



Onondaga County Soil & Water Conservation District

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September 26, 2014

Mayor John Curtain
Village of Marcellus
6 Slocombe Drive
Marcellus, NY 13108

Regarding: Highland Drive and Flower Lane Flooding

Dear Mayor Curtain,

Thank you for the invitation, and tours on 9/14/2014 to review runoff and erosion concerns at the above 2 referenced locations and watersheds. I enjoyed the guidance and history that you and your staff provided as we walked these areas looking at concerns and discussing solutions. My observations and suggestions follow in both "general" and site specific categories:

General-

In both drainage areas (watersheds), the drainage systems appear to be significantly outdated. As a result of high amounts of new development and improvements/expansions to existing structures since the last drainage study there is more runoff and less infiltration occurring. This is a result of more roofs, blacktop, concrete and impervious areas. Also, the drainage ways we walked are not sequenced properly with culverts and channel sizing. This essentially means that you have areas where there are larger culverts in ditches that are above (upstream) from smaller diameter culverts, so technically this is pushing more volume into a smaller area, and that will spill over to surrounding ground during these peak storm events that seem to be occurring more often. Suggested solution would be to work the drainage system so that the largest diameter culverts and ditch sizes are at the bottom of the drainage, appropriately reducing in size as you go upslope. This will require a complete drainage study from the Professional Engineers that you have a working relationship with. You also will have to determine what "size" storm event this study will be designed to handle, such as a 10 year, 25 year or greater storm event. Understand that it is very difficult, and extremely costly to size any drainage to handle every storm event that we have seen in the past few years.

There are small steps that every property owner within these watersheds can do to help eliminate some of the runoff problems. All property owners should continually maintain existing channels and culverts by keeping debris and obstructions cleaned out, and more importantly they should keep a good vegetative cover (mowed and maintained) on all open and bare soil along the ditch banks. Reducing the amount of sediment that flows down these channels will help sustain capacity in

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the channels. The property owners can help out by planting good grass cover and shrubs along the ditch channels to help hold the soil in place during peak runoff events.

Specific-

The pond above Highland Drive has had some repair work done to the berm recently, and on this date it appeared to be in good stable condition. Additional drainage could be installed to the pond system to lower the water level which would provide more storage capacity during peak storm and runoff events. Onondaga SWCD staff can help with this project if the landowner wants to move forward with this suggestion.

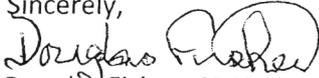
The Agricultural (cropland) property above the pond above Highland Drive would benefit the storm problems if the crops were planted in a contour strip type system where there is a good grass based crop on some of it along with a row type crop such as corn and/or soybeans in narrower strips to reduce the amount of open (unprotected) soil. A good grass cover is the best, and the least expensive solution to many runoff problems. Our staff can help with this planning program.

Coons Pond should be dredged out to put it back to a good working capacity, and routine maintenance is required after most storm events in order to keep it at good working capacity. A forebay should be re-constructed at the inlet to make maintenance easier. Unfortunately, in a pond system such as this, maintenance is necessary on a frequent schedule, and it also can be costly because of the equipment needed to dredge and remove all of the sediment.

Mini Retention Basins throughout the watershed would benefit the runoff concerns by providing more storage capacity for the storm event. However, these too would require routine maintenance and could prove costly. A complete drainage study would help determine locations and sizes of this type structure throughout the watershed.

I enjoyed the opportunity to work with you and discuss these areas of concern, and I would love to continue these joint discussions while working towards possible solutions. However, as of September 20, 2014 the Federal funding source that has allowed SWCD staff to make these visits and provide Technical Assistance has been eliminated. I have enclosed an "Agreement for Services" document that I encourage you to review. If interested in signing this agreement with my Executive Director, please do so and we can continue to provide Technical Assistance to you for many more projects, concerns and opportunities. We have a bunch of these agreements in place with other Municipalities throughout Onondaga County and would love to add you to our list of Service Areas. Thanks for thinking of us when you had/have drainage and storm water concerns.

Sincerely,


Douglas Fisher, CPESC

Program Manager, OCSWCD

Cc: Mark Burger, Executive Director