

# Our Water, Our Future

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Croton Watershed Clean Water Coalition Newsletter



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***Our Water, Our Future** is the newsletter that keeps you, our valuable members, on the leading edge of watershed protection activities. Through the generosity of the Noyes Foundation, both this newsletter and our website, [www.newyorkwater.org](http://www.newyorkwater.org), have been made possible.*

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## HEALTHY STREAMS, UNHEALTHY STREAMS—AND HOW TO TELL THE DIFFERENCE

*By Marian Rose and Liz Hoskinson  
CWCWC*

Last fall saw the kick-off of a joint Sierra Club and Croton Watershed Clean Water Coalition (CWCWC) stream monitoring program. Together, the two groups monitored five streams, two in the Bronx, one in Westchester County and two in Putnam County. The program turned out to be an unqualified success with more than 25 volunteers showing up at each of the sessions. The weather and fall scenery were both perfect, and a wonderful day in the outdoors was enjoyed by all.

We are already receiving queries regarding the commencement of the next round of monitoring. So far, we have set a tentative date of April 27. The intent is to monitor one stream in Putnam and another in Westchester. [In fact, as noted on the web site, CWCWC completed its first round of spring stream monitoring on May 10. Two streams in Putnam County were tested, with final BMI tabulations expected to be completed by the end of the month. If you would like to participate in additional monitoring or testing, please e-mail us at: [crotonwshed@aol.com](mailto:crotonwshed@aol.com) or phone 914-234-6470.] However, please be aware that the terrain to be crossed to reach these sites can be quite rough and, therefore, weather conditions might force a delay to a later date.

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## THE EXTRAORDINARY RESILIENCY OF THE CROTON WATERSHED Why the Watershed Does What it Does and Does it so Well

*By Marian Rose  
CWCWC President*

When the NYC Department of Environmental Protection (DEP) failed to apply for filtration avoidance for the Croton System in 1991 as it had for the Catskill/Delaware System, little did it expect that Croton reservoir water quality would survive the onslaught of development. As DEP said at that time, it did not possess the “political will” to protect its watershed. Contrary to expectations, Croton water quality, despite neglect and abuse of its watershed, remains high.

How can we explain the Croton Watershed’s extraordinary resiliency? Without an in-depth study which, to the best of our knowledge has not yet been made, the obvious answers point to the watershed’s unusual abundance of wetlands; to the regrowth of forests following the abandonment of farming, and to the special quality of its soils.

(cont. page 2, column 1)

### LOCAL STREAMS TELL THEIR SECRETS (cont.)

What kind of stream monitoring can you expect? We’ve been told by our friends at DEC that the most reliable way to assess the health of a stream is by studying its bugs (technically known as benthic macroinvertebrates even though they are

very small). Using high-powered magnifying glasses and microscopes, volunteers divide the bugs collected from the stream (you need a minimum of 100) into various categories.

Some bugs such as mayflies, stoneflies and caddisflies are very sensitive to pollution. Their presence in large numbers indicates a healthy stream. On the other hand, large numbers of worms and midges indicate that water quality may be compromised.

We usually choose to monitor streams that traverse proposed developments in the NYC watershed. In this way, if we obtain results (DEC certified) showing a high quality stream, we can use these to curtail development that would adversely impact the stream and its surroundings.

Stream monitoring offers a wonderful combination of outdoor activity, scientific investigation and the companionship of enthusiastic people.

Please let us know whether you wish to join us by calling any of the following numbers:

.Bob Muldoon at 212.791.7602 (Manhattan)

.Liz Hoskinson at 914.234.6470 (Westchester)

.Ann Fanizzi at 845.228.4265 (Putnam)

CWC

#### OUR RESILIENT WATERSHED (from page 1)

Rather than taking advantage of these unique properties, all the involved agencies in addition to the DEP have shamefully neglected the protection of the Croton. Any incentive to do so has been undercut by the knowledge that the Croton is going to be filtered. Why bother protecting its watershed? Their "solution" – and this includes the US Environmental Protection Agency, NYS Department of Health -- is to allow rampant development in the watershed and to solve the resultant problem of polluted drinking water by building a \$1.5 billion chemical treatment/filtration plant.

The plant alone would occupy an area of 8 to 10 acres and house over 460,000 gallons of chemicals labeled "hazardous substances" by the EPA. Construction of the plant could take up to eight years and result in major disturbances of its neighborhood in terms of continual trucking loads, OUR RESILIENT WATERSHED (from column 1) heavy construction equipment, and blasting resulting in the displacement of thousands of rats.

However, things did not work out as planned. The first site to be picked was the Jerome Park

Reservoir, which is a component of the Croton System. Not surprisingly, the surrounding communities mounted a vigorous campaign against this monstrous intrusion and were successful in forcing DEP to consider other sites.

Impatient with the delay, EPA and DOH had the City and DEP sign a Consent Decree, in 1997, which obligated the DEP to actively seek other sites and to render a decision by December 1998. The City did so and picked the Mosholu golf course in Van Cortlandt Park in the Bronx.

The DEP claimed that this park site did not require "park alienation", i.e., permission by the NYS legislature to use a park held in trust for public enjoyment for a clearly different purpose. The DEP learned otherwise when, as the result of a lawsuit initiated by a member of the CWCWC board and then joined by others, the NYS Court of Appeals ruled unanimously in favor of the plaintiffs.

This brought the agencies back to the drawing board and the issuance of a Supplement to the Consent Decree. This time, the DEP was enjoined to pick one site in the Bronx, one in Westchester and to keep the Mosholu site as a third possibility. As of this writing, indications are that the DEP is back to the Mosholu site and vigorously lobbying of the NYS legislature to alienate the park. This April 15 is the deadline for Mosholu. If Mosholu is not approved, DEP has until April 30 to designate either of the other two sites.

In the meantime, over ten years have elapsed since the Croton has been under orders to be filtered and, according to the regularly issued DEP bulletins, it continues to fulfill all state and federal health standards. More astonishingly, in its annual flyer (this one dated June 2002), DEP states: "Filtration of water from the Croton System is not necessary under today's standards or those anticipated in the near future."

CWCWC therefore questions why the regulators are so adamant on filtering the Croton, seeing that it has an excellent natural "immune system" and that other, less expensive and less obtrusive means are available for its protection. DEP claims that the Consent Decree forces them to filter (*cont. page 3*) OUR RESILIENT WATERSHED (from page 2) We claim that the Consent Decree is simply a contract that can be renegotiated if all the parties agree to do so.

The protection of the Croton, present and future has two overriding components. One is to have in place a watershed management plan suited to the special needs of the Croton (the watershed management plan for the Cat/Del has been successful in postponing filtration for at least another five years). The other is to fulfill future, stricter criteria governing certain water quality standards.

Components of a viable watershed management plan are already in place. The recently promulgated stricter regulations ("Phase 2 Stormwater Regulations") governing stormwater runoff, if properly enforced on a watershed basis, should be the foundation of the management program. Enforcement of the extra protection inherent in the designation of the whole East of Hudson watershed as Critical Resource Waters should also be part of it. County governments should take advantage of the formation of agricultural districts within the Croton watershed. Westchester County has already done so. It is likely that Putnam will soon follow. The regulatory agencies should also take a far more active role in curtailing development that allows pollution to the reservoirs to increase. Unfortunately, they have been notable by their absence. On the other hand, citizen opposition to the threat of the watershed being trashed through development has increased dramatically. It has been extremely effective, so far, particularly in Putnam County where most of the large developments are being proposed, in significantly slowing development or even stopping it.

The other component is to address future federal water quality criteria that are to be in effect around 2010. These include decreasing the levels of the pathogens giardia and cryptosporidium from their present levels. Cryptosporidium, in particular, is a threat to people with deficient immune systems; it was responsible for close to 100 deaths and over 400,000 citizens taking ill in Milwaukee in 1993, despite the fact that the system was filtered. Other criteria include requiring more stringent methods for measuring levels of the disinfection byproducts (DBPs) of chlorine, the disinfectant of choice currently in use by DEP. Some of these, trihalomethanes (THMs) and haloacetic acids (HAAs) are thought to be possible carcinogens. Croton water would probably not comply with these more stringent regulations for THMs and HAAs since, even today, it barely satisfies the criteria for HAAs.

However, there are ways to reduce DBPs without having to filter. One way is to reduce the amount of

pollution carried by development and stormwater runoff into the reservoirs. Pollution entrains phosphorus, which stimulates the growth of algae blooms. In a July 5, 2000 report, speaking about pollution to the New Croton Reservoir, Watershed Inspector General James Tierney writes as follows: "The only currently known method of lessening the creation of chlorine disinfection byproducts is to reduce organic carbon (carbon based) material in the water. In the case of the New Croton, this can best be achieved by reducing the algae levels, which, in turn, requires reductions in phosphorus loadings to the reservoir."

In addition, the new regulations require that any future unfiltered system provide, at least, two disinfectants. This means adding a minimum of one other disinfectant besides chlorine. DEP is currently testing UV for the Cat/Del. For the Croton, CWCWC is proposing using chlorine dioxide as the primary disinfectant together with chlorine. Addition of chlorine dioxide would enable Croton water to fulfill all the regulations and render filtration unnecessary. Among the advantages of chlorine dioxide, we note:

1. It can fulfill all future EPA mandated reductions in cryptosporidium, giardia, viruses and bacteria under a variety of conditions.
2. It will eliminate color, taste and odor problems that, at times, beset Croton water.
3. It produces zero THMs and HAAs.
4. It will enable DEP to satisfy future regulations at a fraction of the cost of the chemical treatment /filtration plant.
5. It can be on-line far sooner than the filtration plant, and, therefore, any concerns with public health will be addressed much sooner.

CWCWC urges the regulatory agencies to pilot test the chlorine dioxide alternative and to postpone construction of the chemical treatment/filtration plant until these tests are completed. In addition, we urge them to pilot test any other alternative that looks promising in terms of cost effectiveness and ability to conform with the new regulations.

The Croton Watershed is a treasure, a vibrant natural resource that has protected our watershed and our water for thousands of years. If we treat it properly, there is no reason why it cannot continue to do so, reliably and at no expense, for another thousand years. CWC

