

**NYC DEPARTMENT OF ENVIRONMENTAL PROTECTION
BUREAU OF ENGINEERING DESIGN AND CONSTRUCTION
CROTON FACILITY MONITORING COMMITTEE MEETING MINUTES**

THURSDAY, OCTOBER 18, 2007 – 7:00PM

The October meeting of the Croton Facility Monitoring Committee was held on September 20, 2007 at the DEP community office, 3660 Jerome Avenue, Bronx, NY 10467. Most of the attendees: CFMC representatives, elected officials' representatives, staff from DEP, its construction manager, design engineer, Integrity Monitor, and members of the public, are listed on the attached sheet. (*Attachment 1*)

The meeting began at approximately 7:10 PM; an agenda (*Attachment 2*) was available.

Welcome

Anthony Perez Cassino, Chair of Community Board #8, welcomed all to the meeting. He called the meeting to order because Greg Faulkner, Chair of the CFMC and of Community Board #7 was delayed. Mr. Cassino promptly began the meeting's public segment by calling on people who had signed up to speak.

Public Session

Karen Argenti, FIPNA, distributed her comments dated October 18, 2007 (*Attachment 3*) concerning the anniversary of the Clean Water Act and criticizing the city and DEP for inadequate watershed protection, uncontrolled combined sewer overflows, and insufficient public information on the internet. Specifically, she noted that DEP grants permits for groundwater and stormwater discharges that continue to pollute sewers and rivers. Instead DEP should strive to match predevelopment runoff, meaning restricting runoff to zero and groundwater to recharge areas of need, not throwing water down the drain as the current project does.

Derrick Baker, NWBCCC and participant in one of the DEP funded GED classes, said that the GED program was outstanding and that the attendees became a family while in the class. He said that the construction training was very appealing but that some of the GED students dropped out of the class. Mr. Baker said that more people should be aware of the GED opportunity. He encouraged DEP to distribute and post more flyers ahead of the next GED class. He added that more people would sign up for GED if a stipend were provided.

Robert Press, Committee of 100 Democrats, said that the ornamental walls and waterfalls that abut the Van Cortlandt Park site were beautiful but he found them to be off limits for most of the public. He expressed dissatisfaction that the Jerome Park Reservoir is not more accessible to the public. Finally, he said that citizen input is not represented sufficiently at the CFMC.

Elizabeth Thompson, KGNA, said she has not come to CFMC meetings for some time but that she's back now and will be attending future meetings with jobs still at the top of her priority list for the Croton Filter Plant.

Mr. Faulkner, who had arrived, closed the public session and asked whether the CFMC principals reviewed and would approve the September 20th meeting minutes. Parks Borough Commissioner Hector Aponte requested some modifications in the draft minutes pertaining to the reuse by the Parks and Recreation Dept and other agencies of groundwater from the site if it is feasible. Noting these text changes, Chairman Faulkner asked for approval of the minutes, as amended. A motion was made by Saul Scheinbach, Community Board #8, and seconded by Joe Gordon, representative of Council Member Koppell. The motion was unanimously adopted.

Mr. Faulkner asked DEP 1st Deputy Commissioner Steven Lawitts to provide information about the project's costs that in September Mr. Lawitts requested be placed on this meeting's agenda. Through use of a lengthy PowerPoint presentation (*Attachment 4*), Mr. Lawitts showed the costs reflected in the project's 1993 EIS, the cost of the construction bids that were opened in 2006, and the intervening higher costs of commodities and foreign exchange rate, as well as the current robust construction climate and 5 year look ahead for construction in the New York region. Overall, Mr. Lawitts explained there is an 89% increase in the project's costs from the earlier cost estimates.

Mr. Lawitts introduced Preston Niblack, Deputy Director of the city's Independent Budget Office, whose spread sheet was presented to the CFMC in September. Messrs. Lawitts and Niblack contrasted and clarified the areas where IBO costs differed from DEP's. Part of the differences are \$137 million for construction of the New Croton Aqueduct (a project that is independent of the filtration plant), and \$48 million in costs, which include \$13 million for the Inter Fund Agreement for city personnel who work directly on capital projects that city agencies don't allocate to project costs but IBO does. Mr. Lawitts added \$15 million for Con Edison power connection costs that he had recently learned about, \$20 million for additional parks improvements largely related to Roberto Clemente Park and rebid of the CRO 312 P plumbing contract (to encourage a larger bid pool) that resulted in adding \$3 million to the earlier bid. The IBO and DEP have reconciled the costs of the Croton Filter Plant; however, as described above, some of the costs may be represented to the public in slightly different formats.

Mr. Lawitts spoke of total life cycle costs of \$1.352 billion, computed from capital cost and 30 year operating costs and present value. He described the low inflation of ~ 2.75% in 2003 versus ~8% in 2007. He said that the large contractors, capable of building a project the size of Croton, now use 1% per month in inflation for a total of ~ 13% per year when estimating cost growth over long-term projects like Croton.

He explained that costs at the Eastview site, compared to the Van Cortlandt Park site, would likely have grown at a similar higher rate because of prevailing wage rates including premiums paid to attract workers in a competitive construction market. Mr. Lawitts said that another DEP capital project, to construct the Ultraviolet Disinfection

facility for the Catskill-Delaware water system, received only one bid and it was \$1.3 billion as against the engineer's estimate of \$1.0 billion. For the UV facility, the contractor must find project staffing beyond the region because the competitive New York market has produced a shortage of qualified trades people and construction managers. Staffing will come from Boston and other areas.

Mr. Cassino asked if Eastview would have been a cheaper site for Croton than Van Cortlandt Park. Mr. Lawitts said it would not because all costs would be inflated in Westchester just as they have been in the Bronx. Mr. Cassino said that DEP put itself at a disadvantage by not stating all of these factors in the first place, causing so much distrust and disagreement without a comprehensive explanation until now. He reflected on the \$243 million for Parks projects and \$293 million for design and construction management that hadn't been accounted for in the initial costs. He said that his opinion is that there were miscalculations by DEP about the costs. He asked specific questions about the dollar amounts that will be spent, for example, on copper and other commodities. Mr. Lawitts said he didn't have these specifics. Providing that level of detail would require going back to the detailed estimates that were prepared just before the bids were opened and trying to reconcile those estimates with the bids. There was additional discussion between Messrs. Lawitts and Cassino after which Mr. Cassino urged that all the costs should be disclosed in the future. Mr. Scheinbach said that he asked a number of questions at prior CFMC meetings because he felt certain that not all costs had been disclosed. Mr. Lawitts explained that when Bernard Daly, DEP's project manager, reported on costs at a prior meeting, he was announcing the costs of the construction bids that DEP opened and not the ancillary costs.

Mr. Lawitts said that at the December 2006 CFMC meeting and again in May 2007, it became clearer to Mr. Daly and Mr. Lawitts that the CFMC wanted a complete run-down on costs, not just the costs of the construction bids. Mr. Scheinbach said that it was beating a dead horse to keep comparing the Eastview site with Van Cortlandt Park; however, he said, that if the project were being built at Eastview, it could come on line a year sooner because it would not require the extensive excavation to place the facility underground in Van Cortlandt Park.

Laura Stockstill, Borough President Carrion's office, said the Lawitts presentation was very thorough. She said she is concerned with the cost escalation and its relationship to higher water rates. She asked Mr. Lawitts how increased water rates factor into the higher costs of DEP's capital program. Mr. Lawitts said that rate increases under discussion at present are being driven by lower than anticipated revenues from water and sewer customers. The city is seeking additional tools to encourage ratepayers to pay their bills. Ms. Stockstill said she would like DEP to present the relationship between sources of revenue for DEP's capital program and water rates at the next meeting. Mr. Lawitts said he would do so; however, he said that since he will not be available in mid to late November when the CFMC next meets, it would be at a future meeting.

Mr. Gordon said that higher costs of construction are affecting construction bids for libraries. He said at the Kingsbridge Library the construction budget has more than

doubled, from \$5.2 million in 2000 when plans were announced to \$13 million now. He said that actual costs are at least 37% over the engineer's estimate and that techniques are needed to track future costs. He urged that government take steps to predict future exigencies. He said that experts could be contacted for help to develop such a prognosticating tool.

Mr. Lawitts said that there have been other examples of significantly higher actual costs than the engineers' estimates on infrastructure. He cited the Willis Avenue Bridge, estimated at \$400 million which will cost \$660 million and the MTA's #7 line extension in which the winning bid is 25% higher than the estimate and was won by Skanska.

At this point, Mr. Faulkner recognized Ms. Argenti. She said that DEP should show the EIS work papers that Mr. Lawitts referred to in his presentation to the public. She said that schedule 7 of the EIS says "costs are based on" and she's angry and confused because both materials and labor are included in that schedule. She distributed another document to the CFMC.

Messrs. Scheinbach and Cassino restated their dissatisfaction with the earlier presentations by DEP. They thanked Mr. Lawitts for his detailed explanation about costs but said that the costs would have been easier to accept if all the numbers had been disclosed as soon as they were available. They also said that, while they have found nothing unethical about the costs, they want to put DEP on notice that DEP is indeed being monitored.

Mr. Niblack interjected a comment about shortfalls on library capital projects and said that amounts in the budget sometimes do not account for inflation or advanced engineering studies that occur on projects. He added that Deputy Mayor Dan Doctoroff has established a Task Force that is studying these issues, which are common to many city agencies and are systemic to the capital budget process. Mr. Gordon added to his previous comments about higher capital program costs.

Finally, Mr. Scheinbach asked Mr. Lawitts whether the project cost in 2011 would still be \$2.8 billion. Mr. Lawitts replied that he could not say. He added that there is a \$95 million estimate for off site work to build the force main from Van Cortlandt Park to the Hunts Point water pollution control plant, but that work has not been bid yet. *[Note, in addition to individual route tours with four community board District Managers, and a meeting with another, the route of the force main was presented to the CFMC at its April 2006 meeting and was the subject of a Bronx Service Cabinet meeting in May 2006.]* Mr. Lawitts said that there may also be changes in the project's scope and change orders to reflect field conditions that were unanticipated when the job was bid.

Mr. Faulkner asked Deputy Commissioner Anne Canty to update the CFMC about safety at Jerome Park Reservoir. She said that protocols for community notifications around Jerome Park Reservoir were being reviewed by the Deputy Commissioner of the Bureau of Water and Sewer Operations, but that a draft of organizations to be notified in the event of an emergency would soon be shared with the CFMC for input. Media and local

officials, including CFMC principals, will be on the list. She added that by the middle of 2008 there will be an alarm system installed at Jerome Park Reservoir. On a semi-annual basis the alarm will be tested. The CFMC and the community will be notified prior to any testing.

Mr. Faulkner asked Arne Fareth, Bureau of Engineering Design and Construction, to explain the groundwater and stormwater being collected and discharged on the Croton site, and the amount of groundwater that could be reused and ways it could be reused.

Mr. Fareth's presentation is attached as *Attachment 5*. Following his presentation, Mr. Fareth responded to questions. Mr. Cassino asked whether the same amount of groundwater/stormwater discharge would be needed following construction as is needed during construction. Mr. Fareth said the volume would be the same; however, there will no longer be groundwater from the tunnels that are now being constructed once they have been pressurized. Reusing some groundwater will be reflected in the DEP's future permit application for sewer discharge when the facility is in operation. Ms. Stockstill asked several questions related to CSO discharges during rain events. Mr. Fareth said that during wet weather, the Croton site retains some wet flow which is eventually pumped to the sewer system at no more than the permitted maximum. This water eventually reaches the Wards Island water pollution control plant which has a maximum capacity of 275 mgd during dry weather and 550 mgd during wet weather flow, with an average around 200 mgd. Ms. Stockstill asked whether the best management practices task force is using the Croton project to examine reuse options. Mr. Fareth said Croton is not being studied.

Mr. Scheinbach complimented Mr. Fareth's presentation but said that he had additional concerns, including the 25% increase in rain events, rising sea levels city-wide and their effects over the next 20, 30 and 50 years. Mr. Gordon said that there must be managed retention chambers on all construction projects, certainly including Croton. Mr. Scheinbach recommended that more creative ideas be brought to mitigation of groundwater/stormwater runoff by implementing strong reuse policies. Rich Friedman, DEP Special Counsel, said that the architects who are working on concepts for above-ground buildings at the site are planning for water reuse systems and they would make a presentation to the CFMC about their designs in the next several months. Mr. Cassino said this is a good idea, and he looks forward to a challenging golf course when the Croton project is complete.

The CFMC decided to have its next meeting on Thursday, November 29th at 7 PM in the DEP community office, and not to meet in December.

Mr. Faulkner asked Mr. Friedman to update the CFMC about jobs and training. Mr. Friedman distributed a report (*Attachment 6*) and reviewed it with the committee. Mr. Faulkner asked about alternatives to Project HIRE's training programs. He encouraged DEP to examine other programs. Mr. Friedman said that during the past month, Project HIRE has seen better results in retention and referrals of its students. He said Project HIRE has improved its record for pre-apprenticeships and for career counseling. Mr. Faulkner asked several questions about Project HIRE's applicants. He questioned Mr.

Friedman about the applicants who are not accepted into Project HIRE. Mr. Friedman explained that Bronx Community College's remedial program is accepting many of the people who aren't able to qualify for Project HIRE. After remedial training those persons are encouraged to apply to Project HIRE again. Mr. Friedman said that a new GED class will begin soon, operating from DEP's community office. Mr. Cassino asked whether all employees on the Croton site are NYC residents. Mr. Friedman said they are not.

Mr. Faulkner asked Faisal Choudhury, Parks & Recreation Dept, to discuss local jobs at the parks improvement sites being funded by DEP. Mr. Choudhury said that 10 sites have been completed, 20 are currently in construction, and 46 are in design. He said the projects cost between \$800,000 and \$4 million. On average, he said, the construction projects employ about 6 or 7 workers of whom about 1/3 are Bronx residents. He said he is working with the Bronx Overall EDC and Commissioner Aponte's office to encourage local hiring, and that Article 36 in construction contracts requires jobs and economic development reporting. As examples, he said that one project that cost \$2.3 million spent \$200,000 of the amount on local purchases. Another project that cost \$4.2 million spent \$200,000 of the amount on local purchases and employed 4 local residents on the job. Purchases for concrete, building supplies, fencing, asphalt and building components were made through Bronx vendors. He said that a list of potential workers is expected soon and that Parks is developing a spread sheet for quarterly reporting to the CFMC because, on a monthly basis, updates would not change. Commissioner Aponte said that it's unrealistic to believe that everyone who wants to work can be trained and employed. For example, he said that if 6000 persons apply for job training, only 600 actually finish the process and get jobs. Another 600 persons may be hired on a seasonal basis. Mr. Choudhury added that some construction projects are under consent decrees and the Department has turned to civil service lists to hire workers.

Mr. Faulkner asked if most Parks construction projects are union jobs and whether the Parks Dept uses the DEP list of job applicants to find workers. Mr. Choudhury said the DEP list goes into each RFP but that Parks is precluded from insisting that persons from the DEP list be hired. Mr. Faulkner said that when a presentation was made about Harris Field at his community board, the Parks Dept designer said s/he knew nothing about using a list for hiring. Commissioner Aponte explained that the designers come from a separate area of the Parks Dept but that he would re-educate the designers. He said that the construction contractors know that they should hire Bronx workers on their jobs.

Before adjourning, Mr. Scheinbach asked for a presentation about Emisstar's report and findings about Best Available Technology and emissions control at Croton at an upcoming meeting. The CFMC agreed.

Upon unanimous agreement, the meeting was adjourned.

<u>Name</u>	<u>Organization / Company</u>	<u>Address</u>	<u>Phone</u>	<u>Fax</u>	<u>E-Mail</u>
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Tom Farrell	URS/MP Construction Manager	3701 Jerome Avenue Bronx NY 10467	(718) 696-2000	(718) 324-3034	thomas.farrell@shawgrp.com
Brian Farrelly	URS/MP Construction Manager	3701 Jerome Avenue Bronx NY 10467	(718) 696-2000	(718) 324-3034	bfarrelly@pimie.com
Steve Kardin	NYC Dept of Investigations - IG	80 Maiden Lane New York NY	(914) 773-4507		
Max Adler	NYC Dept of Investigations - IG	80 Maiden Lane New York NY	(212) 825-3235		
Margot Perron	NYC Dept of Parks & Recreation	1 Bronx River Parkway Bronx NY	(718) 760-6816	(718) 430-1818	margot.perron@parks.nyc.gov
Hector Aponte	Bronx Parks Commissioner	1 Bronx River Parkway Bronx NY	(718) 430-1801		hector.aponte@parks.nyc.gov
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Leon Fendley	NYC Dept of Parks & Recreation	1 Bronx River Parkway Bronx NY	(718) 231-8470	(718) 231-8857	leon.fendley@parks.nyc.gov
Martha Holstein	Strategic Urban Solutions, Inc.	335 Adams Street Brooklyn, NY 11201	(718) 625-1005 x. 223	(718) 625-1032	mholstein@urbansol.com
Bernard Daly	DEP BEDC Project Manager	3701 Jerome Avenue Bronx, NY 10467	(718) 696-2000	(718) 324-3034	Bdaly@dep.nyc.gov
Steven Lawitts	1st Deputy Comm. DEP	59-17 Junction Boulevard Corona, NY 11368	(718) 595-6576	(718) 595-	slawitts@dep.nyc.gov
Robert Barnes	DEP Community Outreach Office - Croton	3660 Jerome Avenue Bronx, NY 10467	(718) 231-8470	(718) 231-8857	robertbar@dep.nyc.gov
Laura Stockstill	Office of Bronx Borough President Carrion	198 East 161st Street Bronx, NY 10451	(718) 590-3881		lstockstill@bronxbr.nyc.gov
Alex Kratz	Norwood News	3400 Reservoir Oval East Bronx NY 10467		(718) 324-2917	norwoodnews@norwoodnews.org
Manny Grossman	The Riverdale Press	6155 Broadway Bronx NY	(718) 543-6065		mgrossman@riverdalepress.com
David Roush	News 12 Bronx	930 Soundview Avenue Bronx NY	(718) 861-6800		news12bx@news12.com
Ken Parr	Community Board #12	136 East 235th Street Bronx NY	(718) 325-4967		

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Abby Bellows	NWBCCC	3209 Hull Avenue Bronx NY	(646) 642-6313; (718)655-1054		abby@northwestbronx.org
Greg Faulkner	Chair, Community Board #7	2559 Sedgwick Avenue Bronx NY 10468	(718) 482-5193	(718) 609-2096	gfaulkner@laqcc.cuny.edu
Anne Canty	Dep Comm,Commun. &Intergov.Affairs DEP	59-17 Junction Blvd. Corona NY 11368	(718) 595-3402	(718) 595-3477	acanty@dep.nyc.gov
Alex Kimball	Hazen & Sawyer Metcalf + Eddy JV	498 Seventh Avenue New York, NY	(212) 539-7122	(212) 614-9049	akimball@hazanandsawyer.com
Saul Scheinbach	Community Board #8	5676 Riverdale Avenue Bronx NY 10471	(718) 884-4740	(718) 796-2763	judisaul@aol.com
Lloyd Douglas	LDCC Business Consultant	165 West 127th Street New York NY 10027	(718) 292 - 3113	(718) 292-3115	
Joseph E. Gordon	Office of G. Oliver Koppell, Council Member	3636 Waldo Avenue Bronx NY 10463	(718) 549-7300	(718) 549-9945	m11gordo@council.nyc.ny.us
Anthony Perez Cassino	Chair, Community Board #8	5676 Riverdale Avenue Bronx NY 10471	(718) 884-4740	(718) 796-2763	acassino@millbank.com
Karen Argenti	Fort Independence Park Neighborhood Assn	PO Box 346 Bronx NY 10471	(646) 529 1990		KarenArgenti@aol.com
Lisa Emond	New York DOE	52 Chambers Street New York NY 10007	(212) 374-59977		
Preston Niblack	NYC Independent Budget Office		(212) 442-0632		preston@ibo.nyc.ny.us
Nestor Reyes	BOEDC		(718) 580-5022		
Ed Neisch	URS/MP Construction Manager	3701 Jerome Avenue Bronx NY 10467	(718) 696-2000	(718) 324-3034	eneisch@Pirnie.com
Pat Woods	FSWSG	2800 University Avenue Bronx NY	(718) 877-5790	(718) 796-8618	vpwoods1@aol.com
Faisal Choudhury	NYC Dept. of Parks & Recreation	1 Bronx River Parkway Bronx NY	(718) 760-6816		faisal.choudhury@parks.nyc.gov

NYC DEP - CROTON FCMC

Page 3 Continued.....

Attachment 2

AGENDA
Croton Facility Monitoring Committee Meeting
Thursday, October 18, 2007 – 7:00 PM
DEP Community Office – 3660 Jerome Avenue
Bronx NY 10467 (718) 231-8470

- | | |
|---|--|
| I. Welcome | Greg Faulkner |
| II. Comments from the Public – Sign up to Speak | 3 Minute Maximum - 30 Minutes. |
| III. Consider, Adopt Minutes of 9-20-07 CFMC Meeting | CFMC Principals |
| IV. DEP Presentation on Costs | Steve Lawitts, 1 st Dep.Comm |
| V. DEP Report on Safety at Jerome Park | BWSO Representative |
| VI. DEP Presentation- Stormwater/Groundwater and Reuse of Stormwater/Groundwater | Arne Fareth, BEDC, DEP |
| VII. CFMC Discussion & Set Next CFMC Meeting | Greg Faulkner, CFMC Principals |
| VIII. DEP Report on Jobs & Training | Anne Canty, Deputy Commissioner
Rich Friedman, Sp. Counsel, DEP |
| IX. Parks Department Report on Jobs | Faisal Choudhury, Leon Fendley
Parks & Recreation Dept. |
| X. Adjourn | |

Comments to the Croton Water Treatment Plant, Facilities Monitoring Committee, October 18, 2007, Karen Argenti

Today, while many celebrate 35 years of the Clean Water Act by remembering its successes. This meeting, and this City's actions to protect our water, are a grim reminder of the **CWA's** failures. In each instance, no matter what the Mayor's "Smoke and Mirrors" **PlanNYC** says, this City has chosen to pollute rather than clean, to fix with a band aid rather than cure, and to throw away and tear down rather than sustain.

While safe drinking water was the result of the CWA movement, the truth is that filtering it is not, it is admitting failure. First, the DEP failed to protect our drinking water in the Croton Watershed, and now we are paying and paying and paying to build a monument to that failure, the filter plant.

On the day that Bronx Council for Environmental Quality (BCEQ) signed on to a letter supporting the Sewage Overflow Community Right to Know Act, we find that as part of this filter plant project, the DEP failed again and choose to allow pollution of our sewers and treatment plants.

This project will inappropriately and continually discharge ground water, and stormwater into the sewer and the Harlem River. People fish and boat and may even swim in the Harlem River! You should tell the Mayor, this is **NOT** the purpose of the Stormwater Pollution Prevention Plan, and it is **NOT** the way to a sustainable urban environment.

The DEP could have opted to limit pollution, and set an excellent example for development projects all over the City. New York City could have been at the cutting edge, but once again, the DEP failed to protect our surrounding water bodies by allowing CSOs to continue unabated, and with no cure in sight!

More importantly, the DEP feels it is acceptable to keep this information to itself. While they have posters and bus shelter signs that ask the public to not dump into the sewer because the garbage pollutes the beaches, incredibly, this only applies to us and **NOT** to the DEP itself! Today we will probably hear how it is ok for the DEP to give permits to projects discharging stormwater runoff and groundwater into the sewers and ultimately our beaches. This could very well be why our subways overflowed with rainwater a couple of months ago. Does any one know for sure about the permits other than taking the DEP's word for it? Are they on the internet as the DOB permits are listed? No way! More spoke and mirrors from this out of control agency.

In the final analysis, we should target predevelopment runoff at **ZERO** for any event up to the 100-year storm. Thus, a new project (such as the CWTP) should strive to match predevelopment runoff, meaning restricting runoff to zero. Groundwater should be used to recharge areas of need, not thrown down the drain. The current project does not do that, and falls short of the Mayor's goals.

Karen Argenti, 646-529-1990
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Croton Filtration Plant Program Costs

**Croton Facilities Monitoring
Committee**

October 18, 2007

Agenda

- **Capital Costs in EIS**
- **Recap previous DEP cost presentations**
- **Reconcile with IBO report**
- **Reconcile with A/M Dinowitz presentation**
- **Life-Cycle Costs in EIS**
- **Mosholu and Eastview**

FEIS Executive Summary: (1 of 2)

TABLE 1. SITE COMPARISON FOR THE CROTON WATER TREATMENT PLANT

	Eastview NCA	Eastview KCT	Mosholu	Harlem River
Approximate dimensions – main building	1,000t. X 267 ft	1,000. X 267 ft	555 ft X 685 ft	920 ft X 260 ft.
Approximate dimensions- Other buildings	51 ft. X 44 ft.	51 ft. X 44 ft.	60 ft X 75 ft 60 ft. X 60 ft.	320 ft. X 180 ft.
Approximate building footprint area	262,000 sq. ft	262,000 sq. ft	380,000 sq. ft	272,000 sq ft
Maximum main building height above grade	65 ft	65 ft	Main building at grade - 0 ft. Others ~ 30 ft.	Penthouse – 76.5 ft. Roof – 65 ft.
Length of Raw Water Tunnel	7,500 ft	7,500 ft	900 ft	1,415 ft
Length of Treated Water Tunnel	7,500 ft 1,950 ft.	1,950 ft.	3,680 ft combined 0 High Level 650 Low Level	350 ft combined 6,640 High Level 1,200 Low Level
Approximate area affected during construction	30 acres	30 acres	28 acres	17.5 acres

FEIS Executive Summary: (2 of 2)

TABLE 1. SITE COMPARISON FOR THE CROTON WATER TREATMENT PLANT

	Eastview NCA	Eastview KCT	Mosholu	Harlem River	
Approximate finished WTP site area (buildings and roads)	12 acres	12 acres	11 acres	11 acres	
Construction Costs, 2003⁴ \$ million	\$1,546	\$1,196	\$992	1,174	
Estimated Mitigation/Attenuation 2003 \$ million	\$23	\$23	\$43	\$11	
Amenities 2003 \$ million	\$28	\$28	\$200	\$30	
Total Capital Costs 2003 \$million	\$1,597	\$1,247	\$1,235	\$1,215	
Annual Operating Costs, 2003 \$million	\$33	\$33	\$22	\$25	
Life Cycle Costs, 2003 \$million	\$1,814	\$1,521	\$1,352	\$1,378	4



Estimate of Construction Costs in EIS

The EIS has a \$992 million construction cost estimate in 2003 dollars:

Contract	Cost (2003 \$ in Millions)
CRO-312G General contract	
CRO-312E1 Electrical contract	
CRO-312E2 Electrical contract	
CRO-312H HVAC contract	
CRO-312P Plumbing contract	
CRO-311 Site Preparation	
Subtotal	\$823
CRO-313 Water Conveyance & Connecting Tunnels	
Off-site work (Metering Chamber, Force Main, etc)	
Subtotal	\$169
Total	\$992

Estimate of Construction Costs as of 12/21/06

Construction was estimated to cost \$1.896 billion as of 12/21/06



Contract	Cost (\$ in Millions)
CRO-312G General contract	\$1,127
CRO-312E1 Electrical contract	\$135
CRO-312E2 Electrical contract	\$38
CRO-312H HVAC contract	\$106
CRO-312P Plumbing contract	\$56
CRO-311 Site Preparation	<u>\$128</u>
Subtotal	\$1,589
CRO-313 Water Conveyance & Connecting Tunnels	\$212
Off-site work (Metering Chamber, Force Main, etc)	<u>\$95</u>
Subtotal	\$307
Total	\$1,896

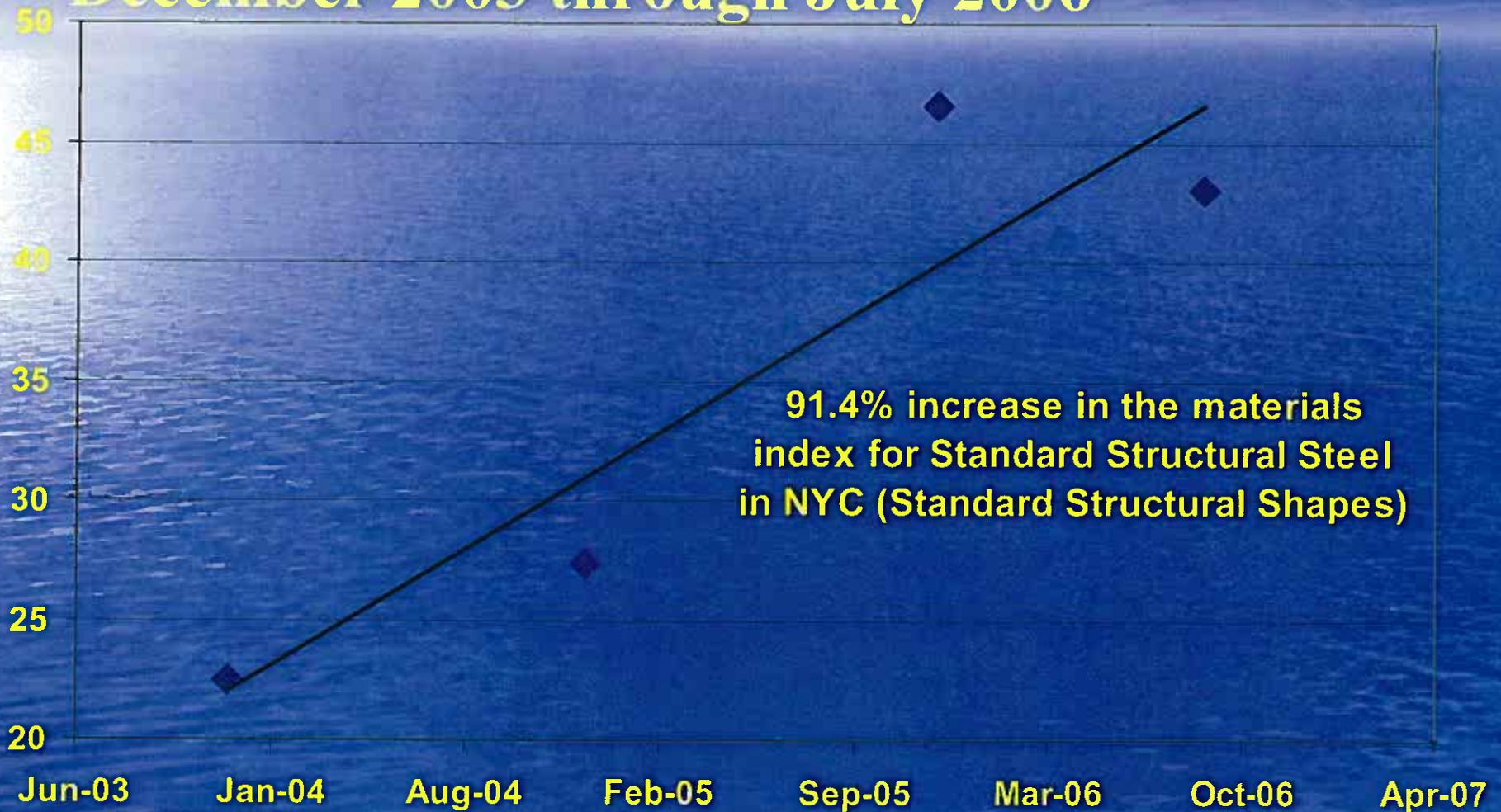
Changes in Materials Prices



Commodity	Percent Increase in Producer Prices From November 2003 to November 2006
Concrete	33%
Carbon Steel, Rebar	48%
Stainless Steel	37%
Copper	133%
Ductile Iron Pipe	34%

ENR 20-City Cost Indexes (New York City)

December 2003 through July 2006



Large Public Works projects in the New York Area Affecting the Bidding Climate

- 7 Line Subway Extension
- Eastside Access
- 2nd Ave Subway

- World Trade Center Reconstruction
- Fulton Street Transportation Center

- Mets Stadium
- Giants Stadium
- Yankee Stadium

- United Nations Rehabilitation

- Cat/Del UV
- Newtown Creek WPCP

Excerpts from the Discussion at the 12/21/06 Meeting

- “[The 12/21/06 estimate of \$2,096 million] excludes the DEP funds for parks improvements.”
- “Mr. Scheinbach asked whether project design and construction management were included in the projections. Mr. Lawitts said they are not. Rather, they are part of the overall project budget and funds are appropriated separately.”

Source: Minutes of 12/21/06 Meeting, page 6

Comparison of EIS to 12/21/06 Estimate with Mitigation and Amenities Added

	Costs		
	EIS 2003 \$ million	12/21/06 Presentation With Mitigation and Amenities Added	% Increase
Construction Costs	\$ 992	\$ 1,896	91%
Estimated Mitigation/Attenuation	\$ 43	\$ 43	0%
Amenities	\$ 200	\$ 200	0%
Total Capital Costs	\$ 1,235	\$ 2,139	73% ₉₁



Estimate of Construction Costs as of 5/17/07

Construction was estimated to cost \$2.096 billion as of 5/17/07

Contract	Cost (\$ in Millions)
CRO-312G General contract	\$1,327
CRO-312E1 Electrical contract	\$135
CRO-312E2 Electrical contract	\$38
CRO-312H HVAC contract	\$106
CRO-312P Plumbing contract	\$56
CRO-311 Site Preparation	\$128
Subtotal	\$1,789
CRO-313 Water Conveyance & Connecting Tunnels	\$212
Off-site work (Metering Chamber, Force Main, etc)	\$95
Subtotal	\$307
Total	\$2,096

Excerpts from the Discussion at the 5/17/07 Meeting

- “[Mr. Scheinbach] asked whether the Parks mitigation money is reflected in the costs. Mr. Lawitts said that it is not listed on the handout but is in excess of \$200 million.”
- “[Mr. Scheinbach] asked about the design costs. Mr. Lawitts said they are not reflected in the handout.”

Source: Minutes of 5/17/07 Meeting, page 6

Comparison of EIS to 5/17/07 Estimate with Mitigation and Amenities Added

	Costs		
	EIS 2003 \$ million	5/17/07 Presentation With Mitigation and Amenities Added	% Increase
Construction Costs	\$ 992	\$ 2,096	111%
Estimated Mitigation/Attenuation	\$ 43	\$ 43	0%
Amenities	\$ 200	\$ 200	0%
Total Capital Costs	\$ 1,235	\$ 2,339	89%

Excerpts from the Discussion at the 6/21/07 Meeting

- **“Mr. Lawitts said that...the cost of Croton’s design and construction management contracts...is \$293 million.”**

Source: Minutes of 6/21/07 Meeting, page 6

Estimate as of 6/21/07 with Mitigation, Amenities, Design and Construction Management Added

	6/21/07 Update
Construction Costs	\$ 2,096
Estimated Mitigation/Attenuation	\$ 43
Amenities	\$ 200
Total Capital Costs	\$ 2,339
Design and Construction Management	\$ 293
Total Capital, Design and CM Costs	\$ 2,632

Independent Budget Office
Croton Filtration Plant Budget Summary

Reference	Description	PLANNED	COMMITTED a.o. 9/20/07
CRO-311	WTP Site Preparation	\$ 120,392,000	\$ 134,982,716
CRO-312G	WTP Construction - General Contract	1,327,700,000	1,327,700,000
CRO-312E	WTP Const. - Electrical Contracts	172,358,000	172,358,000
CRO-312P	WTP Const. - Plumbing Contract	58,475,000	-
CRO-312H	WTP Const. - HVAC Contract	105,700,000	105,700,000
CRO-312	Force Main to Hunts Point WPCP	25,000,000	-
CRO-313	Water Conveyance & Connecting Tunnels	\$ 207,802,000	\$ 206,668,900
CRO-313C	Offsite Facility Jerome Reservoir to CFP	70,000,000	-
	Subtotal, Filtration Plant Construction Costs	\$ 2,087,427,000	\$ 1,947,409,616
HED-545/CON ED [CRO-312]	Con Edison Payment	15,000,000	-
HED-545/CLUBHOUSE	Club House Reconstruction	10,000,000	-
HED-545/FIRST TEE	First Tee (Golf Course Concessionaire)	16,835,000	11,082,208
HED-545/OMB-VE	OMB Value Engineering	1,246,000	1,011,241
	HED-543: WTP Design	\$ 197,868,000	\$ 105,890,193
OCC-ID 007	HED-545CM: Construction Management	\$ 94,396,000	\$ 69,394,702
	Traffic Mitigation (EIC Associates)		\$ 1,111,973
	Cumulative Subtotal, Filtration Plant Construction & Assoc. Costs	\$ 2,422,772,000	\$ 2,135,899,934
Parks, Mitigation & Amenities			
CRO-M&A	Mitigation & Amenities	23,386,000	-
GREEN-BX	Tree Planting in The Bronx	10,000,000	10,000,000
CLEMENTE <i>(excl. \$10 m in State funds)</i>	Reconst. Of Roberto Clemente Park	10,000,000	3,000,000
	Parks Projects [846; see list] <i>(incl. IFA)</i>	197,935,000	64,321,505
	ULURP Parks Projects [see list] <i>(incl. IFA)</i>	15,541,000	16,563,866
	Subtotal, Parks, Mitigation & Amenities	256,862,000	93,885,371
		CUMULATIVE SUBTOTAL	\$ 2,679,634,000
			\$ 2,229,785,305
CRO-NCA	Inspection & Rehab of New Croton Aqueduct	\$ 136,922,000	\$ 42,659,309
GRAND TOTAL, CROTON FILTRATION PROJECT COSTS		\$2,816,556,000	\$2,272,444,614

Independent Budget Office

Croton Filtration Plant Budget Summary (1 of 2)

Reference	Description	PLANNED	COMMITTED a.o. 9/20/07
CRO-311	WTP Site Preparation	120,392,000	134,982,716
CRO-312G	WTP Construction - General Contract	1,327,700,000	1,327,700,000
CRO-312E	WTP Const. - Electrical Contracts	172,358,000	172,358,000
CRO-312P	WTP Const. - Plumbing Contract	58,475,000	
CRO-312H	WTP Const. - HVAC Contract	105,700,000	105,700,000
CRO-312	Force Main to Hunts Point WPCP	25,000,000	
CRO-313	Water Conveyance & Connecting Tunnels	207,802,000	206,668,900
CRO-313C	Offsite Facility Jerome Reservoir to CFP	70,000,000	-
	Subtotal, Filtration Plant Construction Costs	\$2,087,427,000	\$1,947,409,616
HED-545/CON ED [CRO-312]	Con Edison Payment	15,000,000	-
HED-545/CLUBHOUSE	Club House Reconstruction	10,000,000	-
HED-545/FIRST TEE	First Tee (Golf Course Concessionaire)	16,835,000	11,082,208
HED-545/OMB-VE	OMB Value Engineering	1,246,000	1,011,241
	HED-543: WTP Design	197,868,000	105,890,193
OCC-ID 007	HED-545CM: Construction Management	94,396,000	69,394,702
	Traffic Mitigation (EIC Associates)		1,111,973
	Cumulative Subtotal, Filtration Plant Construction & Assoc. Costs	\$2,422,772,000	\$ 2,135,899,934

Independent Budget Office

Croton Filtration Plant Budget Summary (2 of 2)

Reference	Description	PLANNED	COMMITTED a.o. 9/20/07
Parks, Mitigation & Amenities			
CRO-M&A	Mitigation & Amenities	23,386,000	-
GREEN-BX	Tree Planting in The Bronx	10,000,000	10,000,000
CLEMENTE	Reconst. Of Roberto Clemente Park	10,000,000	3,000,000
<i>(total, \$10 m in State funds)</i>			
	Parks Projects [846; see list] <i>(incl. IFA)</i>	197,935,000	64,321,505
	ULURP Parks Projects [see list] <i>(incl. IFA)</i>	15,541,000	16,563,866
	Subtotal, Parks, Mitigation & Amenities	256,862,000	93,885,371
	CUMULATIVE SUBTOTAL	\$2,679,634,000	\$2,229,785,305
CRO-NCA	Inspection & Rehab of New Croton Aqueduct	136,922,000	42,659,309
	GRAND TOTAL, CROTON FILTRATION PROJECT COSTS	\$2,816,556,000	\$2,272,444,614
IFA	CRO-M&A	1,000,000	-
	CRO-NCA	800,000	800,000
	GREEN-BX	100,000	-
	HED-545	11,089,000	7,086,591
	Total, IFA	\$12,989,000	\$7,886,591

Reconciliation of IBO and DEP Costs

(\$ Millions)

IBO Total	\$ 2,817
Less: New Croton Aqueduct	\$ -137
IBO Total Excl. NCA	\$ 2,680
DEP Total	\$ 2,632
\$ Difference	\$ 48
% Difference	1.8%

Components of IBO and DEP Reconciliation (\$ Millions)

Total Difference	\$ 48
IFA	\$ 13
Con Ed	\$ 15
Additional Parks Improvements	\$ 20

Presentation by A/M Dinowitz 9/20/07

CURRENT Construction Estimates omitted

DEP Omitted more than \$697.4 million!

Contract	Cost (\$ in Millions)
Mitigation (awarded from 1999 ULURP)	\$43
Amenities (park improvements for taking parkland)	\$200
CRO-315G - Construction at Jerome Park demo plant and Gate House Rehabilitation	\$3.6
CRO-315E – Electrical	\$.8
EIS review and approvals	?
Traffic Mitigation	?
Plant Start and Testing up 2.5%	\$50
Design Contract at 10%	\$200
Construction Management 10%	\$200
Total omitted costs	\$697
Total DEP costs	\$2,096
Total DEP costs + omitted costs =	\$2,793

A/M Dinowitz 9/20/07 Presentation Annotated

Contract	Cost (\$ Millions)	Annotation
Mitigation (awarded from 1999 ULURP)	\$43	Discussed on 12/21/06 and 5/17/07
Amenities (park improvements for taking parkland)	\$200	
CRO-315G - Construction at Jerome Park demo plant and Gate house Rehabilitation	\$3.60	N/A: Independent project; not part of Croton Filtration Plant
CRO-315E - Electrical	\$0.80	
EIS review and approvals	?	N/A: Included in Design Costs
Traffic Mitigation	?	N/A: Included in CRO-311 Site prep contract
Plant Start and Testing up 2.5%	\$50	N/A: Included in CRO-312G General Contract
Design Contract at 10%	\$200	Discussed on 6/21/07 that Design and Construction Management combined are <u>\$293 million</u>
Construction Management 10%	\$200	
Total omitted costs	\$697	

Design and Construction Management Costs

	Costs			Difference	%
	Minutes of 6/21/07	IBO	A/M Dinowitz 9/20/07		
Design		\$ 198	\$ 200		
Construction Management		\$ 94	\$ 200		
Total Design and Construction Management	\$ 293	\$ 292	\$ 400	\$ 107	37%

FEIS Executive Summary: (2 of 2)

TABLE 1. SITE COMPARISON FOR THE CROTON WATER TREATMENT PLANT

	Eastview NCA¹	Eastview KCT²	Mosholu³	Harlem River
Approximate finished WTP site area (buildings and roads)	12 acres	12 acres	11 acres	11 acres
Construction Costs, 2003⁴ \$ million	\$1,546	\$1,196	\$992	1,174
Estimated Mitigation/Attenuation 2003 \$ million	\$23	\$23	\$43	\$11
Amenities 2003 \$ million	\$28	\$28	\$200	\$30
Total Capital Costs 2003 \$million	\$1,597	\$1,247	\$1,235	\$1,215
Annual Operating Costs, 2003 \$million	\$33	\$33	\$22	\$25
Life Cycle Costs, 2003 \$million	\$1,814	\$1,521	\$1,352	\$1,378

TABLE 5. SUMMARY OF COST ESTIMATES

2.75% inflation, 6.4% interest, 30-year life cycle.

	2002 EV CDR with NCA Rehab	2002 EV CDR with KCT	2003 MGC CDR
Total Capital Costs including MOU Commitments	\$1,597	\$1,247	\$1,235
Total Annual Operating Costs	\$33	\$33	\$22
Total Life Cycle Cost	\$1,814	\$1,521	\$1,352

Total Life Cycle Cost: \$1,352 Million

- **“Life Cycle” is:**
 - Capital Cost
 - 30-year Operating Cost
- **Present Value**
- **Standard financial analysis methodology**

Total Life Cycle Cost: \$1,352 Million

How much would need to be invested in 2003 to pay for the capital and operating costs?

- 1. Four-year capital cost stream inflated at 2.75% per year**
- 2. Thirty-year operating cost stream inflated at 2.75% per year**
- 3. The two cost streams are then discounted back to 2003 using a 6.4% interest rate**

COMPARISON OF FSEIS COSTS VS. CURRENT ESTIMATED COSTS – MOSHOLU AND EASTVIEW SITES

	A	B	C	D	E
	MOSHOLU SITE	MOSHOLU SITE		EASTVIEW SITE	
Description	Current Estimated Costs	Final Supplemental EIS (FSEIS) Estimated Costs (Nov 2003 \$)	FSEIS Estimated Costs Escalated to Mid-Point of Construction (June 2009)	Final Supplemental EIS (FSEIS) Estimated Costs (Nov 2003 \$)	FSEIS Estimated Costs Escalated to Mid-Point of Construction (June 2009)
Total Construction Costs	\$2,362	\$1,235	\$2,096	\$1,247	\$2,159

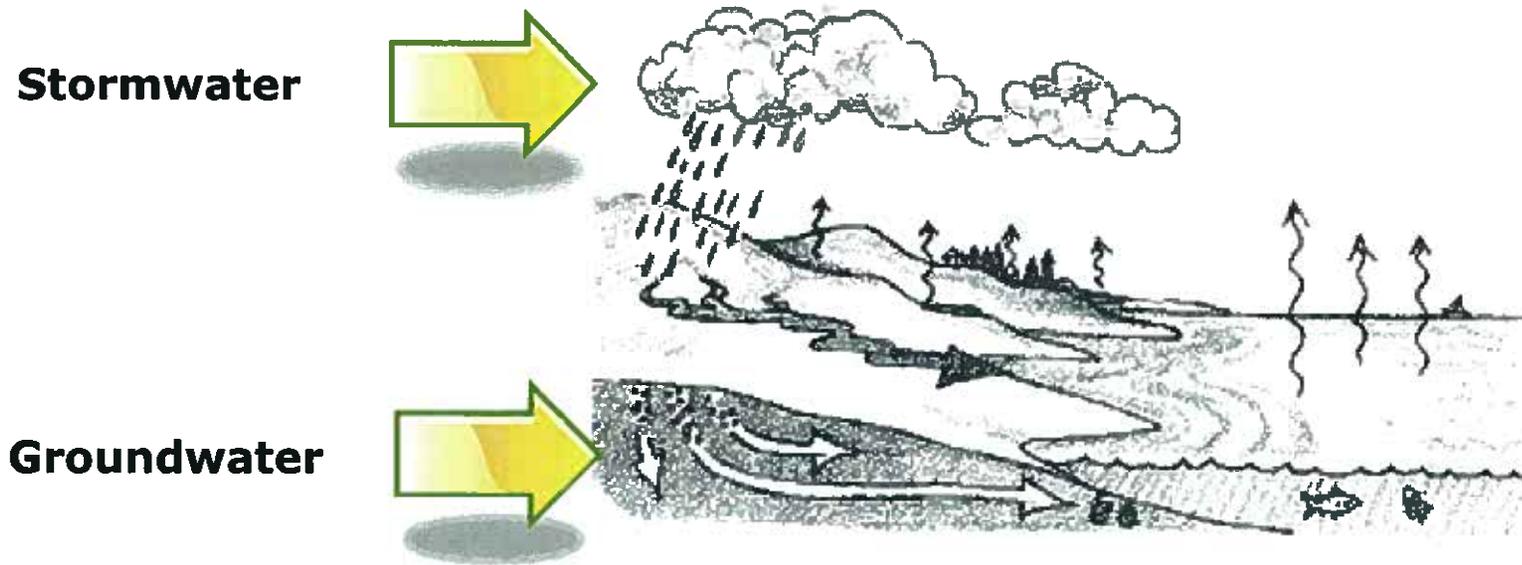


Groundwater and Stormwater at the Croton Filter Plant Site

*New York City Department of
Environmental Protection
October 18, 2007*

Groundwater and Stormwater at Croton

Groundwater and Stormwater: An Overview



Groundwater and Stormwater at Croton

Groundwater and Stormwater: Pre-Construction

- Site experienced stormwater runoff before construction
- Some stormwater was absorbed naturally by ground, but most would runoff into local sewers.



Groundwater and Stormwater at Croton

Groundwater and Stormwater: During Construction

- Because the Croton Filter Plant is being constructed below grade, there are both groundwater and stormwater issues that need to be addressed
 - Groundwater seeps into construction site from water table through the surrounding soils
 - Stormwater comes from rain events, and would require drainage regardless of whether or not construction site was there
- Water pools in low-points of construction area and requires drainage for safety and to facilitate efficient work schedule



Groundwater and Stormwater at Croton

Need for Discharge of Water

- Safety of onsite workers and equipment
 - Standing pools of water pose environmental health and safety risks to workers who could slip, fall or become injured
 - Equipment malfunctions can be caused by wet conditions
- Ensure project schedules are met
 - Work must stop when there is standing water
 - For construction activities, particularly placing concrete, dry conditions are necessary



Groundwater and Stormwater at Croton

Important Considerations

- During wet weather, the Croton site currently pumps less into the drainage system than was pumped before construction started
 - Construction site acts as natural stormwater retention area, keeping excessive wet weather flows from sewers during heavy rain events
- Even if Croton project were to discharge the permitted maximum, it would be discharging 1/10 of 1% of the total quantity of wastewater in the NYC system
- Draining stormwater and groundwater from the site has almost no impact on the overall price of the Croton project and does not add cost to DEP wastewater treatment operations



Groundwater and Stormwater at Croton

Permitting Process During Construction

- During construction, all contractors in the City must apply for permits
 - DEP's Bureau of Water and Sewer Operations administers permits for all projects Citywide
 - All drainage at Croton is monitored by Construction Manager and DEP



Groundwater and Stormwater at Croton

Permits During Construction

- Site Prep and Tunnel Contractor (Cro-311 and 313 contracts)
 - Permit amount: 1,196,000 gallons/day maximum
 - Average dewatering on dry day is only 115,000 gallons/day (~1/10th of permit)
 - Main Excavation Pit: 50 gallons/minute or 72,000 gallons/day
 - Tunnel: 30 gallons/minute or 43,000 gallons/day
 - Maximum drainage (5-Year Storm Event): 1,196,000 gallons/day
- Filter Plant Contractor (Cro-312 contracts)
 - Application pending
- DEP will continue to investigate whether some of this water can be used for other purposes



Groundwater and Stormwater at Croton

Permitting Process During WTP Operation

- For the Operation of the Plant, DEP has applied and received approval for Site Connection Permit.
 - The Site Connection Permit is for a maximum allowable discharge of 10.5 cfs or 6.7 mgd when the plant is in operation.
- DEP also received SPDES permit from NYSDEC
 - Was acquired, though not necessary



Groundwater and Stormwater at Croton

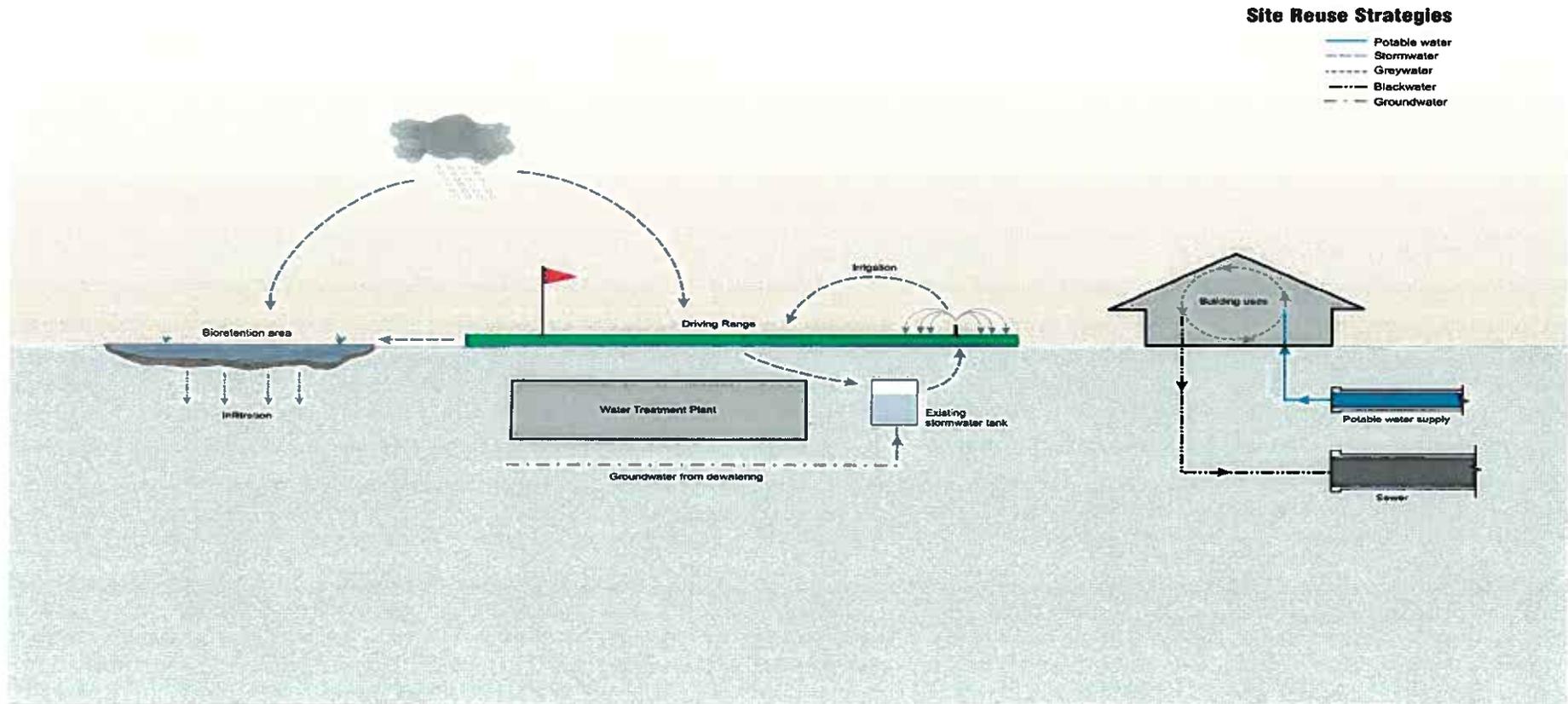
Reusing Stormwater and Groundwater during WTP Operation

- DEP is coordinating with Parks and other agencies on potential re-use options
- DEP is committed to green construction for WTP and above-ground buildings
 - Architect investigating use of groundwater in above-ground buildings and for watering golf-course
 - Estimate that the golf course alone will require 250,000 gallons/day
 - Architectural firm will describe plans for these buildings to CFMC in coming months



Groundwater and Stormwater at Croton

Reusing Stormwater and Groundwater



GRIMSHAW

Croton Filter Project: Report on Jobs & Training**October 2007**

As part of DEP's extensive community outreach efforts in the Bronx, the following standard reporting form was developed to track job training and hiring initiatives:

General Statistics

- ◆ Total number of applicants who have applied for jobs and/or training: **1030** (*additional 123 inactive*)
- ◆ Total number who reside in the Bronx : **884** (*700 Non-union, 184 Union*)
- ◆ Total number who have either been hired or accepted for training: **239**
- ◆ Percent of total applicants who have been, or are in training or working: **23.3%** *of all applicants, 30.2% of non-union applicants, and 33.8% of non-union Bronx applicants.*

GED Courses

- ◆ Total number of applicants who require a GED for apprenticeship programs and/or jobs: **239** (*205 from the Bronx*)
 - ◆ Number of applicants from original list accepted into 2 GED classes: **65**. **35** in the first class (*of whom 26 completed the class*) and **30** in the current class.

Pre-Apprenticeship Programs

- ◆ Number of applicants accepted into any pre-apprentice program. **109**
 - **7** in OAI
 - **5** in Strive
 - **1** in NEW
 - **65** in Project Hire.
 - **31** in CityTech/Building Works program
- ◆ **Project Hire:**
 - **4** graduated in previous program
 - **61** have been accepted in current program- set to graduate on November 9th. Of these:
 - **7** placed in apprenticeship programs
 - Interviews now occurring with 731 (Laborers) Con Ed, Local 1 (Bricklayers), DC9
 - **101** tested for next class, set to start either before Thanksgiving or early January
- ◆ **CityTech/Building Works: 21** graduates, of whom:
 - **4** placed in Carpenter's Union
 - **1** placed at Con Ed
 - **2** placed at DEP
 - **5** passed electrician's exam
- ◆ Number of pre-apprenticeship trainee's now union apprentices: **15** (*9 from Project HIRE, 4 from Building works, 2 directly applied to Union on recommendation of outreach office*).

Other training

- ◆ Workforce 1: **75** have gone through career counseling assessment
 - **5** have received jobs

Workers On-Site

- ◆ Number of workers at Croton during August: **105**
- ◆ Of those, how many live in the Bronx: **16**
- ◆ Bronx residents as percent of total Croton workforce during August: **15%**
- ◆ Total number of New York City workers at Croton during August: **37 (35%)**

Goods and Services

- ◆ **\$172m** purchased or to be purchased in the Bronx