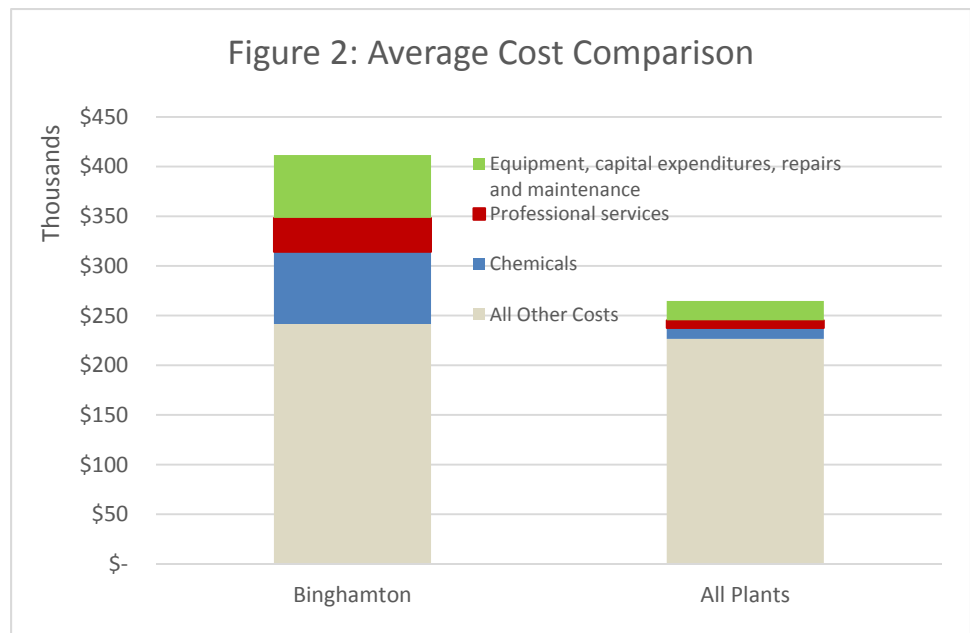
The Owners and Board are not economically providing services to their customers. We surveyed 59 plants within New York State with the same combined collection system as the Binghamton plant. We selected eight of these plants² with similar preliminary and primary treatment processes, flows or experienced similar disaster events as the Binghamton plant. We compared the total cost³ per million gallons daily (MGD) of treated sewage flow of these eight selected plants to the Binghamton plant. We found that the Binghamton plant had the third highest annual average costs per MGD from 2012 through 2014. While the City of Glens Falls and Village of Catskill plants have higher average annual costs per MGD than the Binghamton plant, these plants also suffered damages related to natural disasters in 2011 and 2012.

² See Appendix C for our sample selection methodology. The criteria used to select these eight plants was discussed with the Plant Superintendent and the Board Chairman prior to the comparison to the Binghamton plant. Although they raised concerns about the comparability of the Binghamton plant, they generally agreed that the criteria used to select these eight plants was appropriate. The survey results and costs of the eight comparable plants were self-reported. We did not verify the accuracy of the reported data.

³ Total costs used in this comparison included sewage treatment and disposal personal services, contractual and capital costs. Total costs do not include employee benefits, debt service payments or depreciation.



The main costs attributable to the high costs at the Binghamton plant were chemicals, equipment, capital-related costs and professional services including legal and engineering fees. These three cost components represented 41 percent of the total costs at the Binghamton plant, while these costs averaged 14 percent of the total costs at the other plants.



Professional services, equipment and capital costs have escalated due to the wall collapse and flooding in 2011. For example, the Owners and Board spent at least \$4 million towards the design of the new facility from 2012 through 2014. However, the Owners were in litigation with the suppliers of the equipment for that design and were unable to favorably resolve the dispute. Therefore, the Owners and Board

abandoned those plans and spent an additional \$539,400 in 2014 for a new design. In addition, they spent approximately \$842,000 on legal services associated with litigation related to the wall collapse and designs for the new facility. Further, due to the two events in 2011, the Binghamton plant's primary and disinfection treatment processes were changed to be more chemically reliant, which significantly increased the plant's chemical costs.

Because the Binghamton plant is unable to operate all of the treatment processes, users are paying more for the sewage treatment services. For example, the Binghamton plant's annual average chemical costs per MGD of sewage flow treated is almost \$60,000 higher than plants operating with all of their treatment processes. In addition, the quality of the discharged treated flow does not meet DEC's regular permitted thresholds. As a result, the DEC issued a consent order requiring the Owners to construct a new facility with a completion deadline of April 2017. If the new facility is not completed by the deadline, the Board and Owners could be fined \$50,000 plus a maximum of \$1,000 per day until the construction is completed. These potential fines would add significant cost to operations that would be passed on to the users.

Recommendations

1. The Owners should ensure that the new facility is constructed by or before the DEC deadline to avoid any penalties or fines.
2. The Board should continue to monitor sewage treatment costs, eliminate any unnecessary costs and reach out to other similar sewage facilities to identify additional opportunities to reduce costs.

APPENDIX A

RESPONSE FROM TREATMENT PLANT OFFICIALS

The local officials' response to this audit can be found on the following pages.

The response contains unverified and inaccurate information and a majority of this response does not directly relate to our audit report objective, findings and recommendations.



Binghamton-Johnson City
JOINT SEWAGE BOARD



Eugene Hulbert, Sr.
Gary Holmes
Edward Crumb

Stephen Andrew
George Kolba, Jr.
Ron C. Davis

November 25, 2015

Received

NOV 25 2015

*Office of the State Comptroller
Local Govt & School Accountability*

See
Note 1
Page 24

New York State Office of the State Comptroller
Division of Local Government and School Accountability
Binghamton State Office Building, Room 1702
44 Hawley Street
Binghamton, New York 13901-4417

Attention: H. Todd Eames, Chief Examiner

RE: Response to Draft Report of Examination 2015M-213 [as Revised Post-Exit Interview on 11/24/15]
*Binghamton-Johnson City Joint Sewage Treatment Plant –
Sewage Operations Costs
(Period Covered: January 1, 2012 to December 31, 2014)*

Dear Mr. Eames:

We recognize and appreciate the intensive efforts of your office over the more than eight-month period between mid-November 2014 and August 2015, during which a team of at least four staff/field examiners and auditors of the New York State Office of the State Comptroller (“NYS-OSC”) “poured over” and reviewed in detail our organizational documents and policies, minutes, operating documents and operating records, as well as selections of purchases, competitive bids and requests for proposals (“RFPs”), other procurements, purchase orders, claims for payment, accounts payable, invoices, accounts receivable, bank statements, accounting records and journals, property and asset management records, together with all aspects of payroll for the 36-month period from January 1, 2012 through December 31, 2014. Our records show that the primary field auditor spent 311.85 hours, the supervising field auditor spent 77.25 hours, and two others spent a combined 4.50 hours signed-in at our Facilities. No doubt an equal or greater amount of time was spent by your office’s personnel reviewing documents at our Fiscal Officer’s offices in Binghamton’s City Hall, as well as on work in your offices and/or other locations performing the research and analysis and management/oversight time required to produce the above referenced Report to which this letter responds.

See
Note 2
Page 24

As your audit staff is well aware, during the time period covered by the audit the Board, Fiscal Officer, and assigned staff processed in the order of 5,100 non-capital claims for payment transactions resulting in issuance

Catherine P. Young, Superintendent
Binghamton-Johnson City Joint Sewage Treatment Facilities
4480 Vestal Road, Vestal, New York 13850
Phone: 607-729-2975 Fax: 607-729-0110
Email: bicwwtp@stny.rr.com

RE: Response to Draft Report of Examination 2015M-213 [as Revised Post-Exit Interview on 11/24/15]
Binghamton-Johnson City Joint Sewage Treatment Plant –
Sewage Operation Costs
(Period Covered: January 1, 2012 to December 31, 2014)

of some 3,650 separate check payments or electronic transfers totaling in the range of \$24,394,200.00. Further, with respect to payroll and employee benefits, there were in the order of 4,332 transactions (including paychecks to employees, payroll taxes, insurance, deductions, assignments, and garnishments) resulting in the issuance of payments or electronic transfers of some \$11,458,450.0 during the 36-month time period covered by the audit. On the revenue side there were also numerous recurring receipts of User Fees from municipalities, dumping fees from septic haulers and other commercial vehicles, industrial wastewater surcharges, interest and miscellaneous payments – including grant and insurance recoveries, reimbursements from the U.S. Department of Homeland Security’s Federal Emergency Management (FEMA) and New York State Division of Homeland Security and Emergency Management (NYS-DHSES), and litigation recoveries – all of which required journaling, safekeeping, transmission, and deposit. On a routine basis, the Fiscal Officer and his Deputy executed various cash management transactions to maintain liquidity and seek maximum return on monies not immediately needed for payment of current Sewage Board obligations.

We are very pleased and take satisfaction in the fact that **the Report mentions not a single exception to or concern with any of the bank deposit, procurement, payment, or payroll transactions executed during the period covered by the audit** which were specifically examined, nor does the Report express any finding or concern that there were any items of missing or misused property or public funds not properly accounted for.

See
Note 2
Page 24

The remainder of this letter presents our specific comments, concerns and responses to the findings and recommendations in the Report. In sum, we believe the Report reflects an audit engagement performed with “blinders on” designed to reach a pre-ordained [*but incorrect*] conclusion under a biased, “kick ‘em while they’re down” strategy, lacking in transparency, oblivious to specific *Generally Accepted Governmental Auditing Standards* and principles including the abject failure/refusal of the audit team to account for actual [*and projected*] revenue recoveries realized [*and to be realized*] directly as a result of expenses incurred [*and being incurred*] for legal services, professional services (including engineering design, pilot study, flood recovery consultant, and safety training services), construction and other operating costs.

See
Note 3
Page 24

I.

Failure of Audit/Report to Conform to Generally Accepted Governmental Auditing Standards/Principles

Lack of Qualified Engineering and Technical Personnel on Audit Team – General Standard 3.72(d)(3) and (5) of *Government Auditing Standards* (2011 revision, <<http://gao.gov/assets/590/587281.pdf>>) require, before beginning work on an audit, that an audit team collectively possess the technical knowledge, skills and experience to be competent for the type of work being performed in connection with the audit. This includes engineering (subsection 3) and subject matter knowledge with respect to scientific and environmental matters (subsection 5). The audit team lacked adequate technical knowledge regarding water quality permitting, engineering (specifically, wastewater treatment process design), wastewater treatment facility operation, and scientific understanding of applicable environmental regulations. As a result, the audit team erroneously selected wastewater treatment facilities outside of the Chesapeake Bay Watershed – which is subject to very stringent discharge permit and Total Maximum Daily Load requirements – as “comparable” to the Binghamton-Johnson City Joint Sewage Treatment Plant (JSTP). Charts 1 and 2 on the following pages illustrate that the JSTP is required to meet significantly more stringent discharge limits (1) than are the facilities

See
Notes 2
and 3
Page 24

TABLE 1 - COMPARISON OF NYS-DEC ISSUED SPDES PERMITS FOR NYS-COMPTROLLER SELECTED COMPARATIVE SEWAGE/WASTEWATER TREATMENT PLANTS IN NEW YORK STATE

NYS-DEC #	FACILITY NAME	SYSTEM	PERMITTED MONTHLY AVERAGE B/C	ACTUAL MONTHLY AVERAGE B/C	% of PERMITTED MONTHLY AVERAGE B/C	PERMITTED MONTHLY AVERAGE CODB	ACTUAL MONTHLY AVERAGE CODB	% of PERMITTED MONTHLY AVERAGE CODB	PERMITTED MONTHLY SOLIDS B/C	ACTUAL MONTHLY SOLIDS B/C	% of PERMITTED MONTHLY SOLIDS B/C	MAXIMUM TOTAL NITROGEN	MAXIMUM MONTHLY AVERAGE CURRENT NITROGEN	% of PERMITTED MONTHLY AVERAGE CURRENT NITROGEN	MAXIMUM PHOSPHORUS DISCHARGE AT EDGE OF STREAM	MAXIMUM MONTHLY AVERAGE PHOSPHORUS DISCHARGE AT EDGE OF STREAM	% of PERMITTED MONTHLY AVERAGE PHOSPHORUS DISCHARGE AT EDGE OF STREAM	RECEIVING WATER	SIB WASTEWATER/WASTEWATER	APPROX. PHYSICAL PLANT REQUIREMENTS		
																					PERMITTED MONTHLY AVERAGE B/C	ACTUAL MONTHLY AVERAGE B/C
7	Empire-Dominion City John STP (City of Albany) with NYS-DEC temporary modification of sub-permits contain SPDES Permit requirements.	COLLECTION SYSTEM	35,000	16,440	47.0%	18	639,261 ⁴⁴	6.0 ⁴⁴	20	94,678 ⁴⁴	0.9 ⁴⁴								Susquehanna River	Susquehanna River → Chesapeake Bay	YES	11.2
4	NY 002 6875 County of Albany - North WWP [Town of Rensselaer]	SEWER IN SEWER	35,000	22,560	64.5%	25	see table	15.2 ⁴⁴	30	UNLIMITED/NO LIMIT		UNLIMITED/NO LIMIT		UNLIMITED/NO LIMIT		UNLIMITED/NO LIMIT			Hudson River	Hudson River → Atlantic Ocean	YES	12.6
4	NY 002 6867 County of Albany - South WWP [City of Albany]	SEWER IN SEWER	29,000	21,400	73.8%	25	see table	15.4 ⁴⁴	30	UNLIMITED/NO LIMIT		UNLIMITED/NO LIMIT		UNLIMITED/NO LIMIT		UNLIMITED/NO LIMIT			Hudson River	Hudson River → Atlantic Ocean	YES	14.4
4	NY 008 3711 Rensselaer County SD #1 WWP [City of Troy]	EFFLUENT & DISCHARGE	24,000	18,670	77.8%	25	see table	16.0 ⁴⁴	30	UNLIMITED/NO LIMIT		UNLIMITED/NO LIMIT		UNLIMITED/NO LIMIT		UNLIMITED/NO LIMIT			Hudson River	Hudson River → Atlantic Ocean	YES	9.6
4	NY 002 0516 City of Schenectady STP	EFFLUENT & DISCHARGE	18,500	13,060	70.6%	25	UNLIMITED/NO LIMIT		30	UNLIMITED/NO LIMIT		UNLIMITED/NO LIMIT		UNLIMITED/NO LIMIT		UNLIMITED/NO LIMIT			Mohawk River	Mohawk River → Hudson River → Atlantic Ocean	YES	13.2
6	NY 002 5964 City of Westtown WPCP	EFFLUENT & DISCHARGE	16,000	11,510	71.9%	30	UNLIMITED/NO LIMIT		30	UNLIMITED/NO LIMIT		UNLIMITED/NO LIMIT		UNLIMITED/NO LIMIT		UNLIMITED/NO LIMIT			Black River	Black River → Lake Ontario	YES	8.1
5	NY 002 9050 City of Glens Falls WWP	EFFLUENT & DISCHARGE	9,300	4,060	42.7%	25	386,400 ⁴⁴	26.5 ⁴⁴	30	UNLIMITED/NO LIMIT		UNLIMITED/NO LIMIT		UNLIMITED/NO LIMIT		UNLIMITED/NO LIMIT			Hudson River	Hudson River → Atlantic Ocean	YES	15.9
4	NY 002 9351 City of Kingston (NY) WWP	EFFLUENT & DISCHARGE	6,800	4,810	70.7%	25	UNLIMITED/NO LIMIT		30	UNLIMITED/NO LIMIT		UNLIMITED/NO LIMIT		UNLIMITED/NO LIMIT		UNLIMITED/NO LIMIT			Rondout Creek	Rondout Creek → Hudson River → Atlantic Ocean	YES	1.9
4	NY 002 0389 Village of Catskill WWP	EFFLUENT & DISCHARGE	1,560	44%	0.840	25	UNLIMITED/NO LIMIT		30	UNLIMITED/NO LIMIT		UNLIMITED/NO LIMIT		UNLIMITED/NO LIMIT		UNLIMITED/NO LIMIT			Hudson River	Hudson River → Atlantic Ocean	NO	2.3

GLOSSARY

CODB – is an acronym for “carbonaceous biochemical oxygen demand” measured over 5 days from sampling date at a constant 20°C – a measure of the dissolved oxygen consumed by microorganisms in the biochemical degradation of carbon-containing compounds in wastewater. (Because waters devoid of dissolved oxygen are “dead” to most aquatic life, it is important to minimize discharges of CODB material into rivers and water bodies).

Combined Sewers – convey stormwater, sanitary, sewage, and other wastewater together in the same pipe or conduit.

WWPP – is an acronym for “Wastewater Pre-Treatment Program” (under U.S. Environmental Protection Agency regulations)

WWPC – is an acronym for “Water Pollution Control Plant”

WWT – is an acronym for “Wastewater Treatment Facility”

WTR – is an acronym for “Water Treatment Plant”

WTP – is an acronym for “Wastewater Treatment Plant”

NOTES

- * – the maximum permitted influent or effluent Average Daily Flow limit for this facility is computed on a 12-month rolling average basis
- “e” denotes that this value has been extrapolated from the corresponding discharge load limit or concentration assigned under the SPDES permit
- “p” denotes that this value is the limit assigned under the SPDES permit
- “m” denotes that this value has been extrapolated from the corresponding discharge load limit or concentration assigned under the SPDES permit
- “n” denotes that this value is the limit assigned under the SPDES permit
- “r” denotes that this value has been extrapolated from the corresponding discharge load limit or concentration assigned under the SPDES permit
- “s” denotes that this value is the limit assigned under the SPDES permit
- “t” denotes that this value has been extrapolated from the corresponding discharge load limit or concentration assigned under the SPDES permit
- “u” denotes that this value has been extrapolated from the corresponding discharge load limit or concentration assigned under the SPDES permit
- “v” denotes that this value has been extrapolated from the corresponding discharge load limit or concentration assigned under the SPDES permit
- “w” denotes that this value has been extrapolated from the corresponding discharge load limit or concentration assigned under the SPDES permit
- “x” denotes that this value has been extrapolated from the corresponding discharge load limit or concentration assigned under the SPDES permit
- “y” denotes that this value has been extrapolated from the corresponding discharge load limit or concentration assigned under the SPDES permit
- “z” denotes that this value has been extrapolated from the corresponding discharge load limit or concentration assigned under the SPDES permit

SD – is an abbreviation for “sewer district”

SPDES – is an acronym for “State Pollution Discharge Elimination System”

STP – is an acronym for “Sewage Treatment Plant”

WPCP – is an acronym for “Wastewater Pre-Treatment Program”

WTP – is an acronym for “Wastewater Treatment Plant”

The above SPDES Permit data were compiled from image files or publicly posted by the NYS-DEC on November 10, 2015 at URL: <https://www.databases.com/1/864274/m/nygms/nygms/>, except for Rensselaer County Sewer District #1 WWP, provided directly by NYS-DEC Region 4 on e-mail November 11, 2015. For further information about the NYS-DEC SPDES Permit Program, please visit URL: <http://www.dec.ny.gov/permits/0654.html>.

TABLE 2 - COMPARISON OF NYS-DEC ISSUED SPDES PERMITS FOR SELECTED "SIGNIFICANT" CHESAPEAKE BAY WATERSHED SEWAGE/WASTEWATER TREATMENT PLANTS IN NEW YORK STATE

NYS-DEC PERMIT NUMBER	FACILITY NAME (listed in order of permitted maximum flow)	ARE THERE COMBINED SEWERS IN TRIBUTARY SEWER COLLECTION SYSTEM?	PERMITTED MAXIMUM MONTHLY AVERAGE		% of B-C LIMIT	PERMITTED MAXIMUM MONTHLY SUSPENDED SOLIDS		% of B-C LIMIT	MAXIMUM TOTAL NITROGEN DISCHARGE AT EDGE OF STREAM		% of CURRENT B-C CONCENTRATION LIMIT	MAXIMUM TOTAL PHOSPHORUS DISCHARGE AT EDGE OF STREAM		% of 2025 B-C MAX. FLOW CONCENTRATION CAP
			DAILY LINEAL ENT FLOW (MGD)	DAILY AVERAGE (MGD)		(mg/L)	(mg/L)		(pounds/year)	(pounds/year)		(mg/L)	(pounds/year)	
7 NY 002 4414	Binghamton-Johnson City Joint STP (B-C)	YES	35.000	18	20	639,261	6.0	131.7%	94,678	0.9	77.8%	25,300	0.7	Chemung River → Susquehanna River
8 NY 003 6986	Chemung County Sewer District No. 1 STP	NO	12,200	25	30	292,000	7.9	150.0%	25,300	0.7	77.8%	25,300	0.7	Chemung River → Susquehanna River
8 NY 003 5742	Chemung County Elmira Sewer District STP	YES	12,000	25	30	274,000	7.5	150.0%	27,400	0.8	88.9%	27,400	0.8	Chemung River → Susquehanna River
7 NY 002 7669	Village of Endicott WPCP	YES	10,000	25	30	410,000	13.5	150.0%	28,600	0.9	100.0%	28,600	0.9	Susquehanna River
7 NY 002 7561	[City of Cortland] LeRoy R. Summerson WWTF	NO	9,000	25	30	256,000	9.3	150.0%	23,100	0.8	88.9%	23,100	0.8	Troughmigo River → Chemung River → Susq. R.
8 NY 002 3647	[City of] Homei WPCP	NO	4,000	25	30	106,000	8.7	150.0%	8,530	0.7	77.8%	8,530	0.7	Chemung River → Susquehanna River
4 NY 003 1151	[City of] Onononta Wastewater Treatment Plant	NO	4,000	25	30	134,000	11.0	183.3%	7,510	0.6	66.7%	7,510	0.6	Susquehanna River
8 NY 002 5721	[City of] Corning Wastewater Treatment Plant	NO	3,080	25	30	125,000	13.3	150.0%	5,040	0.5	55.6%	5,040	0.5	Chemung River → Susquehanna River
7 NY 002 1423	City of Norwich Wastewater Treatment Plant <i>but, from May 15th through October 15th →</i>	NO	2,200	25	30	102,805	15.4	150.0%	4,240	0.6	66.7%	4,240	0.6	Chemung River → Susquehanna River
7 NY 002 5798	Town of Owego WPCP #2	NO	2,500	30	30	74,195	9.7	166.7%	3,060	0.4	44.4%	3,060	0.4	Chemung River → Susquehanna River
8 NY 002 3906	Town of Erwin Wastewater Treatment Plant	NO	1,750	25	30	51,000	8.4	150.0%	4,850	0.8	88.9%	4,850	0.8	Susquehanna River
7 NY 002 9262	Village of Owego STP	YES	1,000	30	30	27,000	5.1	85.0%	5,200	1.0	111.1%	5,200	1.0	Cohocton River → Chemung R. → Susq. River
7 NY 002 2730	Town of Owego Sewer District #1 STP	NO	0.848	30	30	32,000	10.5	175.0%	1,730	0.6	66.7%	1,730	0.6	Susquehanna River
7 NY 002 13781	Town of Chenango Northgate WWTP	NO	0.800	30	30	27,000	10.5	175.0%	3,600	1.4	155.6%	3,600	1.4	Susquehanna River
				30	30	27,000	11.1	185.0%	1,910	0.8	88.9%	1,910	0.8	Chenango River → Susquehanna

GLOSSARY

CBOD₅ - is an acronym for "carbonaceous biochemical oxygen demand" incubated over 5 days from sampling date at a constant 20°C - a measure of the dissolved oxygen consumed by microorganisms in the biochemical degradation of carbon-containing compounds in wastewater. (Because waters devoid of dissolved oxygen are "dead" to most aquatic life, it is important to minimize discharges of CBOD material into rivers and waterbodies)

Combined Sewers - convey stormwater, sanitary sewage, and other wastewater together in the same pipe or conduit

L - is an abbreviation for "liter"

mg - is an abbreviation for "milligram"

MGD - is an abbreviation for "million gallons per day"

NYS-DEC - is an acronym for "New York State Department of Environmental Conservation"

REG - is an abbreviation for NYS-DEC "Region"; for further information, please visit URL: <<http://www.dec.ny.gov/about/50230.html>>

SPDES - is an acronym for [New York] "State Pollution Discharge Elimination System"

NOTES-

* - the maximum permitted influent/effluent Average Daily Flow limit for this facility is computed on a 12-month rolling average basis

~ - "e" denotes that this value has been extrapolated from the corresponding discharge load limit assigned under the SPDES permit

† - "p" denotes that this value is the facility's future limit for 2025 to be assigned under the SPDES permit (SOURCE: NYS-DEC C-Boy TMDL Phase II Watershed Implementation Plan, page 105 at URL: <http://www.dec.ny.gov/docs/water_natl/tmdlphaseiiimp.pdf>)

‡ - "x" denotes that this value is the limit assigned under the SPDES permit

§ - "x" denotes that this value has been extrapolated from the discharge concentration limit assigned under the current SPDES permit (NOTE: decreases to 489.491 pounds/year for 2017 under NYS-DEC C-Boy TMDL Phase II Watershed Implementation Plan [see, page 105 at URL in "†", above])

STP - is an acronym for "Sewage Treatment Plant"

WWTF - is an acronym for "Wastewater Treatment Facility"

WPCP - is an acronym for "Water Pollution Control Plant"

WWTP - is an acronym for "Wastewater Treatment Plant"

The above SPDES Permit data were compiled from image files as publicly posted by the NYS-DEC on November 2, 2015 at URL: <<https://www.drapbox.com//rBkiZmzIimgm85-WIGZmo>>; for further information about the NYS-DEC SPDES Permit Program, please visit URL: <<http://www.dec.ny.gov/permits/6054.html>>.

RE: Response to Draft Report of Examination 2015M-213 [as Revised Post-Exit Interview on 11/24/15]
Binghamton-Johnson City Joint Sewage Treatment Plant –
Sewage Operation Costs
(Period Covered: January 1, 2012 to December 31, 2014)

“cherry-picked” by Comptroller personnel and (2) than are most other “significant” wastewater treatment plants in the New York portion of the Chesapeake Bay Watershed. Because they are produced on oversize paper, we have arranged for these charts to be accessible at URL: www.tinyurl.com/B-JCcomparisonCharts.

See Note 4 Page 24

For example, of the “comparable” facilities selected by Comptroller personnel:

- a) all are permitted to discharge effluent containing a 50% higher concentration of Total Suspended Solids (TSS) than is the JSTP in accordance with its underlying discharge permit. Thus, the “comparable” facilities selected by Comptroller personnel are not required to incur costs to construct, repair, operate and maintain facilities capable of meeting the more stringent limits imposed on the JSTP.
- b) all are permitted to discharge effluent containing a higher concentration of Carbonaceous Biochemical Oxygen Demand material (CBOD₅) than is the JSTP in accordance with its underlying discharge permit, ranging from 38% higher to 66% higher; *as noted in the charts, CBOD₅ is a measure of the dissolved oxygen consumed by microorganisms in the biochemical degradation of carbon-containing compounds in wastewater.* Because waters devoid of dissolved oxygen are “dead” to most aquatic life, it is important to minimize discharges of CBOD material into rivers and waterbodies. Nevertheless, the “comparable” facilities selected by Comptroller personnel are allowed to discharge higher concentrations of this pollutant into their receiving waterbodies and are not required to incur costs to construct, repair, operate and maintain facilities capable of meeting the more stringent limits imposed on the JSTP.
- c) none is required to meet a year-round Total Nitrogen discharge limit (including, but not limited to, combined nitrogen from the Ammonia, Nitrate, Nitrite, and Total Kjeldahl Nitrogen [TKN] species of this nutrient). The “comparable” facility selected by Comptroller personnel which has the highest costs has year-round Ammonia discharge load limits only (which, during the warm weather months, permit it to discharge effluent with a 153% higher concentration of Ammonia than the JSTP is permitted to discharge). Three other “comparable” facilities have TKN discharge limits applicable for only five warm weather months during the year. Obviously, the “comparable” facilities selected by Comptroller personnel are not required to incur costs to construct, repair, operate and maintain facilities capable of meeting the more stringent Total Nitrogen discharge limits imposed on the JSTP.
- d) only one is required to meet a year-round Total Phosphorous discharge limit (Watertown, permitted to discharge effluent with an 11% higher concentration of this nutrient than is the JSTP). The other “comparable” facilities selected by Comptroller personnel are not limited in the amount of Total Phosphorous they can discharge, nor are they required to incur costs to construct, repair, operate and maintain facilities capable of meeting the Total Phosphorous discharge limits imposed on the JSTP.

Engineering estimates indicate that it costs the JSTP in the range of \$2.35 million per year (or, approximately, \$142,944.00 per million gallons per day [MGD] treated based on average 2012-2014 flows). Had the Comptroller’s audit team contained personnel with appropriate engineering, scientific, technical and

RE: Response to Draft Report of Examination 2015M-213 [as Revised Post-Exit Interview on 11/24/15]
Binghamton-Johnson City Joint Sewage Treatment Plant –
Sewage Operation Costs
(Period Covered: January 1, 2012 to December 31, 2014)

environmental knowledge, it would have realized that its “comparables” are useless and inappropriate from a watershed and wastewater treatment process requirement/operations standpoint. Even within the Chesapeake Bay Watershed, Chart 2 highlights that the JSTP faces more stringent (and, thus, more costly to comply with) discharge limits than most “significant” wastewater treatment facilities:

- a) all other facilities listed in the chart are permitted to discharge effluent containing a 50% higher concentration of Total Suspended Solids (TSS) than is the JSTP in accordance with its underlying discharge permit.
- b) all other facilities are permitted to discharge effluent containing a higher concentration of CBOD₅ than is the JSTP in accordance with its underlying discharge permit, ranging from 38% higher to 66% higher.
- c) except for one (Town of Erwin, with a concentration limit 15% more stringent than the JSTP) the facilities listed are permitted to discharge effluent containing from 25% to 156% higher concentrations of Total Nitrogen than the JSTP is permitted to discharge.

Accordingly, an important finding that the Comptroller’s audit team could have made – if it was staffed with qualified personnel having suitable engineering, scientific, technical and environmental knowledge – is that the regulatory requirements the JSTP must meet drive it to have significantly higher capital and operational costs than other wastewater facilities. These higher costs resulting from more stringent regulation operate to “unlevel the playing field” for economic development within our Service Area, which further depresses the already depressed economy in New York’s Southern Tier Region.

Failure to Take into Account Revenues/Recoveries Offsetting Costs – The Sewage Board received offsetting revenues and other transfer payments that were not netted against corresponding costs by the Comptroller’s audit team. Considering costs without these revenues falsely portrays what the actual charges to the JSTP’s 11 Municipal Users and two surcharged Significant Industrial Users are. In particular:

See Note 5 Page 24

- a) FEMA DR-1650. Payments were received after January 1, 2012 totaling \$4,880,894.26 pertaining to damage repaired and/or equipment replaced following flooding in June 2006, but were not offset by the Comptroller’s audit team against costs incurred, including costs for our flood recovery consultant (a professional service necessary to ensure that recoveries are maximized given the complex requirements of the FEMA Public Assistance Program, as administered by the NYS-DHSES). As a one-time payment, this would offset sewage treatment operating costs by \$98,963.79 per MGD over the three year audit period.
- b) Flood Insurance Proceeds. Proceeds were received after January 1, 2012 totaling \$2,489,088.09 in compensation for September 2011 flood damage, but were not offset by the Comptroller’s audit team against costs incurred, including costs for our flood insurance public adjuster (a professional service necessary to ensure that recoveries are maximized given the complex interrelationship of the FEMA Public Assistance Program and the National Flood Insurance Program). As a one-time payment, this

RE: Response to Draft Report of Examination 2015M-213 [as Revised Post-Exit Interview on 11/24/15]
Binghamton-Johnson City Joint Sewage Treatment Plant –
Sewage Operation Costs
(Period Covered: January 1, 2012 to December 31, 2014)

would offset sewage treatment operating costs by \$50,468.13 per MGD over the three year audit period.

- c) Owner Reimbursement of Monies Transferred/Used for Design and Construction Work During 2012. During 2012, the JSTP's Owners (City of Binghamton and Village of Johnson City) transferred \$1,193,185.00 from the Sewage Board's Capital Fund into the Operating Fund. These monies were expended by the JSTP's Owners on engineering design and capital projects. In October 2012, the Owners made the Sewage Board's accounts whole by transferring-in \$1,193,185.00 of bond borrowing proceeds, which were not offset by the Comptroller's audit team against the costs incurred by the Owners from the Sewage Board's operating budget, including costs for professional services. As a one-time payment, this would offset sewage treatment operating costs by \$24,192.72 per MGD over the three year audit period.
- d) FEMA DR-4031. Payments were received after January 1, 2012 totaling \$4,365,430.03 pertaining to damage repaired and/or equipment replaced following flooding in September 2011, but were not offset by the Comptroller's audit team against costs incurred, including costs for our flood recovery consultant (a professional service necessary to ensure that recoveries are maximized given the complex requirements of the FEMA Public Assistance Program, the Governor's Office of Storm Recovery, as both are administered by the NYS-DHSES) and the Community Development Block Grant-Disaster Recovery (CDBG-DR). As a one-time payment, this would offset sewage treatment operating costs by \$85,513.37 per MGD over the three year audit period.
- d) Other Property Damage and Insurance Litigation Recoveries. Proceeds were received after January 1, 2012 totaling \$1,358,640.53 in compensation for property damage and property loss following the May 16, 2011 collapse of the West C-Cell Wall at the JSTP, but were not offset by the Comptroller's audit team against costs incurred, including legal services costs and the cost for our insurance public adjuster (a professional service necessary to ensure that recoveries are maximized given the complex nature of the claims and related litigation). As a one-time payment, this would offset sewage treatment operating costs by \$27,547.46 per MGD over the three year audit period.
- e) Other Grant Proceeds. NYS Hazard Abatement Board Occupational Safety Training Grant proceeds of \$15,435.00 were also received during the audit period, but were not offset by the Comptroller's audit team against costs incurred, including professional services for safety training. As a one-time payment, this would offset sewage treatment operating costs by \$312.96 per MGD over the three year audit period. Additionally, as shown on Chart 3 on the next page, the Sewage Board and Plant Management's safety emphasis and safety training program currently save the Sewage Board nearly \$39,400.00 per year in Workers' Compensation Coverage costs.

Taken together, these amounts received reimburse/offset costs expended and equate to a reduction of \$286,998.43 per MGD treated during the audit period. **When applied against the \$411,654.00 per MGD average treatment cost computed by the Comptroller's audit team, the resulting net \$124,655.57 cost per MGD treated would stand as the lowest unit cost of all facilities included in Figure 1 in the Report.**

CURRENT YEAR COST SAVINGS RESULTING FROM BOARD/PLANT MANAGEMENT SAFETY EMPHASIS AND SAFETY TRAINING PROGRAMS

Class Code	Description	Binghamton-Johnson City JSTP's Experience-Based Underwriting		NYS Workers' Compensation Underwriting		Actual Premium Savings
		Annual Payroll for 2015-2016 Underwriting Purposes	Underwriting Coefficient (\$)	Annual Workers' Compensation Premium	"Standard Rate" Coefficient (\$)	
8810	Clerical Office Employees	\$ 260,310.00	\$ 0.001926	\$ 501.38	\$ 0.002700	\$ 201.48
9410	Municipal Township - noc	\$ 293,764.00	\$ 0.041732	\$ 12,259.45	\$ 0.058500	\$ 4,925.83
7580	Sewage Disposal Plant	\$ 1,479,135.00	\$ 0.045228	\$ 66,898.07	\$ 0.063400	\$ 26,878.84
7539	Electric Light Power Co. - noc	\$ 172,089.00	\$ 0.015551	\$ 2,676.24	\$ 0.021800	\$ 1,075.38
8391	Auto Gasoline Station	\$ 330,850.00	\$ 0.040448	\$ 13,382.32	\$ 0.056700	\$ 5,376.97
9026	Building Operation - Commercial	\$ 65,479.00	\$ 0.035668	\$ 2,335.53	\$ 0.050000	\$ 938.45
TOTAL		\$ 2,601,627.00		\$ 98,053.00		\$ 39,396.95

◀ rounded to nearest whole dollar

or,

40.2% **less** than premium would otherwise have been in the absence of JSTP's favorable safety/claims experience

RE: Response to Draft Report of Examination 2015M-213 [as Revised Post-Exit Interview on 11/24/15]
Binghamton-Johnson City Joint Sewage Treatment Plant –
Sewage Operation Costs
 (Period Covered: January 1, 2012 to December 31, 2014)

Further, adjusting for the disparity of discharge permit limits discussed above (at \$142,944.00 per MGD), yields an adjusted/“comparable equivalent” net result of **negative \$18,288.43** per MGD treated during the audit period, far less than any of the “comparable” plants selected by the Comptroller’s audit team for inclusion in Figure 1.

Improper/Biased Exclusion of Certain Costs – The Comptroller’s arbitrary decision to exclude employee benefits costs (see footnote 3 in the Report) demonstrates bias and does not allow the Sewage Board to receive credit for cost-saving and cost-controlling steps taken (for example, as to Workers’ Compensation Coverage costs, above, and innovative steps taken in the Health Benefits Program covering active employees and retirees). Additionally, excluding the retirement systems costs from the analysis – as to which the Comptroller is sole Trustee – is hypocritical given that employer contribution rates during the audit period continued to rise far in excess of the prevailing rate of inflation as shown by the graph on the following page. The recent decision to lower the actuarial assumption for rate of return in the Comptroller’s investment portfolio will also cost employers in coming years. The Comptroller’s decision to exclude employee benefit costs from the analysis precludes a full portrayal of actual costs in this Report focusing on costs and belies a “do as I say, not as I do” mentality.

See
Note 6
Page 24

II.

The Report’s Subjective Conclusion Is Contrary to Objective Federal Method for Assessing Affordability

The Report’s Subjective Conclusion Highlights that NYS Has No Established Standards – The Report’s conclusion that the “Owners and Board are not economically providing services to their customers” is wholly subjective and is not based on any established New York State standards. As discussed above, the audit was not conducted in accordance with established *Government Auditing Standards* as a result of which the “comparables” are not valid. Further, the Comptroller’s audit team did not reduce costs incurred by the amount of offsetting revenue received. Had the audit team done so, the net operating costs of the JSTP during the audit period would have been less per MGD treated than all of the “comparables”. The Sewage Board believes the conclusion of the Report to be invalid due to these defects in the audit process and procedures.

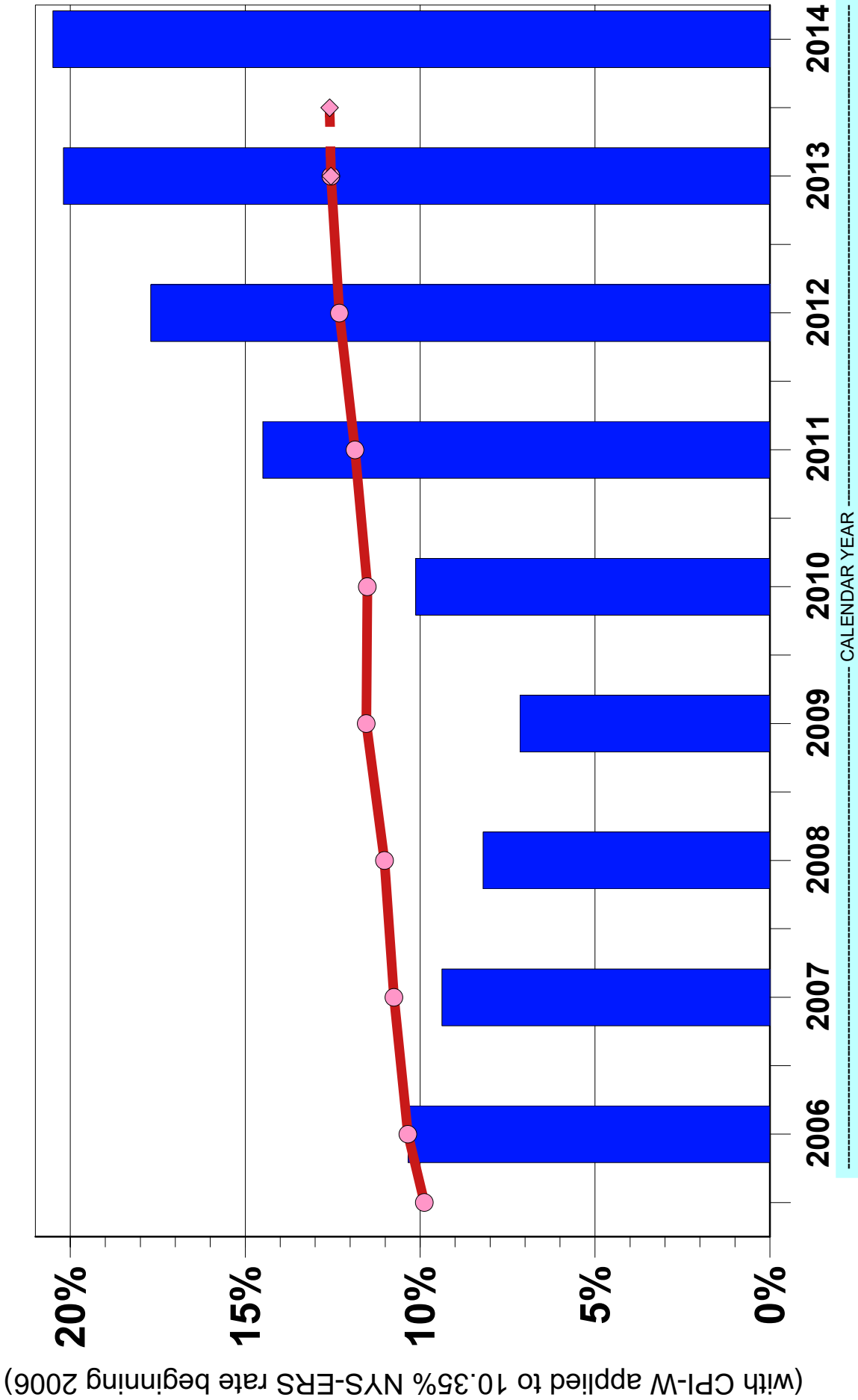
See
Notes 3, 4
and 5
Page 24

Under Federal Standards, Costs Charged to End Users Are in the Low- to Mid-Range of Financial Impact. The United States Environmental Protection Agency (EPA), which regulates the operation of the JSTP, has a well-established mechanism for evaluating and comparing wastewater treatment and sewer costs in communities permitted to have combined sewers overflows (CSOs), as are the City of Binghamton and the Village of Johnson City, which own the JSTP. In its February 1997 guidance publication, "Combined Sewers Overflows -- Guidance for Financial Capability Assessment and Schedule Development" (EPA 832-B-97-004, available for download at: <http://www.epa.gov/npdes/pubs/csofc.pdf>), the United States Environmental Protection Agency ("EPA") set forth a methodology for evaluating and comparing the costs of sewage treatment and sewer collection system infrastructure operation, maintenance, and upgrades. The EPA's methodology is a tool that helps communities meet appropriate public health and environmental objectives by implementing cost-effective means to reduce pollutants and satisfy requirements of the federal *Clean Water Act*.

(continues on page 11)

Binghamton - Johnson City Joint Sewage Board

NYS-ERS PENSION CONTRIBUTION % vs. INFLATION (CPI-W)



■ JSB Contribution % for Tier 4 **—●— Inflation Rate (CPI-W, NE Urban [B/C {50,000 to 1,500,000 community size}], all items, not seasonally adjusted), through 6/30/2013**

RE: Response to Draft Report of Examination 2015M-213 [as Revised Post-Exit Interview on 11/24/15]
*Binghamton-Johnson City Joint Sewage Treatment Plant –
 Sewage Operation Costs
 (Period Covered: January 1, 2012 to December 31, 2014)*

The first aspect of the EPA's two-part objective, formula-based methodology is to assess the financial impact of wastewater treatment and CSO controls on households. This is done by computing the percentage that the annual total sewage disposal and treatment costs (from all sources, including debt service and tax assessments) paid by the community's households bears to the estimated Median Household Income ("MHI"). The results of this analysis are depicted on the following page using 2013 "medium usage household" costs and estimated 2013 MHI (the most recent available – when 2014 MHI data is released by the U.S. Census Bureau in December, an updated chart will be accessible at <http://www.tinyurl.com/BgmJC-Municipal-Sewer-Rates>).

If this "Residential Indicator" is less than 1.0% of MHI, the EPA regards the financial impact of total sewage disposal and treatment costs as being "Low"; within the range of 1.0 to 2.0% of MHI as being "Mid-Range"; and above 2.0% of MHI as being "High". (*Generally, the EPA only provides federal aid and/or grants for sewer and wastewater treatment infrastructure to communities in which a "High" financial impact is demonstrated to exist.*)

As shown on the chart on the next page, none of the Municipal Users of the JSTP were found to be experiencing a high financial impact with respect to their residential customers (4 Municipal Users are in the "Low" impact range and 6 are "Mid-range"). This indicates that, under objective federal standards, residential sewage disposal costs are reasonable within the JSTP's Service Area.

The Report does not call into question any particular cost as being unreasonable or imprudently incurred.

Given that there is no established NYS standard under which to assess affordability and/or whether sewage treatment services are provided economically, and because that residential sewage disposal costs within the JSTP's service area are reasonable under the EPA methodology, the Report's contrary conclusion must yield to the federal assessment.

III.

Disparate/Burdensome State/Federal Regulation Increases Costs in Comparison to Other Plants

As discussed above, federal and state regulatory requirements more stringent than imposed on other wastewater treatment plants drive the JSTP's gross operating costs to be higher than the less-regulated plants.

Chemical Costs. The Report observes that the JSTP's chemical costs are higher than the other less-regulated "comparable" Plants. In this regard it should be noted that under the Consent Order with NYS-DEC, a requirement was imposed that a Chemically-Enhanced Primary Treatment (CEPT) System be installed and operated. Although the costs for design, procurement and construction were submitted to FEMA/NYS-DHSES and substantial reimbursement has been received during the audit period, no reimbursement for additional chemical costs – which have averaged in the range of \$337,000.00 per year – has, as yet, been awarded (although this is something we continue to pursue via our flood recovery consultant). Additional quantities of the chemicals lime, sodium hypochlorite, and sodium thiosulfate are required to meet standards under the

See
 Note 7
 Page 25

(continues on page 14)

COMPARISON OF 2013 MEDIAN HOUSEHOLD INCOME AND 2013 SEWAGE COSTS* FOR MUNICIPALITIES IN JSTP SERVICE AREA
(2013-year data are used based on the availability of 2013 Census Bureau information [2014 interim Census estimates are not yet available])

MUNICIPALITY (listed by order of flow magnitude) <i>w/ estimated 2013 resident Population Served and estimated 2013 Households in Service Area</i>	2013 SEWAGE COST FOR MEDIUM- USAGE HOUSEHOLD	U.S. CENSUS BUREAU ESTIMATED MEDIAN HOUSEHOLD INCOME ["MHI"] IN 2013 DOLLARS ["2013 MHI"] **	2% OF 2013 MHI	2013 SEWAGE COST FOR MEDIUM- USAGE HOUSEHOLD IS "x" % OF 2013 MHI	U.S. EPA RESIDENTIAL FINANCIAL IMPACT *** CATEGORY
City of Binghamton (46,975 / 20,079)	\$554.58	\$30,798	\$616	1.80%	Mid-range
Village of Johnson City (15,063 / 6,490)	\$410.25	\$37,878	\$758	1.08%	Mid-range
Town of Vestal (9,061 / 3,747) <i>(includes Bing. University's Innov. Technologies Complex)</i>	\$469.85	\$61,878	\$1,238	0.76%	Low
Town of Kirkwood (1,570 / 625)	\$709.32	\$51,894	\$1,038	1.37%	Mid-range
Binghamton University (6,151 / [n/a]) <i>(Vestal Campus only [does not include Innov. Tech. Complex])</i>	not determinable	not determined			
Town of Dickinson (3,830 / 1,203)	\$877.50	\$52,995	\$1,060	1.66%	Mid-range
Town of Union (1,328 / 605) <i>(includes 9 residential properties in the Town of Chenango)</i>	\$510.50	\$58,387	\$1,168	0.87%	Low
Town of Binghamton (2,457 / 948)	\$672.80	\$70,500	\$1,410	0.95%	Low
Village of Port Dickinson (1,432 / 634)	\$839.43	\$50,000	\$1,000	1.68%	Mid-range
Town of Conklin (755 / 291)	\$561.15	\$53,512	\$1,070	1.05%	Mid-range
Town of Fenton (982 / 375)	\$524.25	\$60,263	\$1,205	0.87%	Low
totals: (89,604 / 34,997)	<i>weighted averages:</i>	\$38,970	\$779		

See
Note 8
Page 25

NOTES:

* - "Sewage costs" do NOT include costs or amounts billed for potable water (i.e., only the "sewer" portion of combination water-sewer bills is included). **"Sewage costs" may include storm water drainage costs, depending on a municipality's method of cost accounting.** Computation of 2013 sewage costs, above, for medium usage households follows the methodology described on the next page, using 2013 year-end sewage rates and 2013 ad valorem tax assessment rates.

** - Estimated Median Household Income ("MHI") was compiled from the U.S. Census Bureau's 2009-2013 American Community Survey, using only data for those census tracts within the Service Area tributary to the Binghamton-Johnson City Joint Sewage Treatment Plant (JSTP), adjusted forward to "2013 dollars" by the U.S. Census Bureau.

*** - In its February 1997 guidance publication, "Combined Sewers Overflows -- Guidance for Financial Capability Assessment and Schedule Development" (EPA 832-B-97-004, available for download at: <http://www.epa.gov/npdes/pubs/csofc.pdf>), the United States Environmental Protection Agency ("EPA") set forth a methodology for evaluating and comparing the costs of sewage treatment and sewer collection system infrastructure operation, maintenance, and upgrades in communities permitted to have combined sewers overflows ("CSOs"), as are the City of Binghamton and the Village of Johnson City, which own the Binghamton-Johnson City Joint Sewage Treatment Plant. The EPA's methodology is a tool that helps communities meet appropriate public health and environmental objectives by implementing cost-effective means to reduce pollutants and satisfy requirements of the federal *Clean Water Act*.

The first aspect of the EPA's two-part methodology is to assess the financial impact of wastewater treatment and CSO controls on households. This is done by computing the percentage that the annual total sewage disposal and treatment costs (from all sources, including debt service and tax assessments) paid by the community's households bears to the estimated Median Household Income ("MHI"). The results of this analysis are depicted above using 2013 "medium usage household" costs and estimated MHI.

If this "Residential Indicator" is less than 1.0% of MHI, the EPA regards the financial impact of total sewage disposal and treatment costs as being "Low"; within the range of 1.0 to 2.0% of MHI as being "Mid-Range"; and above 2.0% of MHI as being "High". *(Generally, the EPA only provides federal aid and/or grants for sewer and wastewater treatment infrastructure to communities in which a "High" financial impact is demonstrated to exist.)*

The second aspect of the EPA's methodology involves assessment of the various communities' "financial capability" taking into account socioeconomic conditions, financial operations, and overall debt burden of the governmental entities in which the households are situated. *(This aspect is not reflected in the above chart).* A matrix is then created using the results of both aspects of the Financial Capability Assessment. The matrix can then be used to address funding approaches, sources, and upgrade implementation schedules.

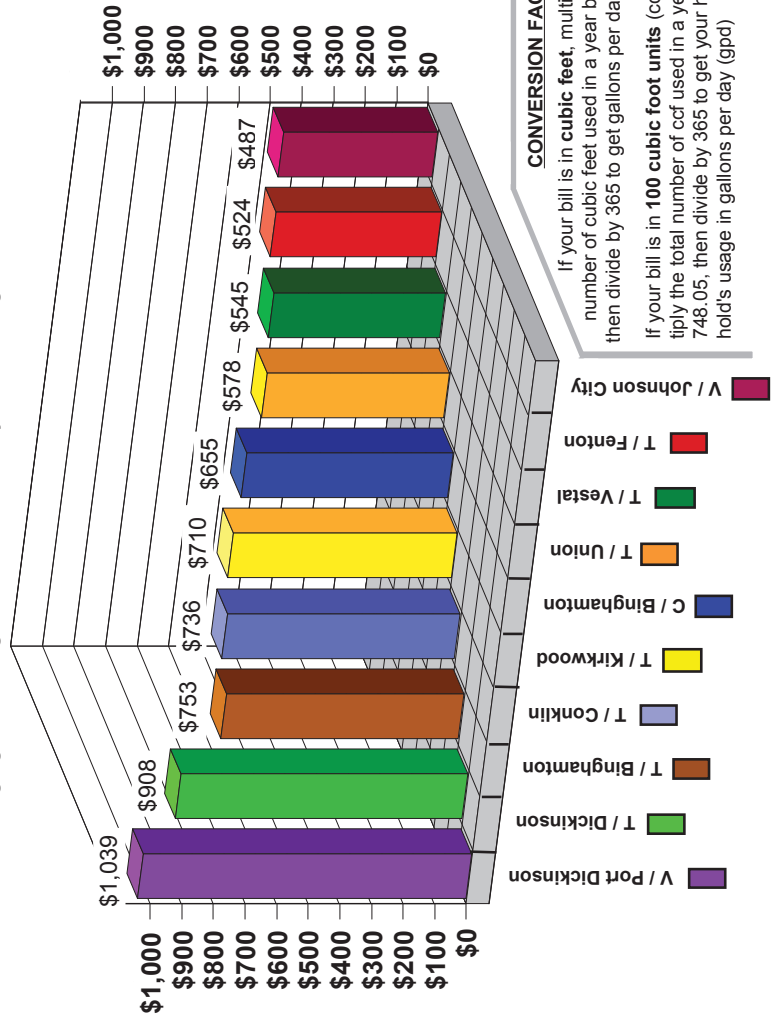
Comparing Sewer Costs based on Household Usage

The chart at the right shows the current sewer use rates for the municipalities discharging to the Binghamton-Johnson City Joint Sewage Treatment Plant. For a more tangible comparison, the **annual costs** that would be paid by a **low-usage** (80 gpd), **medium-usage** (240 gpd), and **high-usage** (400 gpd) household are shown below:

<i>(listed in order of medium-usage annual cost)</i>	Low (80 gpd)	Medium (240 gpd)	High (400 gpd)
Village of Johnson City	\$ 160.00 <small>[min. bill]</small>	\$ 487.25	\$ 818.75
Town of Fenton	\$ 192.75	\$ 524.25	\$ 855.75
Town of Vestal <small>(incl. tax assessment*)</small>	\$ 275.99 <small>[min. bill]</small>	\$ 545.09	\$ 857.79
<small>* - tax is assessed for sewer maint./bonds at \$38.25/4715 per unit; levy above = 1.15 units for each</small>			
Town of Union	\$ 173.24 <small>[min. bill]</small>	\$ 577.95	\$ 987.92
City of Binghamton	\$ 218.23	\$ 654.69	\$ 1,091.15
Town of Kirkwood <small>(incl. tax assess.**)</small>	\$ 261.19	\$ 709.69	\$ 1,167.42
<small>** - tax is assessed for sewer ops./maint. by District/Extension at nine different rates; for comparison, using District 1 rate of \$36.93/6098 per unit; levy above = 1.0 [low]...1.0 [med.]...1.25 [high] units</small>			
Town of Conklin	\$ 272.00	\$ 736.00	\$ 1,208.00
Town of Binghamton <small>(incl. tax assess.***)</small>	\$ 284.30	\$ 752.71	\$ 1,228.61
<small>*** - tax assessed for sewer maint./bonds at \$66.80/3605 per unit; levy above = 1.0...1.5...2.0 units</small>			
Town of Dickinson	\$ 322.50	\$ 907.50	\$ 1,462.50
Village of Port Dickinson	\$ 518.85	\$ 1,039.11	\$ 1,559.37

Annual Sewer Cost for a Medium-Usage Household [as of January 2015]

Discharging to the Binghamton-Johnson City Joint Sewage Treatment Plant



(effective as of 01-Jan-15)	(subject to change by governing municipality)	Effective for usage beginning
Municipality (by flow volume)	Rates (ccf=100 cu. ft.)	
City of Binghamton	\$ 4.74*/ccf > min.	first meter reading after 01-Sep-13
<i>minimum charge</i> [up to 5ccf] -	\$ 23.70 - 3x/year	
<i>flat rate</i> (well or unmetered) -	\$ 165.90 - 3x/year	
<small>* + in 2015, City contributes \$0.85563/ccf from its General Fund (\$1,506,013.15)</small>		
Village of Johnson City	\$ 4.25 /ccf > min.	01-Apr-14 (no flat rate)
<i>minimum charge</i> [up to 10ccf] -	\$ 40.00 - 4x/year	
Town of Vestal <small>[min. incl. cap. chg.]</small>	\$ 5.30 /1000gal.	09-Jan-14
<i>minimum charge</i> [up to 10Kgal] -	\$ 58.00 - 4x/year	
<i>flat rate</i> (well or unmetered) -	\$ 66.00 - 4x/year	
----->	(also adds assessment to property tax bill)	
Town of Kirkwood	\$ 5.75 /ccf	01-Aug-13 (no min. charge)
<i>flat rate</i> (well or unmetered) -	\$ 79.00 - 3x/year	
----->	(also adds assessment to property tax bill)	
Binghamton University - Vestal Campus	(does not separately bill its dormitory residents)	
Town of Dickinson	\$ 7.50 /ccf > min.	09-Jul-13
<i>minimum charge</i> [up to 1 ccf] -	\$ 15.00 - 4x/year	
<i>flat rate</i> (well or unmetered) -	\$ 116.55 - 4x/year	
Town of Union	\$ 5.256 /ccf > min.	first meter reading after 01-Sep-14
<i>minimum charge</i> [up to 10ccf] -	\$ 43.31 - 4x/year	
<i>flat rate</i> (well or unmetered) -	\$ 68.75 - 4x/year	
Town of Binghamton	\$ 7.50 /1000gal.	01-Nov-13 (no min. charge)
<i>flat rate</i> (well or unmetered) -	\$ 168.75 - 4x/year	
----->	(also adds assessment to property tax bill)	
Village of Port Dickinson	\$ 6.67 /ccf	01-Mar-14 (no flat rate)
<i>plus</i> operational charge -	\$ 86.24 - 3x/year	
Town of Conklin	\$ 8.00 /1000gal.	01-Nov-13
<i>plus</i> basic charge -	\$ 10.00 - 4x/year	
<i>flat rate</i> (well or unmetered) -	\$ 86.50 - 4x/year	
Town of Fenton	\$ 4.25 /ccf > min.	01-Nov-12 (no flat rate)
<i>minimum charge</i> [up to 12ccf] -	\$ 60.00 - 3x/year	

prepared for: Binghamton-Johnson City Joint Sewage Board (January 2015)

RE: Response to Draft Report of Examination 2015M-213 [as Revised Post-Exit Interview on 11/24/15]
*Binghamton-Johnson City Joint Sewage Treatment Plant –
Sewage Operation Costs
(Period Covered: January 1, 2012 to December 31, 2014)*

Consent Order. It should also be noted that the Owners’ design engineers have proposed and obtained approval from NYS-DEC for construction of an ultraviolet light disinfection system for the reconstructed plant, which will eliminate the need for two chemicals (sodium hypochlorite and sodium thiosulfate) at a projected future savings in chemical costs in the range of \$550,000.00 per year.

Design Engineering Costs. The Report correctly observes that there have been increasing costs for professional services, equipment and capital construction due to both the wall collapse and flood damage from the September 2011 flood. However, the Report is incorrect in its penultimate paragraph in stating that \$4 million in design costs were “abandoned” because approximately half of this amount was for condition assessments, studies and reports required by the NYS-DEC under the Consent Order. Further, because digital data and AutoCad drawing files for rehabilitation of existing structures were transferred to the new engineer the Owners hired, much of the remaining value was not lost or “abandoned”, either.

See
Note 9
Page 25

Litigation Costs. The Sewage Board believes the costs being incurred for presently-pending litigation are prudent, and will benefit the Municipal Users in the long term, but because the litigation remains pending we cannot otherwise comment on this aspect of costs.

IV.
The Sewage Board Actively Pursues Cost-Saving Approaches

The Sewage Board actively pursues cost-saving approaches to procurement and operations. We are also closely monitoring the progress and scope of the Owners’ redesign and reconstruction projects. Earlier this year, the Board proposed transferring to the Owners capital monies already banked for projects in the Sewage Board’s Capital Fund, based on an analysis which showed that the Owners were going to assume the work, paying with bond proceeds that better correlate to the period of probable usefulness of the construction (as opposed to the “pay as you go” approach under the Sewage Board’s budget [because the Sewage Board has no power to incur debt]). As a result of discussions which followed, it was determined that \$4 million would be refunded to the JSTP’s Municipal Users. (As a one-time payment, this refund offsets sewage treatment operating costs by \$81,103.00 per MGD over the three year audit period).

It should also be noted that the amount of Governmental Entity Fees which are charged to the JSTP’s 11 Municipal Users under the Sewage Board’s budget are less than those charged in 2009, by an average compounded annual decrease rate of -2.92% per year, in part due to cost-saving measures carried-out by the Sewage Board. As the graph on the following page shows, this performance is – in absolute terms – 8.75% less than the national average compounded rate of *increase* for water and sewerage maintenance services.

We totally agree with the Report’s recommendation that Owners’ construction projects be timely completed within the deadlines established in the Consent Order and, although we have no direct role in them, we stand ready to assist in whatever way possible.

GOVERNMENTAL ENTITY FEES vs. INFLATION (CPI-W&S-M)



- Total Governmental Entity Fees (from Joint Sewage Board Budget, as of beginning of year)
- ◆ Inflation Rate (Water and Sewerage Maintenance [CPI-W&S-M], U.S. City Average, All Urban Consumers [Series CUUR000SEHG01], not seasonally adjusted), through 6/30/15

RE: Response to Draft Report of Examination 2015M-213 [as Revised Post-Exit Interview on 11/24/15]
*Binghamton-Johnson City Joint Sewage Treatment Plant –
Sewage Operation Costs
(Period Covered: January 1, 2012 to December 31, 2014)*

In conclusion, due to the above-described defects, if released the Report will create a false and unfavorable impression of sewage treatment costs within our service area. If released, the Report will also have the effect of “torpedoing” economic development efforts in our region, at least insofar as water-consuming industries are concerned.

Thank you for your consideration of this response. Should you have any questions or wish to discuss this audit response in further detail, please do not hesitate to contact me. We acknowledge that, after a final audit report is issued by the State Comptroller, it will be our responsibility to collaborate with the Owners of the Binghamton-Johnson City Joint Sewage Project on the development of a written corrective action plan (“CAP”) within the time permitted by law.

Sincerely,

George Kolba, Jr., Chairman	Ron C. Davis Member	Eugene Hulbert, Sr. Vice-Chairman	Stephen Andrew Member	Edward Crumb Member
--------------------------------	------------------------	--------------------------------------	--------------------------	------------------------

cc: Hon. Richard C. David, Mayor, City of Binghamton
Hon. Gregory Deemie, Mayor, Village of Johnson City
Clarence E. “Chuck” Shager, Comptroller, City of Binghamton and Board Fiscal Officer
Thomas Johnson, Clerk/Treasurer, Village of Johnson City
Joseph A. Merrill, Binghamton City Clerk
Sewage Board Members
Catherine P. Young, Superintendent
Charles L. Pearsall, Business Manager
John Perticone, Esq., Co-Counsel
Alfred Paniccia, Esq., Co-Counsel
Michele Cuevas, Board Secretary
McKenna Sandell, Account Clerk

P.S.: We also express our concerns with the lack of transparency of the survey reported-on in the second paragraph of the body of the Report, used by the Comptroller’s audit team to select “comparable” plants (albeit, as reported in footnote 2, without verifying “the accuracy of the reported data” survey respondents provided). Because the survey questions and responses were not presented in any detail, we asked to receive a copy of the survey and its results. (Indeed, if we are consider pursuing the last part of Recommendation 2 in the Report, we will need to know who the survey participants were). We were instructed that we would need to submit a FOIL request to obtain the records associated with the survey. We did so, we but did not receive a substantive reply by the due date for this audit response. We asked for a time extension to submit this response in order to receive and review the survey records. Our request was denied. At such time as we receive the survey records, we intend to review them and consider supplementing this response, with any supplemental information to be posted online on pages following the charts to be posted at URL: <www.tinyurl.com/B-JCcomparisonCharts>.

See
Note 10
Page 25

APPENDIX B

OSC COMMENTS ON THE OFFICIALS' RESPONSE

Note 1

The majority of the response did not directly relate to our audit report objective, findings and recommendations.

Note 2

During audit planning, we did limited testing to further focus our audit objective. Our objective focused only on the sewage treatment plant costs.

Note 3

Generally accepted government auditing standards (GAGAS) require us to obtain an understanding of the program to be audited. The audit team gained a sufficient understanding of the operations to enable them to answer the objective of the audit, which related to the cost analysis of sewage treatment operations. As stated on page 3 of our audit report, we conducted this performance audit in accordance with GAGAS.

Note 4

Prior to surveying and analyzing any of the other eight plants' financial data, we discussed the selection of the plants with the Plant Superintendent and Board Chairman. Although concerns were raised during this discussion about the comparability of the Binghamton plant, Sewage officials agreed that the criteria used to select the eight plants was appropriate.

Note 5

We did not audit the operations of the comparable sewage treatment plants. We did not review any of the plants' revenues in our analysis because of the timing of reimbursements and the various ways they could be accounted for. Further, some of the revenues they received are for expenditures that were outside of our audit scope or were not expended or recorded in their accounting records. Instead, these were expended and accounted for on the Owners' records. Additionally, the revenues discussed may not offset the expenditures billed to the municipal users.

Note 6

Due to the various ways that each plant recorded its employee benefit costs, we did not include these costs in order to maintain comparability.

Note 7

Our report states “due to the two events in 2011, the Binghamton plant’s primary and disinfection treatment processes were changed to be more chemically reliant, which significantly increased the plant’s chemical costs.”

Note 8

The Sewage Cost for Median Usage Household information is not verified. The United States Census Bureau Estimated Median Household Income in 2013 reported on this chart appears to include the entire municipality and not just the service area as noted. Additionally, City of Binghamton’s figure is transposed and the Towns of Dickinson, Union, and Fenton figures are higher than what was reported by the U.S. Census Bureau. Additionally, according to the graph, the Sewage Cost for Medium-Usage Household has increased for the majority of the municipalities from 2013 to 2015.

Note 9

Our report states, “Therefore, the Owners and the Board abandoned those plans...” and not the costs.

Note 10

We obtained input from the Plant Superintendent on the questions to include in the survey. The survey was sent to the Binghamton Plant and the Sewage officials completed it. Further, the survey responses we received were only used to assist us in the selection of comparable plants. Moreover, we did not receive the request for the extension of time to file the response until two days before the due date.

APPENDIX C

AUDIT METHODOLOGY AND STANDARDS

To achieve our audit objective and obtain valid evidence, we performed the following procedures:

- We reviewed policies, procedures and Board minutes and interviewed Village, City and Board officials and employees concerning the operations and history of the Binghamton plant. In addition, we toured the plant with the Plant Superintendent to observe current operations at the Binghamton plant.
- We constructed a survey with input from the Plant Superintendent. We sent surveys to 59 sewage and wastewater treatment plants with combined collection systems (including the Binghamton plant) within New York State to obtain financial and operational information for comparison purposes. We also obtained the annual MGD of sewage flow treated for the same 59 plants from the DEC. We used this information along with the survey information to select eight comparable plants based on treatment processes, volume of flows treated annually, or plants that experienced similar disaster events. We discussed the criteria used to select these eight plants with the Plant Superintendent and Board Chairman. Although, they raised concerns about the comparability of the Binghamton plant, they generally agreed that the selection criteria used was appropriate.
- We obtained additional financial data from 2012 through 2014 from the Binghamton plant and the eight comparable plants and calculated the total and individual costs on a per MGD flow basis to determine if the Binghamton plant had high costs compared to the other eight plants. We also used this information to analyze the types of costs at the Binghamton plant that were unusually high as compared to the other eight plants.
- We also used the financial data to calculate the average annual amount per MGD flow that the Binghamton plant paid for chemicals and compared it to the average annual amount per MGD paid by the other six comparable plants with chemical costs to determine how much more the Binghamton plant paid for chemicals.
- We reviewed invoices related to professional services costs to determine amounts paid for legal and engineering services between 2012 and 2014 at the Binghamton plant.
- We reviewed the consent order from DEC to determine the new facility's completion deadline and the potential costs the Binghamton plant faces if the deadline is not met.

We conducted this performance audit in accordance with GAGAS. Those standards require that we plan and perform the audit to obtain sufficient, appropriate evidence to provide a reasonable basis for our findings and conclusions based on our audit objective. We believe that the evidence obtained provides a reasonable basis for our findings and conclusions based on our audit objective.

APPENDIX D

HOW TO OBTAIN ADDITIONAL COPIES OF THE REPORT

To obtain copies of this report, write or visit our web page:

Office of the State Comptroller
Public Information Office
110 State Street, 15th Floor
Albany, New York 12236
(518) 474-4015
<http://www.osc.state.ny.us/localgov/>

APPENDIX E
OFFICE OF THE STATE COMPTROLLER
DIVISION OF LOCAL GOVERNMENT
AND SCHOOL ACCOUNTABILITY

Andrew A. SanFilippo, Executive Deputy Comptroller
Gabriel F. Deyo, Deputy Comptroller
Tracey Hitchen Boyd, Assistant Comptroller

LOCAL REGIONAL OFFICE LISTING

BINGHAMTON REGIONAL OFFICE

H. Todd Eames, Chief Examiner
Office of the State Comptroller
State Office Building, Suite 1702
44 Hawley Street
Binghamton, New York 13901-4417
(607) 721-8306 Fax (607) 721-8313
Email: Muni-Binghamton@osc.state.ny.us

Serving: Broome, Chenango, Cortland, Delaware,
Otsego, Schoharie, Sullivan, Tioga, Tompkins Counties

BUFFALO REGIONAL OFFICE

Jeffrey D. Mazula, Chief Examiner
Office of the State Comptroller
295 Main Street, Suite 1032
Buffalo, New York 14203-2510
(716) 847-3647 Fax (716) 847-3643
Email: Muni-Buffalo@osc.state.ny.us

Serving: Allegany, Cattaraugus, Chautauqua, Erie,
Genesee, Niagara, Orleans, Wyoming Counties

GLENS FALLS REGIONAL OFFICE

Jeffrey P. Leonard, Chief Examiner
Office of the State Comptroller
One Broad Street Plaza
Glens Falls, New York 12801-4396
(518) 793-0057 Fax (518) 793-5797
Email: Muni-GlensFalls@osc.state.ny.us

Serving: Albany, Clinton, Essex, Franklin,
Fulton, Hamilton, Montgomery, Rensselaer,
Saratoga, Schenectady, Warren, Washington Counties

HAUPPAUGE REGIONAL OFFICE

Ira McCracken, Chief Examiner
Office of the State Comptroller
NYS Office Building, Room 3A10
250 Veterans Memorial Highway
Hauppauge, New York 11788-5533
(631) 952-6534 Fax (631) 952-6530
Email: Muni-Hauppauge@osc.state.ny.us

Serving: Nassau and Suffolk Counties

NEWBURGH REGIONAL OFFICE

Tenneh Blamah, Chief Examiner
Office of the State Comptroller
33 Airport Center Drive, Suite 103
New Windsor, New York 12553-4725
(845) 567-0858 Fax (845) 567-0080
Email: Muni-Newburgh@osc.state.ny.us

Serving: Columbia, Dutchess, Greene, Orange,
Putnam, Rockland, Ulster, Westchester Counties

ROCHESTER REGIONAL OFFICE

Edward V. Grant, Jr., Chief Examiner
Office of the State Comptroller
The Powers Building
16 West Main Street, Suite 522
Rochester, New York 14614-1608
(585) 454-2460 Fax (585) 454-3545
Email: Muni-Rochester@osc.state.ny.us

Serving: Cayuga, Chemung, Livingston, Monroe,
Ontario, Schuyler, Seneca, Steuben, Wayne, Yates Counties

SYRACUSE REGIONAL OFFICE

Rebecca Wilcox, Chief Examiner
Office of the State Comptroller
State Office Building, Room 409
333 E. Washington Street
Syracuse, New York 13202-1428
(315) 428-4192 Fax (315) 426-2119
Email: Muni-Syracuse@osc.state.ny.us

Serving: Herkimer, Jefferson, Lewis, Madison,
Oneida, Onondaga, Oswego, St. Lawrence Counties

STATEWIDE AUDITS

Ann C. Singer, Chief Examiner
State Office Building, Suite 1702
44 Hawley Street
Binghamton, New York 13901-4417
(607) 721-8306 Fax (607) 721-8313