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MEMORANDUM

TO: Ms. Thelma Murphy, EPA

FROM: Andrew B. DeSantis, Assistant Director 

RE: Comments on the Draft NPDES General Permit for Discharges from Small Municipal Separate Storm Sewer Systems in North Coastal Massachusetts

DATE: March 22, 2010

CC: Mr. Jay Ash, Chelsea City Manager, Mr. Ned Keefe, Chelsea Deputy City Manager, Mr. Joseph C. Foti, Chelsea DPW Director, Mr. John DePriest, Chelsea City Planner, Ms. Patricia C. Passariello, P.E. Weston and Sampson Engineers, Mr. Frederick Civian, Massachusetts Department of Environmental Protection

I am commenting on draft NPDES General Permit for Discharge from Small Municipal Separate Storm Sewer Systems in North Coastal Massachusetts

I have worked in planning, public works, and environmental permitting in local government for the last 30 years.

I am concerned about the affordability of the proposed stormwater management regulations particularly in environmental justice communities such as the City of Chelsea, Massachusetts.

The City of Chelsea lies completely within the Mystic River watershed and is one of the twenty-one communities that are within this watershed. All communities within this watershed receive some or all of their sanitary sewage collection from the Massachusetts Water Resources Authority. Any community discharging sanitary sewage for collection and treatment by the MWRA has seen an enormous spike in wholesale charges over the last twenty years. Wholesale charges from the MWRA to member communities for sewage have increase almost 36% in the last ten years (MWRA Advisory Board Annual Water and Sewer Retail Rate Surveys). Retail charges for the City of Chelsea have increased over 90% in the same period.

The City of Chelsea in an effort to reduce costs to the rate payer in the community has embarked on an ambitious program to separate combined sewer into separate sanitary and storm sewer collection systems. Approximately 75% of the City is currently combined. Excessive requirements regarding storm water discharge may force the City to rethink this strategy.

Currently, the water and sewer retail rates in the City of Chelsea are much higher than what the EPA in its own publication (Rate Options to Address Affordability Concerns for the District of Columbia Water and Sewer Authority – Prepared by USEPA Region III, Philadelphia, PA December 2002) considers affordable rates as 2% of median household income (rates in Chelsea are at a level of 3.5%).

Tremendous progress has been made in cleaning up Boston Harbor and it's environs. Surface waters at Revere Beach and other locations are noticeable cleaner and it is certainly desirable to keep this effort moving forward. However, affordability and cost benefit must be considered as part of the equation. Including the upcoming fiscal year, the City of Chelsea has spent in excess of \$8.9M on various projects of which a large portion of the expenditure is directly related to correcting sewer deficiencies which degraded water quality and sewer separation. Expenditures on our storm water management plan totaled \$500K.

A cost/benefit analysis of the requirements of the proposed permit must be undertaken.

Grant monies in addition to loans must also be made available.

Redevelopment is an avenue for the City of Chelsea to renew itself and provide an infusion of tax revenue. Any new development has a requirement for open space and plantings. We are actively planting more street trees in an effort to increase the tree canopy in the City. We require developers to provide site drainage and to typically meet 80% removal of total suspended solids.

David Webster of EPA Region 1 gave a presentation by on the new draft MS4 permit at a recent meeting of the MWRA Advisory Board where he spoke of the preference for infiltration as a solution for stormwater management. Unfortunately in the City of Chelsea, most of the soil type is composed of Class D soils not suitable for infiltration. Rain gardens, storm water tree pits and green roofs are viable partial solutions for some of this problem however these also provide some difficulties and increased costs. We are opening bids for an infrastructure project this week that includes four stormwater tree pits. The bid cost of these tree pits at \$11K per each installation. Planting a tree without the stormwater appurtenances typically costs about \$600 including the tree.

Mr. Webster also opined that the EPA would like to see municipalities institute Storm Water Utilities to charge for the implementation of Stormwater Management Plans. Recently we updated our water and sewer ordinances and added a section on Stormwater. My engineering consultant originally proposed the ability to institute charges in the ordinance. I removed it from the proposed ordinance submission due to the fear that if a

City Councilor read this, it may jeopardize the passage of the ordinance. Mandating that municipalities institute a storm water utility would address the issue of getting it implemented, however as illustrated above, the costs for a community like Chelsea would still be burdensome.

The municipalities covered by the draft permit differ greatly in land use and impervious cover. The universal application of this permit in a one size fits all manner does not allow for the flexibility to tailor BMP's to individual municipalities. More flexibility is needed to allow an individual permittee to design BMP programs that provide increased benefits in a particular situation.

Due dates should be stated from the "date of authorization" rather than "effective date." There is no timeframe by which EPA must solicit/incorporate public comments and issue an authorization. If EPA takes an unreasonable time to complete this task, the allowable time period for the permittee to complete the Year 1 tasks could be substantially and unfairly reduced. Year 1 should be a full calendar year from date of authorization.

The draft permit does not detail the steps between publishing an NOI for public comment and issuing Authorization. For example, how will public comments be addressed and by whom, and what period of time will be allotted for such activities? Allow 90 days for addressing of public comments from receipt of public comments by permittee.

In Section 1.10 Stormwater Management Program (SWMP), paragraph c, a requirement for maintaining adequate funding for the SWMP. Adequate funding is undefined and could be subject to interpretation. The costs of most portions of the SWMP requirements could be reasonably estimated, however in an older City like the City of Chelsea, the findings of Illicit Discharge Detection may require corrective actions requiring six or seven figure expenditures to undertake. Although the City of Chelsea does budget adequate maintenance and capital budgets for stormwater activities undertaken by the Department of Public Works, there needs to be flexibility in the requirements to allow a municipality the opportunity to secure funding outside of it's own ability to raise funds.

In Section 2.1.1 paragraph c, requires a 60 days to find and fix everything tributary to an outfall where sampling data indicates an exceedance of WQ standards, this timeline is too short. Particularly during the winter season, any repair requiring excavation is particularly difficult. A more reasonable time frame would be 120 days.

In Section 2.3.2, New Dischargers, the definition is unclear here and is not contained in Appendix A.

In Section 2.3.2.1, New Discharges to Impaired Water without and Approved TMDL, Individual permits for single outfalls doesn't make sense for municipalities or EPA/DEP. Written specific clauses in the General Permit such as done for TMDLs would be more workable.

In section 2.4.4.8, paragraph h, a requirement is stated for training employees about the IDDE program including how to recognize illicit discharges and sanitary sewer overflows. The City of Chelsea employs hundreds of employees in various capacities as well as contracts with various firms including operation and maintenance of sewer collection facilities and street sweeping. The training requirement should be limited to those personnel directly involved in operations of facilities that may contribute to discharges in the MS4 including individuals providing direct management of such employees. Typically these would include the public works department, water and sewer operational divisions, solid waste, highway and inspectional services.

In Section 2.4.6.9, paragraph c, an inventory and priority ranking of all MS4 owned property and infrastructure is (including public right-of-way) that has the potential to be retrofitted with BMPs to decrease the frequency, volume and peak intensity of stormwater discharges within the MS4 is required to be submitted within two years of the effective date of the permit. This particular requirement will require a substantial amount of time and funding to perform properly particularly in communities like the City of Chelsea that have small in-house technical staffs. The time frame of this requirement should at a minimum be 5 years.

In Section 2.4.7.1 Good Housekeeping and Pollution Prevention for Permittee Owned Operations, Paragraph d. Operations and Maintenance, subparagraph iv, a requirement for twice yearly sweeping of permittee owned parking lots, streets and sidewalks is written. I heard at the public hearing held on March 18, 2010 that some communities could not afford to conduct twice yearly sweeping of all streets. The City of Chelsea conducts twice monthly sweeping of all streets from March 1 through December 31. While this is feasible for the City of Chelsea due to its small land area (2 sq. mi.) and limited road mileage (44 miles) it may not be feasible for other communities to sweep all streets even twice a year. However the 44 miles of roadway have sidewalk on both sides of the street for 99% of the total mileage. The City of Chelsea Department of Public Works does not have sufficient personnel or equipment to conduct sweeping of sidewalks on a city wide basis twice a year. The total labor force in the Chelsea DPW is 19 people, 4 are these people are building maintenance people. The labor force spends considerable time cleaning sidewalks in the business areas of the city where there is heavy foot traffic. We also are in possession of equipment called a 'Mad-Vac' which is used to vacuum material out of the gutters and off of sidewalks. The setting of a goal to clean/sweep every sidewalk twice a year over the five year period of the permit may be reasonable.

In section 2.4.7.1, Good Housekeeping and Pollution Prevention for Permittee Owned Operations, Paragraph d. Operations and Maintenance, subparagraph viii, annual inspection of all permittee owned stormwater structures is not defined as to what constitutes an inspection. For example, would all stormwater conduits be required to be internally inspected by cctv? More definition is needed as to what would constitute an inspection that would comply with this requirement.

In section 3.3.1, reference is made to a requirement for monitoring of all interconnections with other MS4s. It is not clear if both MS4s are required to monitor the connection.

Monitoring of the interconnection by the discharger to the interconnection should be required. Monitoring by the receiving MS4 would necessarily occur if a water quality exceedance is experienced by the receiving MS4 downstream of the interconnection and subsequent IDDE investigation does not find a source of illicit discharge within the downstream MS4.

The new stormwater permit should require that the Massachusetts Department of Transportation include in its NOI for its transportation road network the Tobin Bridge which contributes approximately 7 acres of roadway surface drainage to combined sewer and storm sewer in the City of Chelsea.

Lastly, it would be extremely helpful to the regulated MS4's if the EPA provides examples of MS4 permits authorized that fully comply with the proposed permit conditions that are reflective of the divergent land use and economic variations that exist in the area of coverage.