A New Vision for the New York City Watershed:
Using Successful Partnership Programs To Protect Water Quality While Facilitating Business Retention and Development

Introduction:

The principal component of the MOA and the FAD is that water quality protection will thrive only if the watershed communities are allowed to thrive. The MOA (together with the FAD) creates a partnership between the residents and communities of the watershed and DEP (among others). The MOA (as quoted in the 2010 Water Supply Permit, Paragraph 2 Scope) states as follows:

> "The City's LAP, the City's Watershed Regulations and the other programs and conditions contained in the Watershed MOA, when implemented in conjunction with one another, are intended to protect water quality while allowing existing development to continue and future growth to occur in a manner that is consistent with the existing community character and planning goals of each of the Watershed communities."

In the spirit of the above, we present this paper in an effort to advance a growing partnership to the benefit of water consumers and improved business retention and development for the next generation. We propose to strengthen the partnership by building on the successful existing partnership programs; while, at the same time, increasing the cost effectiveness of the programs. There have been many successes since the MOA's inception. Those successes are the genesis of this report and form the premise of this report. This report identifies where there are weaknesses or gaps in the current programs and provides recommended solutions for enhanced cost effective water quality protection. It identifies where there can be improvements and, offers the rational for using existing successful partnerships to facilitate compliance with the Watershed Rules and Regulations (WRR).

Situation:

In the 1990s, EPA, DOH, DEC and other stakeholders worked with DEP to identify the threats to an unfiltered water supply and to identify programs and controls to mitigate those threats. One approach selected was to filter/treat the water at the sources of pollution rather treat/filter the entire supply. In order to force treatment at the source of the pollution, under the MOA and as a requirement of the FAD, the City was allowed to regulate all sewage within the watershed and all new construction (i.e., storm water restrictions and permits). In other words, the WRR focus is on sewage and storm water as the primary threat to water quality from human activity. By mitigating these two sources, the MOA and the partnership programs required by the MOA have achieved substantial water quality improvements. The controls required by the City for wastewater treatment plants have proven to be cost prohibitive for the West of Hudson watershed residents. Those controls apply to both new facilities and all existing facilities. For a typical 20

home residential community, the capital cost of the regulatory upgrade for a sewage treatment plant ("WWTP") to comply with the WRR range from $2,000,000 to in excess of $4,000,000 ($200,000 per home) for each WWTP and the annual operating cost of the upgrade facility is as much as $7,500 per home. In the 17 years since the MOA was executed, there has been only one privately funded new waste water treatment plant West of Hudson. That plant was funded by a not- for- profit using donations to serve an existing summer religious education camp under a court order from a DEP enforcement action. Under the WRR, the only options for the property owner were to build a new WWTP meeting all of the City requirements or close the camp and demolish the structures. The practical impact of the restrictions on WWTPs is that new development must either be connected to an existing community sewer system or be served by a subsurface sewage treatment system.

At the time of the MOA, it is estimated that there were over 22000 septic systems in the West of Hudson Watershed.[1] DEP takes the position that all of the 1997 existing septic systems do not comply with the WRR requirements for existing systems and as such are non-complying regulated activities. Under DEP's interpretation of its WRR, those existing homes, institutions and small businesses connected to an existing septic system cannot alter or modify their septic system without coming into compliance with the City's regulations for new systems (or to the extent determined possible by DEP). DEP considers the addition of a bedroom to home as a prohibited alteration to septic system; the conversion of a home to an office or retail space as a prohibited alteration to septic system; the addition of seat or table to a restaurant as a prohibited alteration to septic system; the conversion of room at an existing hotel to a rental room as a prohibited alteration to septic system; the addition of sink and refrigerator to an existing hotel room as a prohibited alteration to septic system.

The City interprets its regulation and regulatory authority as limiting the homes, business and institutions that were on septic system in 1997 to the same level of activity (and mix of sewage) that occurred in 1997 (even though there is tremendous uncertainty regarding the level of activity that occurred 17 years ago and that uncertainty will only increase with time). In order to address the impacts (i.e., costs) of these regulatory requirements, the MOA and the subsequent FADs required the DEP to fund up to 22 community sewer system to provide sewer service in the densely populated areas within the watershed; to fund sewer extension at each of the DEP WWTPs; to fund septic system rehabilitation at one and two family homes for failing system; and to provide some limited funding for small business with failing systems. Those programs (together with the regulatory upgrade program applicable to existing WWTPs) have drastically improved the overall nature of sewage disposal within the watershed. The results include the rehabilitation of over 4300 residential septic systems, the construction of 16 community sewer systems, the extension of city owned sewer line to over a hundred homes/businesses; the closing of over 12 WWTPs with connections to community systems, the upgrade of over 90 WWTPs to meet the requirements of WRR (both east and west of the Hudson). The tremendous progress that was made over the last 17 years in sewage treatment was made based upon the cooperation and efforts of the communities (including CWC) and the

[1]Phone Call CWC

funding and efforts of the DEP and its staff. Those improvements were not affordable to the communities and residents and, if imposed on the communities without funding, would not have happened. Those improvements also would not have occurred if DEP acted as a bully/enforcer; they occurred because DEP has honored the partnership and, for the most part, has been fair, respectful and reasonable to community stakeholders.

With respect to storm water, DEP requires individual permits subject to a permitting process with little, if any, due process (in contrasts, DEC relies on a general permit for storm water; allows an independent professional engineer to develop and certify the completeness of the SWPPP and considers and issued the storm water manual incorporated into the general permit as guidance subject to engineering judgment). Over the past 17 years, the state and city storm water restrictions have been expanded to require larger land areas and certain soil in order to properly manage storm water (e.g., retention for larger storm; maximizing infiltration; green infrastructure to the extent possible; avoiding development on steep slopes, minimizing the alteration of existing drainage areas; where impervious surface coverage is 20% or more of the drainage area, storm water to be treated by two different types storm water management practices in series; 100-foot separation distance between the storm water infiltration practice and the subsurface sewage treatment system absorption area, etc.). The most significant difference is that DEP treats the Storm Water Manual incorporated into the State General Permit as mandatory, exercising very little flexibility; DEP requires an individual permit in which the DEP staff determines the actual requirements from the Storm Water Manual. An applicant could either agree to the DEP staff requirements or abandon the project. There is no realistic opportunity to challenge DEP's storm water permit determinations. While the Future Storm Water Fund created in the MOA was intended to address the incremental cost of DEP's storm water regulation, DEP generally takes the positon that they are enforcing the same Storm Water Manual as applies in the DEC General Permit so there are no incremental cost associated with their program (when a project is also subject to the State General Permit). In order to enhance DEC's enforcement of its storm water program, DEP has funded DEC storm water staff person in the DEC Region 4 Office.[2] The end result is that storm water requirements have been a major obstacle to new construction and to improvements and enhancement to existing municipal infrastructure and, at a minimum, has resulted in significant delay and costs out of sync with the size of the project and the water quality impacts. In other words, even though the DEP is enforcing the State Storm Water Manual, the SWPPPs required by DEP are very often not affordable, the engineering costs are excessive and the construction costs are out of sync with the size of the project. Because DEP is enforcing the State Storm Water Manual, there is no cost effective approach to determine the actual incremental cost from DEP's individual permit versus the State General Permit.

[2]In addition, over the past 17 years, the State has maintained and increased funding for the Watershed Inspector General's Office, which uses public funds to oppose, delay and restrict potential development within the Watershed. In addition, DEP has used its extensive funding to oppose the few major development projects that have been proposed within the West of Hudson Watershed since 1997. For example, as part of its opposition to the Cross Road Project, the City advertised for proposals from an engineering firm to evaluate the DEIS, listing the contract amount as $600,000.

New Knowledge and Positive Developments

In 1997, the two major storm water issues West of Hudson were turbidity in the Schoharie Watershed Basin and phosphorous in the Cannonsville Reservoir Basin. The turbidity in the Schoharie Reservoir was particularly problematic because of the discharge through the Shandaken Tunnel to the Esopus. As part of the SPDES Permit issued to DEP for the Shandaken Tunnel Discharge, DEP was required to perform a comprehensive evaluation on the effectiveness of terrestrial-based best management practices on turbidity within the Schoharie Reservoir. That study was issued in 2007 and determined that the 71-87% of the turbidity within the Schoharie Reservoir was due to natural erosion within the stream itself.[3] In its report, DEP stated as follows:

> The mandate of this report is essentially an evaluation of the potential turbidity reduction benefits of increased or focused funding and implementation of terrestrial-based programs and projects (whole farm, forestry, willing seller land acquisition, conservation easement programs, storm water retrofit) and stream-based programs and projects (stream restoration, and stream buffer easement programs). Since the overwhelming majority, roughly 71-87%, of turbidity inputs at the outfall of the Shandaken tunnel are derived from in–stream rather than terrestrial sources, the greatest opportunities for reducing such turbidity in the long–term is enhanced implementation of the stream management program. On the other hand, the opportunity for turbidity reduction based on terrestrial-based programs is very limited. Indeed, as presented in the analysis in this report, even if one were able to apply BMPs in these terrestrial-based programs to all lands within the Schoharie watershed (which, for a variety of practical considerations, is hardly possible), the maximum theoretical turbidity reduction would be less than 5%.

In other words, runoff from the terrestrial areas is not a major source of turbidity and does not have a measurable impact on drinking water quality.

Effective May 1, 1997, the Cannonsville Reservoir Basin was phosphorous restricted because according to DEP, the average concentration of phosphorous within the reservoir itself exceeded 20 ug/L. As a result of being phosphorous restricted, any storm water plan for a new project within the Cannonsville watershed had to achieve the standard of no net increase in phosphorous and all new wastewater treatment plants and expansion of existing wastewater treatment plants (subject to certain variances) were prohibited. As a result, Delaware County developed and implemented a Phosphorous Reduction Plan for the Cannonsville Reservoir Basin focusing primarily on agriculture sources. DEP aggressively pursued the regulatory upgrade of the wastewater treatment plants with in the Cannonsville basin (Villages of Delhi, Hobart, Stamford and Walton, etc.). The end

[3] The "*Schoharie Watershed Turbidity Reduction Report: Evaluation of Watershed Management Programs, dated September 1, 2007 (Prepared in accordance with the 9/1/2006 SPDES Permit (NY-0268151) for the Shandaken Tunnel Outlet).*"

result is that the water quality in the Cannonsville Reservoir is no longer phosphorous restricted. In other words, the two major water quality impacts from storm water runoff (phosphorous in the Cannonsville and turbidity in the Schoharie) were either determined not to have an impact on overall drinking water and/or have been addressed through partnership programs and local initiatives (i.e., Regulatory Upgrade Program and the Delaware County Phosphorous Reduction Program and the Watershed Agricultural Program).

The Septic Rehabilitation Program administered by CWC is perhaps the most valuable, cost effective, well received water quality program funded by DEP. The results include the rehabilitation of over 4300 residential septic systems. Equally important is that the program model implemented by CWC of allowing the property owner to contract for the repair/rehabilitation and implementing a plan prepared by independent engineer and approved by DEP and CWC has proven to be cost effective to administer and implement and expedient. The cost for the septic system upgrades on a per household basis is approximately 20% of the costs of new community sewer system utilizing a new intermediate subsurface sewage treatment system. More important, the best management practices being used in the septic rehabilitation program (which do not necessarily comply with the requirements for new system in WRR) have been successful and reliable in protecting water quality. In other words, the fixes piloted by the Septic Rehabilitation Program have demonstrated that water quality can be protected without strict compliance with the WRR design standards. The Septic Rehabilitation Program is expedient, cost effective, popular, practical and extremely effective at obtaining water quality benefits and that model should be expanded.

After Hurricane Irene, it became clear to all stakeholders that the most significant threat to water quality and to sustaining and thriving communities is the sudden increase in extraordinary and violent storms. Delaware County Board of Supervisors (together with the other WOH counties) proposed to DEP, DEC, DOH and EPA that the stakeholders refocus their efforts on preparing for and mitigating the impacts from these storm events as the most important tool to preventing degradation to the New York City's water supply and maintaining community sustainability. All parties agreed. As a result, under the Stream Management Program, the Land Acquisition Program and a Program Agreement with CWC, a comprehensive flood mitigation planning and implementation program has been agreed to and funded by the DEP. With the encouragement, funding and technical assistance from DEP, the NYC West of Hudson Watershed is becoming a national leader in flood mitigation planning and protection. Although DEC, DOH and EPA have been fully supportive, upon information and belief, it was the DEP that recognized the threat to both its water supply and the communities; convened its technical staff to develop programs and initiatives to foster flood protection and voluntarily offered funding and technical assistance to the watershed communities. By its actions, DEP has been demonstrated strong leadership and solidified the partnership.

Delaware County Situation

As stated above, there have been many successes in protecting the New York City ("NYC") Water Supply since the signing of the 1997 Memorandum of Agreement ("MOA") in the West of Hudson Watershed ("WOH"). Water quality in many of the WOH reservoirs has been stable or improved since that time. The Cannonsville Reservoir is a prime example. The NYC Department of Environmental Protection ("DEP") and upstate residents have developed many successful partnerships to serve those ends and assist communities with their infrastructure simultaneously. Hundreds of farmers, involving tens of thousands of acres have implemented Whole Farm Plans. Stream Corridor management programs have added another layer of water quality protection. The cooperative development of the NYC Watershed Flood Mitigation is a continuation of successful partnerships that are mutually beneficial to all parties.

Over the past 17 years a lot has been learned and many things have changed, but one thing has not, there has not been the rabid and expansive development that was feared and projected at least with respect to the communities within Delaware County.[4] When the MOA was being negotiated during the early/mid 1990's, the environmental community and regulators were fearful that the WOH would soon reflect the extensive development allowed to occur in the East of Hudson. Development is weak and will remain weak, similar to the remainder of rural upstate New York , due in part to national trends (globalization, loss of manufacturing, inability of small farms to compete; the cost of transportation), the high cost of living in New York State (in particular taxes and energy) and a myriad of overlapping and at time onerous regulations. Since 1997, there has been an outmigration of jobs and people from upstate rural areas, drawing the youth we paid to educate along with them. Data also shows more and more daily travel outside the county for available jobs. Unfortunately, according to a report published by the National Oceanic and Atmospheric Administration ("NOAA"), evaluating the 50 worst places to own a home, Delaware County ranked as the 10th worst place to own a home. There are over 3,000 counties in the United States. The list includes cost to heat and cool homes to weather related deaths in homes.[5] Delaware County's ranking is based almost entirely upon the risk for weather impacts such as flood damage and heating costs.

Building permits from 2000 through 2007 averaged less than 150 per year for the entire county. Rhode Island (which is smaller than Delaware County) had 2,820, 2,398, 757, and 928 building permits (includes single and multifamily homes) respectively for 2001, 2002, 2012 and 2013.[6] The Town of Hamden had three and five building permits in 2013 and 2014 respectively on 60 square miles.[7] The population concentration of the County has remained at approximately 32 people per square mile since 1997. The Town of

[4] In this paper, we are not asserting that the economic conditions that currently exist within Delaware County or the west of Hudson watershed are attributable to the WRR; rather we are making the point that over the past 17 years, for whatever reason, the economic conditions have either stayed the same or have gotten worse and the 1990s concern/fear of rampant development did not occur and will not occur in the future. As result, the City's Long Term Water Quality Protection Plan should be updated to reflect the current reality and updated to address what we learned from the past success.

[5] Website: http://stories.weather.com/worstplacestoownhome

[6] Website: www.homefacts.com/buildingpermits/Rhode-Island.html

[7] Private conversation with Hamden Town Clerk

Hamden has 22 people per square mile. In comparison, the State of Rhode Island has 1018 plus people per square mile[8].

The mean household income is 30% lower than the state median household income. That is distorted more and more by a higher percentage of elderly (middle class residents from the NYC Metropolitan Area) who have come here to retire with high incomes as compared to the dwindling number of resident working families. This has led to distorted classification of school systems to "high wealth districts" leading to significant reductions in state aid, increased the value of land in these districts, also in part due to competition for lands with the Land Acquisition Program. In turn that makes it more difficult for working families to purchase homes and afford higher property taxes. The numbers and types of jobs needed to enable working families to purchase a home in competition with newly retired or elderly with the resources to buy watershed homes, is becoming out of reach for our working families.

In the absence of stable employment with a living wage, Delaware County residents have become self-employed; Delaware County has exceptionally high level of individual proprietors relative to nearby counties in and out of the watershed. A high percentage of the working residents need to make more money than otherwise provided for by their jobs, if they have one, pursue stone cutting, renting out rooms or their homes, maintaining second homes (cleaning, painting, lawn mowing, snow maintenance, etc.), cooking from their home, art and crafts; logging or another part-time business venture to earn enough money to purchase a home or purchase benefits, such as health insurance that they could not otherwise afford. Ninety-five percent of the businesses in Delaware County employ five or fewer employees. These employees are very unlikely to make above average per capita wages.

Delaware County population has barely changed in the past 150 years. Figure 4.1 in The New York City Watershed Economic Impact Assessment Report, 2009, commissioned by Delaware County, shows that the population in Delaware County declined 4% between 1996 and 2006 and projected further decline going forward. "Data from the Cornell Program on Applied Demographics indicate that [a certain geographic area in the Catskills is anticipated to] average 4% growth between 2005 and 2035 Delaware County is expected to lose 23% of its population and is therefore excluded from the total and development growth analysis. This is likely to coincide with a decline in jobs and economic development."[9] P15. A reduction from last estimate of population of 47,980 for 2013 of 23% equals over 11,000 people.[10] Further, demographic projections by Cornell University show a decline of population of 43% for the age group 0 to 60 and an increase of 21% for ages 60 to 85. They demonstrated that by "[s]eparating population projections by age shows a steep decline in the working-age population."[11] Data shows that Delaware

[8] Quickfacts.census.gov
[9] Pg 15 Private Lands, Public Benefits: Open Space Resources and Preferred Growth Areas in the Catskills, Open Space Institute, Inc. 2011
[10] Quickfacts.census.gov
[11] Pg 16 Private Lands, Public Benefits: Open Space Resources and Preferred Growth Areas in the Catskills Open Space Institute, Inc. 2011

County is, if not the fastest, one of the fastest aging counties in New York State. The data above from the OSI substantiates what New York State census data shows. If our demographic trends continue, our financial and productive human resources will decrease along with our GDP going forward, our economy will become more focused on the needs of the elderly, leaving fewer dollars for other needs such as infrastructure and maintenance to support our local economy. This trend is not one of rapid development, but one of a reduction in our workforce, which in turn will reduce our tax base and GDP. The bottom line is the facts of our economy and demographics together defy the fear of rampant growth. We will be fortunate to maintain the status quo as a County going forward. We clearly will need more housing for the elderly and we will need housing for those working families remaining here. As a result, the cost of the DEP's sewage regulations and storm water regulation will remain and become even more unaffordable. As a result, future improvements in water quality protection are not going to come from enforcing restrictions that prevent or increase the cost of new construction; but rather working in partnership with CWC and the communities and their residents in improving the infrastructure, their resiliency to violent storms, helping small business survive and implementing best practices to protect water quality.

The Future:

In light of the lack of development , the forecasts supporting that trend going forward, the economic and population challenges facing the County and the great strides achieve through partnership in improving water quality, we propose it is time reevaluate the process of protecting the water supply to fit the current and future conditions on the ground.

If one examines successful programs, such as the Community Waste Water Program administered by CWC, the Regulatory Upgrade Program administered by DEP/EFC, Stream Corridor Programs administered by the Soil and Water Conservation Districts and DEP, the Septic System Rehabilitation and Repair Program administered by CWC, the Septic Systems Maintenance Program administered by CWC, it becomes very clear that where there has been great success in improving water quality with the cooperation of local residents and City funding. The common denominator in these successes involves a growing and improving partnership between the City and upstate communities through partnership programs implemented and administered on the local level (CWC). Putting this into the context of minimal development, aging populations, economically stressed residents and sustained or improved water quality, we adamantly suggest, that an aggressive and adversarial process to enforce the storm water regulations and enforce the prohibition on alterations to NCRA and the restrictions on siting new septic system is counterproductive to obtaining the cooperation of the local stakeholders and is not necessary to protect water quality and is contrary the MOA mandate of "allowing existing development to continue and future growth to occur in a manner that is consistent with the existing community character and planning goals of each of the Watershed communities." At the very least a facilitative process in the administration of

the Watershed Rules and Regulations is the only approach that is consistent with the goals of the MOA to protect water quality and community sustainability.[12]

Strict and inflexible enforcement of the storm water regulations and/or prohibiting changes in size or use of a home or commercial facility is unwarranted relative to the benefit to water quality from such enforcement, particularly on the scale of development here. The number of entities attempting to pursue moderate modifications on their property is de minims relative to the scale of development outside the watershed The point being, the City gains little if any water quality benefit from strict and inflexible enforcement (other than distrust, cynicism and opposition). At the same time, it has always been clear to all stakeholders that the residents and business in the West of Hudson Watershed cannot afford the cost of implementing the sewage and storm water requirements of the WRR. We now know that the regulatory costs are far more expensive than the cost predicted at the time of the MOA. From the studies conducted since the MOA, we also know that at least with respect to turbidity, the primary and overwhelming source is the stream bed itself and only a small proportion of the overall sediment within the water column is from the upland areas. We also know that the best management practices being used in the septic rehabilitation program (which do not necessarily comply with the requirements for new system in WRR) have been successful and reliable in protecting water quality. We also know the costs of constructing a new wastewater treatment plant under the WRR and the costs of operating such systems for small communities are not affordable and out of sync with the size and overall family income level of our communities. We know the difficulties in siting new septic systems consistent with the WRR and the limitation that places on siting new development. We also know that cost of designing and implementing a stormwater pollution prevention plan consistent with the WRR is not affordable and/or practicable relative to the types of development occurring in the West of Hudson watershed. We also know that the DEP stormwater permit has caused significant delay and uncertainty in project development (in particular, in comparison to the water quality benefits).

Stormwater protection East of Hudson is much more important due to their circumstances of homes sited in close proximity to reservoirs, high population concentrations per square mile and high percentages of impermeable surfaces lends itself to a higher risk pollutant loading. In Delaware County these situations do not exist in any significant level, in fact the storm water impacts here relative to the reservoirs on information and belief is barely measurable. If is also of little concern due to the tiny amount of development overall and

[12] This approach is modeled in part on a pilot program being conducted by the DEC entitled: NYC Industrial Waterfront Pollution Prevention, Toxic Reduction, and Resiliency Planning. In that program, DEC, in partnership with the New York State Pollution Prevention Institute and the New York City Environmental Justice Alliance, with funding from EPA, have engaged with community stakeholders in helping local businesses to identify and implement cost-effective strategies aimed at pollution prevention, toxic reduction and climate adaptation. The main goal is to transform an industrial/environmental justice community in the South Bronx to be sustainable and climate resilient. The DEC staff has gotten approval to use prosecutorial discretion to assess local businesses in that geographical area in order to identify and implement cost-effective strategies aimed at pollution prevention, toxic reduction and climate adaptation without any reporting or any enforcement. The New York City Environmental Justice Alliance is the conduit to obtaining access to the community facilities and the trust of the community stakeholders.

the scale of individual development projects. In Delaware County impervious surfaces are less than 3% of the involved basins which data shows is below any significant threshold for overall contamination of the water supply.

Recommendations and New Programs

1. Expediting and Regulatory Relief for Flood Mitigation.

As stated above, under the Stream Management Program, the Land Acquisition Program and a Program Agreement with CWC, a comprehensive flood mitigation planning and implementation program has been agreed to and funded by the DEP. In addition, after Hurricane Sandy, the states of New York, New Jersey and Connecticut received significant sums from the federal government to help flood impacted communities prepare for the next flood event and adopt flood mitigation measures. Many or most of the structures in our watershed communities were developed prior to comprehensive governmental regulations on multiple levels which control, restrict and manage such development. The Coalition of Watershed Towns (and others) have expressed a concern that the delay and cost of complying with the overlapping, complex and duplicative regulatory approvals will prevent the re-structuring/redevelopment of communities or, at a minimum, discourage communities from attempting to participate in effective flood mitigation. The Coalition of Watershed Towns commissioned an evaluation to identify the approvals and regulatory standards applicable to replacing housing and commercial property demolished as part of the flood mitigation project. An excerpt from that evaluation is attached hereto as Exhibit A. That evaluation indicates that a typical 15 unit residential project will require in excess of 26 different approvals from six governmental agencies/bodies and will take a minimum of 2 to 4 years assuming no public opposition. The reality is that current regulatory standards may not allow for cost-effective redevelopment and/or redevelopment at all due to potentially conflicting restrictions associated with the following: cultural resources, wildlife, threatened or impaired species habitat, storm water management requirements, septic system siting requirements, steep slope limitations, regulatory setback requirements, SEQRA documentation requirements, building code, zoning, conservation easements and the open space restrictions and wetland/streams crossing. The attached evaluation identifies a handful of strategies to reduce the regulatory roadblocks to the flood mitigation redevelopment project. Delaware County respectfully request that the DEP, DOH, EPA, DEC and DOS give due consideration to those strategies.

2. Enhancing the Small Business Septic Assistance Program.

As stated above, under DEP's interpretation of its WRR, those existing homes, institutions and businesses connected to an existing pre-1997 septic system cannot alter or modify their septic system without coming into compliance with the City's regulations for new systems (or to the extent determined possible by DEP). DEP considers the conversion of a home to an office or retail space as a prohibited alteration to septic system; the addition of seat or table to a restaurant as a prohibited alteration to septic system; the conversion of room at an existing hotel to a rental room as a prohibited

alteration to septic system; the addition of sink and refrigerator to an existing hotel room as a prohibited alteration to septic system; the addition of outdoor deck to a restaurant as a prohibited alteration to septic system. DEP has a legitimate concern regarding the effectiveness of these old septic systems serving commercial facilities. DEP uses the alleged change to the use of the building as an opportunity to force the property owner to upgrade its septic system to meet their regulations. As a result, the City interprets its regulation and regulatory authority as limiting the homes, business and institutions that were on septic system in 1997 to the same level of activity (and mix of sewage) that occurred in 1997 (notwithstanding the difficulty of demonstrating the level of activity that occurred 17 years ago). Delaware County and the Coalition of Watershed Towns disagree with the city's interpretation and, by a letter dated, April 18, 2014, petitioned DEP to alter their interpretation and enforcement strategy. DEP has experienced opposition to the enforcement of its interpretation and DEP has indicated a willingness to address these issues in order to more effectively address its concern regarding the effectiveness of these old septic systems.

The Coalition Watershed Towns and Delaware County have a partial solution to address the need to evaluate these septic systems and to make improvements where necessary and practicable. Under the 2007 FAD, DEP was required to fund a Small Business Septic Repair Program to be administered by CWC. Under that program, CWC will reimburse the small business owner 75% of the cost of a septic system repair for a failed septic system up to a maximum of $40,000. To be eligible, the failed commercial septic system must be: (i) 700 feet or less from a watercourse or (ii) within the 60 day travel time priority. Apartment buildings and septic systems constructed after November, 1995 are not eligible. That program should be expanded to include not only small businesses, but institutions and other non-public entities. The program should apply to subsurface sewage treatment systems and intermediate subsurface sewage treatment systems as those terms are defined in the WRR. The program should be expanded to include not only failed system, but any existing system, whether or not it has failed. Under the expanded program, an eligible property owner would petition CWC for an evaluation of its existing septic system. CWC would then perform a comprehensive evaluation of the existing septic system and make recommendations for the need for improvements and, if so, the improvements that are practicable. The property owner would have the option to contract with CWC to make the improvements. If the owner agrees to make the improvements, the owner would be entitled to a 75% subsidy from CWC. The $40,000 cap should either be eliminated or substantially increased.

Under New York State Public Health Law Section 1104 and under Section 141 of the MOA, any wastewater treatment plant (public or private) that existed as of November, 1995 and any public wastewater treatment plant (new and existing) are entitled to be reimbursed by DEP for the incremental costs, including annual operating and maintenance cost, incurred in accordance with the requirements of the WRR, including costs incurred due to expansion, repair, replacement. For purposes of Section 141 of the MOA, DEP does not consider a septic system to be WWTPs subject to a regulatory upgrade. Publicly owned septic systems and subsurface sewage treatment systems are eligible for funding under New York State Public Health Law Section 1104. At the

present time, there is no funding for incremental costs for non-public subsurface sewage treatment systems that need to expand, repair or replace. As a result, Coalition of Watershed Towns and Delaware County propose that non-public property owners of subsurface sewage treatment systems be eligible for reimbursement from the Small Business Septic Program Fund for the incremental costs, including annual operating and maintenance cost, incurred in accordance with the requirements of the WRR, including costs incurred due to expansion, repair, replacement.

3. Future Stormwater Fund -- Allocation and Replenishment.

Under Section 128 of the MOA, the City was obligated to provide $31,700,000 for a program to design, construct, implement, and maintain storm water measures pursuant to the storm water pollution prevention plans required by Section 18-39(b)(3) of the Watershed Regulations and individual residential stormwater plans required by Section 18-39(e) of the Watershed Regulations and not otherwise required by federal and/or state law with respect to projects West of Hudson constructed after the effective date of the Watershed Regulations. The storm water funds also are available for reasonable and proper costs for designing, permitting, constructing, implementing, and maintaining eligible storm water projects.

As stated above, DEP requires individual permits subject to a permitting process with very little, if any, due process (in contrasts, DEC relies on a general permit for storm water; allows an independent professional engineer to develop and certify the completeness of the SWPPP and considers and issued the storm water manual incorporated the general permit as guidance subject to engineering judgment). The most significant difference is that DEP treats the Storm Water Manual as mandatory, exercising very little flexibility and requires an individual permit in which the DEP staff determines the actual requirements. While the Future Storm Water Fund created in the MOA was intended to address the incremental cost of DEP's storm water regulation, DEP often takes the positon that they are enforcing the same Storm Water Manual as applies in the DEC General Permit so there are no incremental cost associated with their program (when a project is also subject to the State General Permit). The end result is that storm water management has been significantly more expensive within the watershed but there is no cost effective and fair manner to calculate the incremental costs. The Coalition Watershed Towns and Delaware County propose that in situations where both a DEP and DEC storm water SWPPP are required, that 50% of the overall cost to design, construct, implement and maintain storm water measures be deemed the incremental costs associated with WRR for both the Future Stormwater Fund and for Section 145 of the MOA. The applicant could either accept that amount or a petition for a different amount if it can document an actual incremental cost.[13] If the goal is to protect water

[13] The goal of the MOA is to protect water quality and to protect the viability of the communities. The cost to the city to filter their water supply is in the billions of dollars. The cost to the city to treat their water supply at the source is in the hundreds of millions of dollars. If the storm water regulations are critical to DEP's FAD obligations, the most practical approach to ensuring that there is adequate funds to protect water quality while allowing the upstate communities to develop is to establish a fair, reasonable and known reimbursement rate. Note, the median family income in Delaware County is 60% of the median family income in NYC.

quality by mitigating pollution from storm water arising from new construction, the best and most effective approach is a cost sharing approach that provides the applicant with assistance in funding and maintaining the requirement of the SWPPP. In order to ensure that the SWPPP are cost effective, in order to be eligible for reimbursement, the applicant would be required to coordinate the SWPPP approval process with CWC. In other words, apply the administrative tools from the Septic Rehabilitation Program to administer the Future Storm Water Fund.

January, 2017 will be the 20th anniversary of the MOA. As stated above, over the past 17 years, the state and city storm water programs have been modified to significantly more comprehensive, complex, demanding and expensive. In the meantime, the partnership created by the MOA is intended to continue as long as the City of New York relies on the West of Hudson Watershed for its water supply. Since the cost of storm water management (both in engineering and implementation) has increased beyond anyone's reasonable expectations, it is appropriate that on the 20th anniversary of the MOA, that the storm water fund be replenished to its original amount ($31,700,000). For the past 17 years, CWC has been an excellent steward of those funds and will continue to be in the future. It is critical, however, that the partnership created by the MOA remains fair, equitable and sustainable to the next generation.

4. Replenishment of the Catskill Fund For The Future.

Under Section 135 of the MOA, the City was obligated to provide $59,745,241 to fund a program supporting responsible, environmentally sensitive economic development projects in the West of Hudson communities. The program, known as the "Catskill Fund," has been successfully and judiciously administered by CWC. As stated above, the partnership created by the MOA is intended to continue as long as the City of New York relies on the West of Hudson Watershed for its water supply. Notwithstanding the Catskill Fund, Delaware County has lost residents and the residents remaining have fallen further behind the median income level of the remainder of the state. In the past six years, the Catskill Fund interest earnings have been de minimus due to the unprecedented reduction in the federal interest rate. The partnership created by the MOA needs to remain fair, equitable and sustainable to the next generation. As a result, on the 20th anniversary of the MOA, the Catskill Fund should be replenished to its original amount ($59,745,241) and adjusted for inflation (as of January, 2014 the amount would be $87,840,000) and after deducting for bad debt.

5. Generic Variances for Projects in for Low Income Rural Communities-Sewage and Stormwater.

Sewer

To the extent that new housing is to be located within a village or hamlet, the preferred solution for managing sewage is connecting to an existing community sewer system. In areas where there is no access to a community sewer system, the only viable

solution is constructing a new subsurface sewage treatment system. Any new subsurface sewage treatment system must meet the requirements of Section 18-38 of the New York City Watershed Regulation. In general, the following restrictions apply:

> (1) The system must meet the requirements of 10 NYCRR Part 75 and Appendix 75-A;
> (2) The system must meet the requirements set forth in the Design Standards for Wastewater Treatment Work, Intermediate Size Sewage Facilities, New York State Department of Environmental Conservation (1988) (hereinafter "Intermediate Design Standards");
> (3) No part of any absorption field for any new subsurface sewage treatment system shall be located within the limiting distance of 100 feet of a watercourse or wetland;
> (4) Raised systems are only allowed in certain areas and require separation of at least 250 feet from any watercourse;
> (5) Mound systems, galley systems, seepage pits, evaporation transpiration and evaporation transpiration absorption systems are prohibited;
> (6) An additional area of at least 100% of the primary absorption should be set aside as the reserve absorption field;
> (7) No part of any primary or reserve absorption field should be built under any pavement or other impervious surface; and
> (8) Sites with soil percolation rates faster than three minutes per inch or slower than 60 minutes per inch shall not be approved.

Under the state program, the Intermediate Design Standards are guidance and not strict requirements. By comparison, DEP strictly applies the Intermediate Design Standards as standards, exercising little or no flexibility in when/how they are applied. This rigid application of the Intermediate Design Standards without regard to site-specific circumstances significantly complicates development of septic systems for clustered residential developments.

According to DEP's regulations, any proposed alteration or modification of any individual sewage treatment system that is an existing or noncomplying regulated activity shall be performed in accordance with the requirement applicable to new subsurface sewage treatment system. However, alterations or modifications of individual sewage treatment systems that cannot meet these requirements, due to site constraints, shall be performed in accordance with these requirements to the extent possible. Any proposed alteration or modification of any intermediate sized subsurface sewage treatment system is prohibited unless such alteration or modification complies with the requirements of the Watershed Regulation.

In order to facilitate subsurface sewage treatment systems necessary for new housing and/or new commercial facilities in low income rural communities, DEP should issue a generic variance allowing such subsurface sewage treatment systems to be regulated the same as alteration/modifications of individual subsurface sewage treatment system and/or remediation of subsurface sewage treatment (compliance is required to the extent

practicable). Without this variance, those locations that are most desirable for new housing or a new commercial facility may not otherwise be available.

Stormwater

DEP currently allows some flexibility with respect to storm water associated with "redevelopment projects" which is defined as "reconstruction or modification of any previously developed land such as residential, commercial, industrial, or road/highway, which involve soil disturbance. Redevelopment is distinguished from new development in that new development refers to construction on land which is not been substantially developed." NYC Watershed Regs. §18-16(a)(91). With respect to redevelopment projects, DEP allows some flexibility providing that: "such plan shall (i) be prepared and implemented, ***to the extent possible***, in accordance with requirements of Part III of the New York State Department of Environmental Conservation General Permit GP-0-10-001 that are applicable to construction activities identified in Table 2 of Appendix B; (ii) be prepared and implemented, ***to the extent possible***, in accordance with additional requirements for storm prevention plan set forth in subsection c below and (iii) provide an improvement in stormwater management and/or stormwater treatment as compared with conditions prior to the activity." NYC Watershed Regs. §18-39(b)(7) (emphasis added).

DEP could issue a generic variance allowing new development projects in a low income rural community that is not eligible for Future Stormwater Funds and not eligible for funding under Section 145 of the MOA to be treated as a redevelopment project for purposes of the Watershed Regulations. This minor generic variance will provide more flexibility to develop in the area preferred by the community.

The definition of the term "Low Income Rural Communities" should be determined by consensus of the stakeholders.

We respectfully request an opportunity to meet with DEP, DOH, DEC, DOS and EPA and/ or other watershed parties to discuss alternatives that yield more immediate results for water consumers and watershed residents. We are not suggesting the City forego their authority and responsibilities, but believe the process can be improved cost effectively for all parties by building on the successful programs that are partnership based.