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Outlook '93

For Release: Wednesday, December 2, 1992

FARMERS AND NEW YORK CITY WORK TOGETHER TO DEVELOP
FARMER FRIENDLY STRATEGIES FOR PROTECTING THE
PRISTINE QUALITY OF NEW YORK CITY'S WATER

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In October of this year, New York City embarked on a bold new effort to manage and reduce the agricultural sources of water pollution in its 2000 square mile water supply watershed in partnership with the local agricultural community. At the same time, the New York began a year-long celebration of the 150th anniversary of its municipal water supply system, a remarkable engineering achievement that continues to supply its nine million customers with some of the world's purest and healthiest drinking water.

While the challenge of last 150 years has been the construction and maintenance of the water supply's dams, aqueducts and tunnels, the charge for the next century is to protect the pristine quality of the sources of the City's drinking water, some of which is located in watershed over one-hundred miles from the City. To that end, the City's Department of Environmental Protection, which I head, is currently engaged in finalizing and implementing an ambitious watershed protection and management program to protect those source waters.

As one of the major land uses in our watershed, agriculture, particularly dairy farming, presents one of the greatest challenges to our watershed management program. How did it come about, then, that the environmental resource protection interests of a large and distant city and the farm community's desire to maintain a fragile agricultural economy and way of life in the watershed region were reconciled? While our situation in New York may be unique, there are nevertheless constructive lessons here that the environmental and agricultural communities can learn so that the often inevitable conflict between them may be avoided. The results, in fact, can be quite fruitful. We've come so far together that City bureaucrats have begun pulling on their boots to tour dairy farms, or they're attending Farm Bureau meetings and dinners. In fact, Mayor Dinkins, who likes to say

that New York has everything, now speaks with pride about "our" farm program. Here's some background on where we started and how we got where we are today.

The New York City water supply system is the greatest surface storage and supply complex in the world, covering over 1,900 square miles, or 1,216,00 acres, of land area. In addition to its residents, the City supplies high quality drinking water to one million residents in upstate counties, as well as millions of daily commuters, tourists and visitors to the City.

In addition to managing and maintaining its water quality through an antidegradation program, the City is working to demonstrate to EPA and the New York State Health Department that it can provide above-standard drinking water without the need to filter water supplies from the Catskill and Delaware watersheds, which on the average day account for 90 percent of the City's water supply. Under the federal Safe Drinking Water Act and Surface Water Treatment Rule, communities like New York which rely on surface water sources may avoid filtration if they show that their source water meets federal and state raw water standards; that adequate disinfection is in place; and that an adequate watershed protection program to reduce the risk of waterborne disease can be implemented. The potential savings for the City is more than \$5 billion for construction of a filtration system to handle up to three billion gallons of water daily, plus annual operating costs estimated at \$200-400 million.

In September, 1990, the New York City Department of Environmental Protection issued a Discussion Draft of revisions to its watershed regulations. Under State public health law, the City has had authority since 1905 to issue and enforce regulations for the protection of its water supply sources in its upstate reservoirs. Those regulations had not been amended since 1953.

The Discussion Draft was developed to solicit input on approaches to meeting the City's overall objective: to prevent degradation of the sources of its water supply. Included in those draft regulations were a number of new restrictions for agricultural operations, including mandated manure storage and erosion and sediment controls, limiting distances to exclude activities near watercourses, and prohibitions on the discharge of contaminants from barn yards.

Many members of the farm community, including local, state and federal agricultural agencies and Cornell University faculty, believed that the Discussion Draft sections on agriculture threatened the continued viability of farms in the New York City watersheds, especially dairy and livestock farms. Even without the City's proposed regulations, agriculture in the watershed faced a tenuous future with enormous economic and land use

pressures causing increasing numbers of farmers to sell out to land speculators and developers.

At the same time, New York City believes, for reasons that I'll explain a bit later, that well-managed farms are a preferred land use in the watersheds for water quality purposes, compared to other forms of development, and their survival is essential to the long-term prosperity of the southeastern New York region.

Responding to the concerns of both the agricultural community and the City, the New York State Department of Agriculture and Markets convened an Ad Hoc Task Force on Agriculture and the New York City Watershed Regulations to address concerns about the Discussion Draft. The challenge for the Policy Group of the Ad Hoc Task Force was to recommend alternative regulations or programs that would protect New York City's water supply, while also sustaining the long term viability of agriculture within the watersheds.

The Task Force was advisory and had no legal standing. Its members collectively represented most of the entities with technical knowledge or legal and program authority to forge a workable program for agriculture in the watersheds. It included public health professionals, environmentalists, local, state and federal agricultural agency representatives, watershed county government, state and local farm organizations. Individual farmers, such as dairymen Dave Taylor and Bill Murphy, played central and active roles in the Task Force's deliberations. I was the chair.

From the outset, the Task Force had three goals:

1. To improve mutual understanding of the laws and public policies that shape the City's watershed protection program.
2. To improve mutual understanding of the characteristics of farm operations and of the technology and art of farm management that are available to address the influences of farm practices on drinking water quality.
3. To explore ways in which the city may work in partnership with farmers and the well established network of agricultural support institutions to encourage a sustainable farm economy in the watersheds, yet achieve the City's water quality objectives.

All participants in this process agree that these three goals were successfully achieved.

After an intensive year of regular meetings and subcommittee meetings, the community of diverse interests represented in the

Ad Hoc Task Force learned together that farming in the New York City water supply watersheds presents a complicated environmental management problem. As we all know, farm practices are a potentially significant source of nonpoint source pollution and present a risk of pathogen introduction into the water supply. Farm practice pollution control is critical for meeting the City's anti-degradation objectives, as well as the avoidance criteria of the federal and state Surface Water Treatment Rules. On the other hand, we learned that farming is a preferred land use, with significant long-term environmental benefits, and the City wanted to take all appropriate steps to support it. When well-managed, agriculture preserves the low density living-landscape of the watershed, and, unlike other landuses, a government support structure already exists to assist its management. Yet, as I mentioned above, supporting the continued vitality of farming in the watershed represents an especially significant challenge since agriculture is a rapidly declining industry in the region.

The City's regulatory approach to agriculture had taken a purely water quality perspective and set absolute technological standards for all farm practices, to be applied uniformly in all farm situations. Discussions in the Ad Hoc Task Force, however, have convinced City and farm community members that a locally developed and administered program of best management practices planning and implementation, tailored to the site specific and operational requirements of individual farms, with the voluntary participation of the farm operator, would be far more beneficial for both pollution control and the viability of the farm industry.

The City, after consulting with appropriate regulatory bodies and after full review of federal and state regulations, is satisfied that such a program would meet the avoidance criteria for effective watershed regulations and represents the best strategy for dealing with the concerns of both the City and the farm community.

Instead of taking a regulatory approach to agriculture, applied and enforced by the City, the City has entered into partnership with the watershed farm community to carry out a locally developed and administered Whole Farm Planning Program. The City has committed \$3.4 million over the next two years to refine and demonstrate this approach on ten pilot farms in five counties in the watershed, and use those ten farms to market the approach throughout the region. In the second phase of the program, Whole Farm Planning will expand to all willing farmers in the watershed. The watershed's agricultural and political leadership has itself committed to a goal of 85% participation in this program by 1997, at which time it will be evaluated and assessed.

These are the guiding principles for the watershed agricultural program:

1. The objective of the program is to protect the sources of the New York City water supply while keeping farms in operation. Agriculture should be continued and promoted as a preferred land use in the City's watersheds. Except for a general prohibition to safeguard against individual farm operators who exhibit a willful and irresponsible intent to pollute in a manner that threatens to significantly increase pollution levels and degrades the source waters of the City's water supply, the program will be entirely voluntary.
2. While entirely voluntary, farmer participation in the program will be strongly driven by incentives, including 100% "cost-sharing" for BMP planning and implementation, to be provided by the City and supplemented by state, federal and local funding sources, if available.
3. The preferred approach to source protection for farms is the use of Best Management Practices developed to meet water pollution control policies under the 1989 New York State Nonpoint Source Water Pollution Control Act and Section 319 of the Federal Clean Water Act amendments of 1987. In addition, Cornell University faculty will assist in the development of new BMPs, based on on-farm research and experience gained through the program.
4. The mechanism of choice for selecting agricultural BMPs is preparation of a Whole Farm Plan for each farm. A collateral objective for each Whole Farm Plan is to sustain and improve the economic viability of the farm.

Whole Farm Plans should be prepared by local County Project Teams, including professional staff from the county Soil and Water Conservation District, Cooperative Extension, and the Soil Conservation Service.

Whole Farm Plans should address these agricultural contaminants: nutrients, pathogens, sediments, toxicants, and organic matter. The level of control required for each Whole Farm Plan should depend on the location of hydrologically sensitive areas on the farm and in the watershed generally.

In managing agricultural contaminants, Whole Farm Plans should involve these components: soil erosion control, animal waste management, plant nutrient management, domestic animal pathogen management and chemical and pesticide management.

5. Continuing education, professional training and local involvement are essential component of the Whole Farm Planning approach to agriculture.

While many of these mechanisms and approaches for farm management are not new, our attempt to combine them into a whole package for each individual farm represents an innovation and challenge. Agencies that did not work well together in the past, such as Soil and Water Conservation Districts and Cooperative Extensions, will now sit down together with farmers to develop and implement farm plans for protecting water quality and the economic health of the farm.

In addition to new institutional relationships at the agency level, a new regional institution to address agricultural and environmental resource protection issues has also been established. The Watershed Agricultural Council, consisting of farmers and government agencies, will continue the consensus-building efforts of the Ad Hoc Task Force, as well as monitor the progress of the Watershed Agricultural Program.

And finally, the City has begun sitting down with farmers to explore opportunities and techniques for farmland retention to continue farming in the watershed region. Any program for farmland retention, from purchase or lease of development rights to real property tax reform and support for dairy price stabilization, must have the mutual support of the City and the farm community in order to succeed in New York.