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## MUNICIPAL LAW

BY JEFFREY D. FRIEDLANDER

### *Protecting the Water Supply: Progress and Caution*

As I have noted in a previous article, New York City's water supply system raises a variety of legal and policy issues of particular interest and concern. The City's Catskill and Delaware water supplies, which together provide in general for 90 percent of the city's daily water needs, are a source of such high quality water that the city has sought and continues to receive authorization from its regulators, the federal Environmental Protection Agency (EPA), the New York State Department of Health (SDOH) and the New York State Department of Environmental Conservation (DEC), to operate these supplies without filtration or other mechanical treatment. The Cat/Del water supply is the largest unfiltered water supply in the nation, and the largest safe unfiltered water supply in the world.



Avoiding filtration is desirable for a number of reasons. First, filtration is expensive: construction of a filtration plant for Cat/Del water is estimated to cost well over \$10 billion, while the operating costs would be hundreds of millions of dollars per year.

Second, it is far safer to rely on high quality source waters than on mechanical treatment components that can fail. Indeed, every significant waterborne disease outbreak in the U.S. since the 1980s, when filtration of public surface water supplies became the norm under federal law, has occurred in a filtered system. And our reliance on streams, wetlands, and natural processes in reservoirs to clean our drinking water, and on gravity to bring the water to the distribution system, makes the city's drinking water system one of the "greenest" aspects of our infrastructure.

The safeguarding and maintenance of our water supply is primarily the responsibility of the City's Department of Environmental Protection (DEP), assisted by attorneys of the Environmental Law Division of the Law Department. In this article, I will describe recent developments in two of the most important components of the city's long-term watershed protection program: progress toward ensuring that the city can continue to buy sensitive land in the watershed (the land area from which the city's drinking water originates) to protect it from development that might impair water quality; and updates to the city's watershed regulations, which restrict certain land uses in the watershed. I will then address what I believe is the most significant potential threat to the quality and integrity of the city's Cat/Del water supply system: the prospect of natural gas extraction in the watershed.

#### **Background**

In 1997, the city, DEC, the nearly 80 local governments in the watershed, the city's federal and state regulators, and a handful of environmental advocacy and land protection organizations signed the landmark New York City Watershed Memorandum of Agreement (MOA), a 145-page contract with some 1500 pages of attachments. The MOA memorializes a partnership among watershed stakeholders, and strikes a balance, with elaborate mechanisms for protecting that balance, between the city's watershed protection goals and obligations on the

one hand and all signatories' concerns for preserving the economic vitality of the watershed communities on the other.

At the core of the 1997 MOA are provisions relating to the two programs the city and its regulators believe essential for long-term watershed protection: land acquisition and land use regulation. The MOA also established a number of city-funded programs to protect and improve water quality while supporting the economic viability of the watershed communities, and the Watershed Protection and Partnership Council, a standing body with representatives from the various watershed stakeholders.

In 2002 and 2007, EPA authorized the city to continue to operate the Cat/Del system without filtration (known as filtration avoidance determinations or FADs). The 2007 FAD is expected to remain in effect for 10 years. It includes a process for the city and its regulators to work together over the coming two years to evaluate a number of the watershed protection programs and develop specific milestones and requirements for the second five years of the FAD, based on data from the first five-year period.

The FAD and watershed protection programs are not, however, without controversy. Shortly after the 2007 FAD was issued, the Coalition of Watershed Towns, representing the local governments in the 1,600 square miles constituting the vast majority of the Cat/Del water supply to the west of the Hudson river, filed two separate lawsuits challenging the FAD. At the heart of both lawsuits were serious concerns about the continuation of the city's land acquisition program, which watershed communities view as a threat to their economic growth.

#### **Land Acquisition**

The 1997 MOA provided a framework for a Land Acquisition Program and memorialized the terms for a "Water Supply Permit," issued by DEC pursuant to Article 15 of the State Environmental Conservation Law, which the parties

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agreed was necessary in order for the city to buy land for watershed protection purposes. By its terms, the 1997 Water Supply Permit authorized land acquisition for 10 years and provided for a five-year extension, an option the city exercised in 2007.

Under the MOA, the city dedicated a total of \$300 million to acquiring land in the watershed of the Cat/Del water supply. One of the core principles of the program is that it operates exclusively on a willing buyer/willing seller basis—the city has agreed not to use eminent domain to acquire land for watershed protection.

The goal of the program is to acquire property which, in aggregate, serves the city's watershed protection goals by preserving open space and preventing land disturbance and creation of impervious surfaces. Consistent with this principle, neither the MOA, the Water Supply Permit, nor the FAD identifies specific individual properties, or even acreage thresholds, which the city must acquire to satisfy the watershed protection goals of the program. Rather, the city must solicit offers of eligible land to satisfy the requirements of the FAD, with the assumption that the city will acquire some percentage of that land.

Other key features of the Land Acquisition Program include the city's obligation to pay taxes on lands it holds in the watershed, in order to protect the local tax base, and the prohibition against the city's acquiring land west of the Hudson containing habitable dwellings, in order to preserve the local housing stock.

Following the issuance of the 2007 FAD, in response to substantially increased city funding for land acquisition and local concerns over a corresponding increase in the volume of city land acquisitions, the Coalition of Watershed Towns brought a petition for review in the U.S. Court of Appeals for the Second Circuit challenging EPA's issuance of the FAD on procedural and substantive grounds. The city intervened as a defendant in that litigation, which was ultimately dismissed. *Coalition of Watershed Towns v. United States EPA*, 552 F.3d 216 (2d Cir. 2008), cert. denied —U.S.—; 129 S. Ct. 2879 (2009).

However, following a separate challenge to the environmental review of the 2007 FAD brought by the coalition in state court, the city decided that it made sense to begin discussing the terms of the 2012 Water Supply Permit, which are central to the coalition's concerns, rather than to litigate. Accordingly, the state proceeding has been suspended for some two years to allow for ongoing negotiations, which involve not only the parties to the litigation but all of the other interested MOA signatories as well. *Coalition of Watershed Towns v. City of New York*, Supreme Court, Delaware Co., Index No. 2007-1558.

One of the key issues in these negotiations has been the proposed expansion of "hamlets" within the watershed west of the Hudson River. Under the MOA, towns and incorporated villages were allowed to designate parcels in existing

population centers which they could then elect to prohibit the city from acquiring. The concept underlying such "hamlet designations" is that they encourage growth and development in areas with infrastructure to support it, which is preferable from both the water quality and the local planning perspectives.

As part of the ongoing land acquisition negotiations, the parties have reached agreement (contingent on the resolution of other outstanding issues) on a number of new, expanded hamlet designations. Throughout the negotiations, the city has made clear that it will agree to expanded hamlet areas only if it determines that the expansions proposed by a town will not impair the city's ability to run a robust Land Acquisition Program, consistent with the requirements and goals established under the MOA and the FAD. Moreover, the parties have agreed that any modifications to the hamlets require the consent of the FAD regulators.

The city is continuing to work with other stakeholders to reach resolution on terms for hamlet expansion, among other issues. The progress of these negotiations is important for the city's application for the 2012 Water Supply Permit, which was filed on Jan. 20, 2010. The city is also engaged in environmental review of the continuation of the Land Acquisition Program pursuant to the State Environmental Quality Review Act (SEQRA).

### **Watershed Regulations**

In operating its water supply systems, the city is subject to federal and state regulation, and, in turn, has its own regulatory authority in the watershed. Since 1911, the New York State Public Health Law has authorized the city to enact and enforce regulations governing land use in the watershed to protect water quality. The city first adopted such regulations in 1917; the two pages of those regulations addressed privies, washing clothes in streams, and "places where dung may accumulate," among other things. The regulations were updated, but not substantially revised, in 1953.

Pursuant to the 1997 MOA, DEP adopted a comprehensive set of modern watershed protection regulations, constituting approximately 100 pages of the Rules of the City of New York (RCNY). The current "Rules and Regulations for the Protection from Contamination, Degradation and Pollution of the New York City Water Supply and its Sources" focus on standards for city approval of the types of land use with the greatest potential to affect water quality: wastewater treatment plants, subsurface sewage treatment (septic) systems, impervious surfaces, and stormwater discharges from construction activities. 15 RCNY chapter 18. These rules have been separately adopted by SDOH, codified at 10 NYCRR part 128.

On March 4, 2010, DEP adopted revisions to the Watershed Regulations which, under the City Administrative Procedure Act, will take effect on April 4, 2010. These

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amendments incorporate changes in federal and state law since 1997 and also address issues that have arisen in administration and enforcement of the regulations over the past 13 years, relating primarily to residential development. As with all the city's major actions concerning the watershed, these amendments reflect substantial input from our partners, including our state and federal regulators, local governments of watershed communities, and environmental advocacy organizations.

### **Natural Gas**

The city's Cat/Del watershed sits atop a geologic formation called the Marcellus Shale, one of several shale formations in the United States that hold reserves of natural gas. The Marcellus Shale extends over a large portion of the northeastern U.S., including parts of New York, Pennsylvania, Ohio, West Virginia, Maryland and Virginia.

Until recently, it was neither economically viable nor technologically feasible to drill for natural gas in these shale formations. However, the advent of new drilling technologies, horizontal drilling and hydrofracturing (or "hydrofracking"), have made it possible to extract gas from these shale formations economically and have spurred strong interest in drilling in the Marcellus Shale, including within the Cat/Del Watershed.

With horizontal drilling, one or more horizontal bores are drilled from a single vertical well, while hydrofracking involves injecting large volumes of water-up to eight million gallons per well-mixed with chemicals and sand into the target rock formation to create fractures and increase the flow of gas in the well.

Natural gas extraction has the potential to bring significant income and employment to the region. The city has concluded, however, that the process poses serious threats to its water supply.

In New York, natural gas drilling is regulated by DEC. To determine the potential impacts of issuing permits for natural gas development using horizontal drilling and hydrofracking, DEC has undertaken an environmental review pursuant to SEQRA.

In a draft environmental impact statement issued on Sept. 30, 2009, DEC proposed to issue permits to drill, deepen, plug back or convert wells for horizontal drilling and high-volume hydraulic fracturing in the Marcellus Shale and other similar formations. The comment period on the draft ended on Dec. 31, 2009, and as of the time of this writing, the final environmental impact statement has not been issued.

In order to evaluate the potential impacts to the city's watershed from natural gas drilling, the city hired a consultant team to prepare an assessment that focused on potential impacts to water quality, water quantity and water supply infrastructure. This assessment also formed the basis of the city's extensive comments on the state's draft environmental

impact statement. Attorneys of the Environmental Law Division worked closely with the mayor's office and DEP in analyzing the state's environmental review and drafting the city's comments.

Based on its detailed analysis, the city has concluded, using information about the density of drilling in similar formations, that the state proposal could result in the establishment of up to 6,000 wells in the watershed to extract natural gas, with an accompanying seven million truck trips, one million tons of concentrated chemicals, and millions of gallons of wastewater generated from drilling operations.

The city believes that these industrial activities would pose a substantial threat to the quality of its unfiltered water supply and are inconsistent with the principles of watershed protection and pollution prevention embodied in the FAD. Specifically, intensive natural gas development in the watershed would risk degrading source water quality, impairing long-term watershed health and the city's reliance on natural processes to filter drinking water, damaging critical infrastructure, and exposing both watershed residents and city residents to toxic chemicals. Underscoring the importance of this issue, the EPA recently announced it is allocating \$1.9 million to conduct a comprehensive study to investigate the potential adverse impacts that hydrofracking may have on water quality and public health nationwide.

Because of the unacceptable risks posed by natural gas drilling in the watershed, the city has called on DEC to rescind the current draft environmental impact statement and to study the potential impacts on the watershed in greater detail, including consideration of an alternative strategy of banning natural gas drilling within the watershed. Given the very high stakes involved, the city intends to pursue all legal means to protect the watershed from the serious threat posed by natural gas exploration.

*Jeffrey D. Friedlander is first assistant corporation counsel of the City of New York and represents the Mayor's Office on the Watershed Protection and Partnership Council. Hilary Meltzer and Carrie Noteboom, senior counsels in the Environmental Law Division, provided assistance in the preparation of this article.*