

**DRAFT**

New York City  
Department of  
Environmental Protection



# Croton Water Treatment Plant Upcoming Construction At Jerome Park Reservoir

June 19, 2008

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## Presentation Outline

- Overview of Croton Work at JPR
- Construction Schedule
- Shaft & Meter Chamber Excavation

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## Croton Project Overview

Gate House  
No. 1

New Croton  
Aqueduct

Water  
Treatment  
Plant

Jerome Park  
Reservoir  
(JPR)

Tunnel Shafts



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## Overview of Upcoming Work at Jerome Park Reservoir

- Work consists of five separate contracts:
  - CRO 313: Connection to the NCA of the treated and raw water tunnels and construction of Shaft 21A
  - CRO 315: Demolition of the Demonstration Building and installation of Chlorine Scrubber at Gate House 5
  - CRO 334: Rehabilitation of NCA
  - CRO 312 OS: Construction of Shaft and Meter Chamber and interior work at Gatehouses
  - CRO 312 G: Removal of temporary Treated Water bulkhead in NCA at JPR

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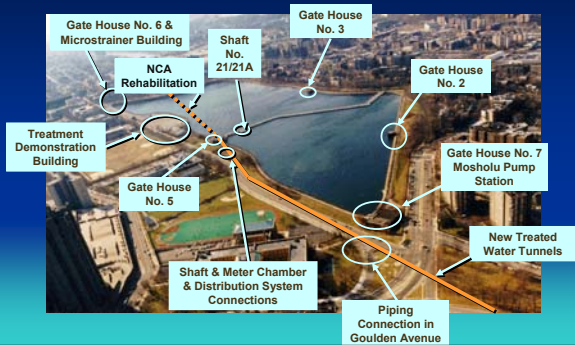
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## Jerome Park Reservoir Overview



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## Current Construction Activities – Demolition of Treatment Demonstration Building CRO 315

- Asbestos abatement completed May 14, 2008
- Removal of interior piping, supports and recyclable equipment is ongoing
- Demolition of building to be completed within six months



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## Current Construction Activity – Raised Bore for New Tunnel Shafts CRO 313

- CRO 313 is ahead of schedule and therefore assisting CRO 312 OS by performing this task, which originally fell under CRO 312 OS
- A critical step in constructing the Shaft that will connect the Meter Chamber to the Treated Water Tunnel
- Installation of Temporary Construction Power
- Raised Bore at Shaft and Meter Chamber
  - Installation of Temporary Sound Barrier and Sheeting
  - Limited Excavation of Soil and Rock (52 foot x 24 foot area)
  - Raised Bore Two Shafts



➤ Construct new Shaft 21A at Reservoir Dividing Wall using Raised Bore

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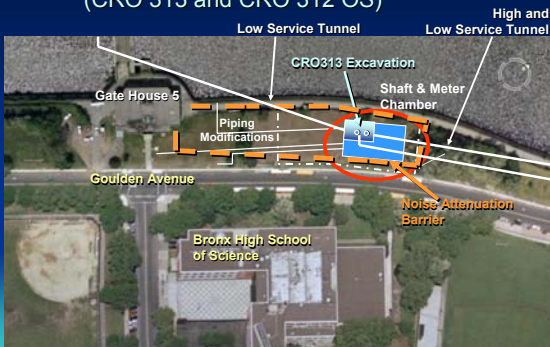
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## Shaft and Meter Chamber Excavation (CRO 313 and CRO 312 OS)




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## Jerome Park Reservoir – Overall Construction Schedule

	2008	2009	2010	2011	2012
<b>CRO 313: New Tunnels and Shafts</b>	5/08	[Bar]		4/11	
<b>CRO 315: Demolish and Modify Structures at JPR</b>	4/08	2/09			
<b>CRO 334: NCA Rehabilitation</b>		9/09	7/10		
<b>CRO 312 OS: Off-Site Facilities</b>		1/09	[Bar]		
<b>CRO 312G: Croton WTP</b>				2/11 – 5/11	

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## Actions to Minimize Construction Impact

- Mitigation techniques will be consistent with those used at Mosholu site
- Installation of Sound Attenuation Barrier at Shaft and Meter Chamber
- Dust and Particulate Control
- Emissions Control
  - BAT and ULSD for On-Site Diesel equipment
  - Concrete Trucks to comply with latest EPA Emissions Standards
- Rodent Monitoring and Control
- Cleaning outside the Shaft and Meter Chamber Work Area for neighborhood upkeep
- NYCDOT Approved Truck Routes
- Schedule and logistics

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## Shaft & Meter Chamber: Rock Removal

### Method #1

or

### Method #2

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|--|---|
| <ul style="list-style-type: none"> <li>➤ No blasting</li> <li>➤ Mechanical removal only</li> <li>➤ Extensive use of hoe ram</li> <li>➤ 26 week schedule</li> </ul> | <ul style="list-style-type: none"> <li>➤ Allow blasting</li> <li>➤ Shaft &amp; Meter Chamber and Large Diameter Piping</li> <li>➤ Reduced use of hoe ram</li> <li>➤ 16 week schedule</li> </ul> |
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*Total Rock Volume = 9,000 cubic yards.*

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## Rock Removal - Mechanical Method




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## Rock Removal- Blasting Method



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## Controlled Blasting Program

- FDNY to review, approve and provide on-site supervision of controlled blasting
- Sound Attenuation Barrier (Shaft and Meter Chamber)
- Limit blasting charge
- Vibration monitoring
- No overnight storage of explosives
- Some mechanical removal may be required

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## Benefits of Controlled Blasting

- Reduced Noise
- Shortened Construction Schedule
- Reduced Dust

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