

TOWN OF PITTSFORD

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August 26, 2021

BY MAIL

Canal Corporation c/o James Candiloro
30 South Pearl Street
Albany, NY 12207

Email to: NYSCC-Embankments@bergmannpc.com

Re: New York State Canal Corporation (NYSCC) and New York Power Authority
Earthen Embankment Integrity Program (EEIP): Written Comments on
Draft Generic Environmental Impact Statement (DGEIS) and Draft Embankment
Maintenance Guide Book (Guide Book) for EEIP

Dear Mr. Candiloro and Bergmann:

On behalf of the Town of Pittsford, I am submitting the following written comments on the DGEIS and Guide Book for the EEIP.

Introduction

Exactly two hundred years ago from this year, work commenced on the Great Embankment, an earthen structure built within the Town of Pittsford to carry the Erie Canal across the 70-foot deep, one-mile wide Irondequoit Creek valley. It is considered one of the most significant engineering feats of the entire canal. The Great Embankment was enlarged in the 1850's and again in the early 1900's. It is still the highest canal embankment in the world. *See, Town and Village of Pittsford Local Waterfront Revitalization Program (LWRP), Appendix A at 10, approved by the New York Secretary of State on June 23, 2006 and available at https://docs.dos.ny.gov/opd-lwrp/LWRP/Pittsford_V&T/Index.html.*

A photograph of a State heritage sign alongside the canal towpath adjacent to the Town's Great Embankment Park is shown below.



Of course, when the Great Embankment was first built and later enlarged, there were no trees on it, just as there were no trees on other canal embankments as they were built and expanded. But that does not mean that trees were never intended to be allowed to grow on the canal embankments, or that their presence on the embankments is the result of the State's neglect. The State has never produced engineering plans for the canal which specify that no trees should exist on canal embankments. Instead, regarding the Great Embankment, there is anecdotal evidence that black locust trees, well known for their rot-resistant qualities, were encouraged to grow on the embankment to help hold it together. A typical black locust tree on the Great Embankment is shown below.



Over the years, trees have grown on the canal embankments, whether intended or not. It was not until 1998 that NYSCC decided that it didn't want trees on the canal embankments anymore, through the adoption of a guideline directing embankments to be kept clear of brush and trees. A year later, in 1999, NYSCC showed up at the Great Embankment with chain saws. Neighbors organized and vehemently objected to the indiscriminate clear-cutting of trees on the embankment. NYSCC relented and went away, without performing any structural maintenance of the embankment which was supposed to be facilitated by the vegetation removal. *See, Town of Pittsford v. Power Authority of the State of New York, Sup. Ct., Monroe Co., Index No. 2018-945, Administrative Record at 33; Reply Affidavit of Lucinda Enriot at 3.*

A photograph of the lush vegetation on the outboard toe of the Great Embankment taken at Marsh Road is shown below left, alongside a photograph taken on the slope of the Great Embankment, showing its significant pitch.



In 2017, NYSCC initiated a multi-million dollar project to remove vegetation from the canal embankments. Identifying 53 separate locations covering about 145 acres (later reduced to 122 acres) across the entire canal system, NYSCC included a 13.48-acre site (later reduced to 10.9 acres) along the Great Embankment within the Town, contiguous to the Town's Great Embankment Park. NYSCC maintained that its vegetation removal project amounted to "maintenance" of existing landscaping or natural growth and hence did not require any environmental review under the New York State Environmental Quality Review Act (SEQRA). Commencing a civil action against NYSCC and the Power Authority, the Town of Pittsford, as well as the adjoining towns of Brighton and Perinton, asserted that the planned vegetation removal of 10 or more acres of land required SEQRA review. The Supreme Court agreed with the three towns and ordered NYSCC and the Power Authority to cease their clear-cutting plans until they complied with SEQRA. *See, Town of Pittsford v. Power Authority of New York, supra; Affidavit of James Candiloro at 5-8; Petition at 3, 7; Order and Judgment of Hon. Daniel G. Barrett at 3.*

Now NYSCC has proposed its Earthen Embankment Integrity Program ("EEIP"), which, like its former vegetation removal project, fully endorses and requires extensive clear-cutting of trees on the embankments of the entire canal system. This new clear-cutting program covers 120 miles of embankments across the 524-mile canal system. Within the Town of Pittsford, about 458 acres of land (including 137 acres of water) would be subject to clear-cutting of trees. *See, NYSCC SEQRA Full Environmental Assessment Form (FEAF) Part 1 Supplemental.* As the program is proposed, NYSCC would follow of series of "Guide Book" steps before it cut down the trees on sensitive sites, as discussed

below. But NYSCC has not yet identified any sites it wishes to clear-cut, so municipalities and residents across the State have no idea if and how they will be affected. This makes it very difficult for them to garner the time and resources to comment intelligently on the program. For the Town of Pittsford, will the Great Embankment be targeted again for clear-cutting? Moreover, even for sensitive sites, the EEIP still requires clear-cutting on most portions of the embankments and leaves all power to NYSCC to decide what gets clear-cut and when. Powers granted to municipalities to protect their environmental resources have been outright rejected by NYSCC, as will be discussed below.

All of this turmoil has been generated by NYSCC's insistence that the continued presence of trees on canal embankments will cause them to fail. The Great Embankment has stood with trees for nearly two centuries, and it has never failed because of trees. Ironically, there was a breach in the Great Embankment in 1974 when indiscriminate digging of a water or sewer line under the canal at that location caused the canal bed to collapse and water to pour out. *Town of Pittsford v. Power Authority, supra, Enriot Aff. at 2*. This incident should discourage the kind of man-made assault on the wooded embankments that the EEIP represents. What's more, NYSCC has not pointed to one instance in the 200-year history of the entire canal system where the presence of trees has caused an embankment to fail. That's worth repeating: trees have never caused an Erie/Barge canal embankment to fail.

Statements from and Comments to the DGEIS and Guide Book

DGEIS

Statement at 1-8:

“1.3.1 Purpose, Need and Benefit of the Project. The purpose of the EEIP is to restore the integrity of embankments, a capital asset, and improve the NYSCC's continued ability to properly maintain embankments so that the risk to nearby people, property and the environment from flooding due to embankment failures is reduced. This work involves the proper maintenance of embankment features as described in the Guide Book. Without implementation of an embankment maintenance program, embankments will continue to be weakened by various forms of deterioration, and the NYSCCs ability to detect deficiencies will remain significantly impaired.”

Comment: SEQRA regulations require all draft EISs to contain a statement of the purpose, “public need,” and benefits of a proposed action. 6 NYCRR §617.9(b)(5)(i). The Town applauds NYSCC's efforts to maintain the security of all canal embankments through inspection, monitoring, repair, and renovation as circumstances warrant. This, of course, includes the selective removal of dead, dying, or dangerous trees, which the Town fully supports. However, NYSCC has not demonstrated why and how wholesale clear-cutting of trees on all canal embankments is necessary to provide that security. On the contrary, the widespread removal of all live, well-established trees and root systems from canal embankments may well weaken them, as well as deprive canal visitors and nearby residents of the many salutary benefits of trees.

Statement at 1-8:

“Today, in New York State, dams that are not otherwise regulated by the Federal Energy Regulatory Commission (FERC) or United States Army Corps of Engineers (USACE), are regulated by 6 NYCRR Part 673 and the engineering of dams is covered by Guidelines For the Design of Dams. Although canal and feeder earthen embankments are not regulated as dams, these embankments do retain water for certain parts of the year and uncontrolled breaches could result in damage to life and property. As such,

guidance documents related to earthen dam maintenance and inspections are utilized by the NYSCC as part of its inspection and maintenance program of these earthen structures and referenced in this GEIS and the Guide Book.”

Comment: This is an important concession: Canal earthen embankments are not regulated as dams. All of the guidance documents relied upon by NYSCC for vegetation management do not, on their face, apply to canals. The State dam safety regulations define a “dam” to include any earthen barrier which impounds waters, such as a barrier intercepting drainage over land, crossing a watercourse, or diverting waters to a reservoir. 6 NYCRR §673.2(f). A “canal,” on the other hand, means the “channel and adjacent State-owned banks of the inland waterways of the State.” 21 NYCRR §150.1(f). Even the Guide Book’s own definitions for a “dam” and a “canal embankment” differentiate the two different structures. *Guide Book* at xii. NYSCC is choosing to refer to the vegetation management guidance for dams to support its *policy* of clear-cutting canal embankments, not to comply with actual standards that apply to canal embankments. If tree clear-cutting were necessary for canal embankments, it would be the law, not policy.

Statement at 1-8, 1-9:

“The NYSCC has experienced, in recent years, several incidents involving canal and feeder embankments that have been closed and repaired under costly emergency contracts. In June 2016, a partial failure of Culvert 70 near Hulberton, NY required extensive and costly repairs, and closed the Erie Canal and Erie Canalway Heritage Trail for over 2 weeks. Emergency repairs were required during April and May 2018 at canal embankment sections of the Erie Canal in Perinton and Ogden, NY.”

Comment: Notice that none of these emergencies explicitly mentions trees as the source of the emergency, although the one during 2018 in Perinton is very suspicious. In response to the case brought by the towns of Pittsford, Brighton, and Perinton mentioned above, NYSCC in 2018 declared a site in Perinton to be an emergency, hoping to obtain the regulatory power to clear-cut the site under the exception in the SEQRA regulations applying to emergencies. The problem was that the inspection upon which the emergency declaration was based occurred many months before the declaration, and the conditions observed – cattails, a minor riprap slope failure, and an existing seep – were not considered to be an emergency by the inspection report. Accordingly, the court rejected NYSCC’s attempt to justify its clear-cutting program under the SEQRA emergency action exception. NYSCC’s citing of this Perinton matter to support its new clear-cutting program damages its credibility in general. *Town of Pittsford v. Power Authority, supra, Affidavit of Howard M. Goebel at 10-11; Decision of Hon. Daniel G. Barrett at 4-5.*

Statement at 1-10:

“A full inventory of embankments on the NYS Canal System has not been completed but is underway. The project area for this GEIS has been selected to include most NYS Canal System lands such that when embankments are located within the GEIS project area, future embankment maintenance will be covered by the impact thresholds set up through this GEIS.”

Comment: As noted in the Introduction, without a designation of the sites which will be subject to clear-cutting as determined by NYSCC, it is impossible for municipalities and residents to gauge if and how to respond. NYSCC should refrain from adopting the EEIP until it identifies the sites to which the program will be applied. Perhaps Pittsford will be spared.

Statement at 1-13, 1-14:

“Table 1.3-1: Regulatory and Community Thresholds:

Federal or State rare, threatened, or endangered plant species are located on NYSCC property or on adjacent lands that would experience an incidental take as defined in 6 NYCRR Part 182 as a result of being disturbed by EEIP activities.

EEIP activities would significantly reduce or degrade occupied habitat (as defined in 6 NYCRR Part 182) used by any rare, threatened or endangered species.

EEIP activities would significantly reduce the quantity or quality of the resource or characteristic which was the basis for its designation as Critical Environmental Area.

EEIP activities that would cause the loss of any wetlands in the Montezuma Marshes Natural Landmark as identified in Section 3.3 of the Generic EIS.

NYSCC property where EEIP activities are contemplated involves or is adjacent to a public park, and those activities would significantly impair the park’s aesthetic, historic, or recreational function.

Where historic resources listed or eligible for inclusion in the State or National Registers of historic places, are located on or in close proximity to NYSCC property where EEIP activities are contemplated, and the EEIP activities would result in a determination of an adverse effect on the historic resource by the Agency Preservation Officer or the SHPO.

Where an aesthetic resource of local importance has previously been identified through an adopted comprehensive plan or zoning and is located on lands where EEIP activities are contemplated and those activities would significantly damage the aesthetic character of the resource.

Where EEIP activities would significantly adversely affect an aesthetic resource of Statewide Significance derived from one or more of the categories identified in Section VI.A, of NYSDEC Program Policy DEP-00-2 ‘Assessing and Mitigating Visual and Aesthetic Impacts,’ http://www.dec.ny.gov/docs/permits_ej_operations_pdf/visualpolicydep002.pdf.

Where EEIP activities are inconsistent with an approved Local Waterfront Revitalization Program (LWRP) accordance with the New York State Waterfront Revitalization of Coastal Areas and Inland Waterways Act (NYS Executive Law, Article 42).

For embankment segments where any of the regulatory and community thresholds in Table 1.3-1 are exceeded, the following actions would be taken as shown in Figure 1.3-3:

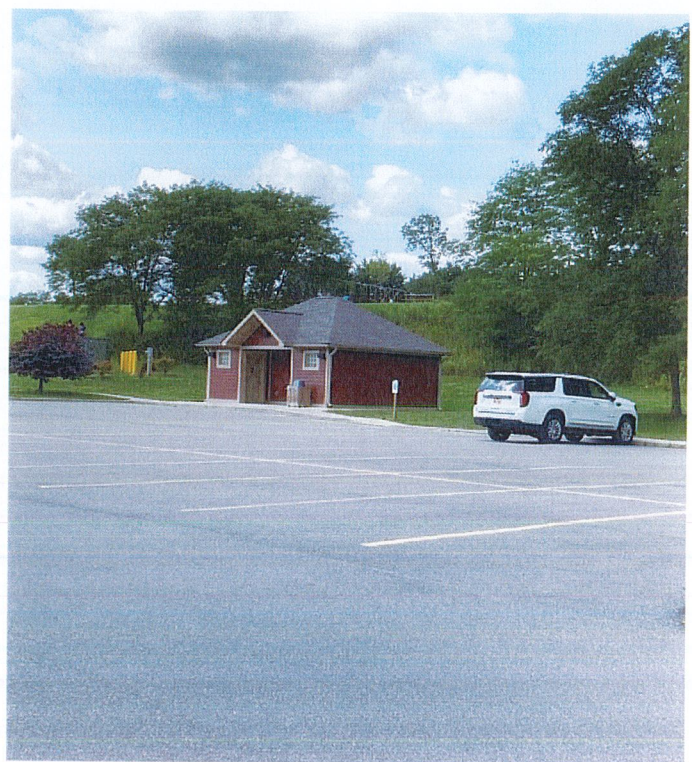
1. Remove trees and brush smaller than 3 inches in diameter at breast height (DBH) that impede inspections and trees larger than 3 inches DBH that are dead, diseased, and imminently dangerous to property and people. Provide, as necessary, emergency response to stabilize embankments.
2. Perform a tree inventory and an embankment condition survey. Identify the limit of Zones 2B and 3 on the involved earthen embankment. This would be used to develop mitigation or alternative EEIP procedures as described in Section 3.9.4 of this GEIS.
3. Engage with stakeholders based on specific thresholds identified.
4. Evaluate potential mitigation measures from this DGEIS. If any are appropriate, these measures would be implemented and the EEIP activities would continue as prescribed in the *Guide Book*. If none of the mitigation measures are appropriate, continue with Action Item 5.
5. Perform more detailed inspections, including detection of embankment seepage and embankment stability monitoring. The prescribed content and frequency of inspections is provided in the

Guide Book. These include bi-weekly to monthly Bank Walk Inspections and quarterly Enhanced Embankment Monitoring for a more detailed investigation.

6. If the results of the initial seepage monitoring suggest that the embankment is stable, a seepage and monitoring program would be developed and implemented. Monitoring may include: piezometers, slope indicators, observation wells and seepage weir boxes. Seepage and stability monitoring would continue for an additional 5 years if the gathered information suggests that the embankment is stable. Following the five years, the earthen embankment would be reassessed and the *Guide Book* procedure would commence again as shown on Figure 1.3-3.
7. If the results of the seepage and stability monitoring indicate instability or that safe conditions are deteriorating, corrective engineering solutions would be implemented. Such solutions are not addressed in this GEIS. Implementation of corrective engineering solutions would be considered a separate site-specific action under SEQR and would be reviewed accordingly.”

Comment: At a minimum, the following regulatory and community thresholds are exceeded by the embankment segments within the Town of Pittsford: EEIP activities contemplated at or near the Great Embankment Park, Lock 32 State Canal Park, and King’s Bend Park; the Town’s adopted comprehensive plan recognizes trees along the canal as an aesthetic resource of local importance; and EEIP activities may be inconsistent with the Town’s approved Local Waterfront Revitalization Program (LWRP) and its overlay LWRP zoning district.

Let’s see how this would work. Suppose NYSCC proposes to clear-cut all of the trees on the embankment of the Great Embankment Park (possibly leaving some in Zones 2B and 3 later described). This would include all of the trees shown in both of the photographs shown below.



Presumably, the Town would be one of the “stakeholders” who NYSCC would engage. But just what “potential mitigation measures” would be implemented to save the trees, because except for a few trees

in embankment zones 2B and 3, there are no exceptions in the EEIP for removing all of the trees on the canal embankments? Let's say the inspections and monitoring showed safe conditions, would all of the trees have to be removed anyhow? Suppose monitoring showed that safe conditions were deteriorating, such that corrective engineering solutions would be appropriate. Would those solutions be a separate site-specific action under SEQRA? See action no.1 above regarding 3" DBH trees. May live, healthy, safe trees greater than 3" DBH be allowed to stay on any embankment zones other than zones 2A and 3?

Statement at 1-17:

"1.3.7 Approvals and Permits Required

Although the NYSCC is not subject to local laws..."

Comment: By what authority does NYSCC assert that it is not subject to local laws? All local laws? Some local laws? If some, which ones? As noted in the Introduction, the Town has an approved LWRP. Under Executive Law §915 and implementing regulation published at 19 NYCRR §600.3, State agency actions must be consistent with an adopted LWRP "to the maximum extent practicable." How does NYSCC interpret this provision in the context of its proposed EEIP?

Statement at 2-1, 2-2:

"Ad-Hoc Alternative – Project-By-Project Approach

.....

This alternative is a continuation of NYSCC's current practice of non-programmatic and intermittent maintenance and repairs of canal and feeder embankments. Activities may be undertaken through annual inspections and observations of bank walkers, which may identify conditions that require NYSCC's attention to maintain the canal system in good condition as required by the Canal Law. Trees and vegetation growth on embankments are managed at times where it interferes with NYSCC's ability to inspect or conditions arise that necessitate immediate action to address loss of integrity; however, there is no prioritized embankment maintenance system-wide based on embankment condition, hazard classification, and risk urgency."

Comment: NYSCC may and should incorporate embankment condition, hazard classification, and risk urgency into its current practice of inspections and increase the frequency and thoroughness of its bank walker observations and follow-up inspections. It should then perform targeted vegetation removal as necessary to minimize a real risk or correct an observed deficiency. Clear-cutting all canals embankments should be jettisoned.

Statement at 2-2:

"An ad hoc approach to embankment integrity may be less protective of the environment."

Comment: It is hard to see how cutting down all of the trees on the canal embankments will be more protective of the environment than cutting down only those trees with identified risk.

Statement at 3-2:

"In limited situations in which the planned activities do not fall within the parameters of the EEIP activities presented in this document (including the Guide Book), such as implementing an alternative

engineering solution give unique aspects of a specific site [*sic*], then that activity would be subject to a separate review under State Environmental Quality Review (SEQR).”

Comment: Regarding the Town of Pittsford, with its parks, comprehensive plan, and LWRP described above, what, if any, are the “limited situations” in which an “alternate engineering solution” would be subject to a separate SEQRA review?

Statement at 3-5:

“It is critical to understand the importance of maintaining the canal and feeder embankments free from trees and other large, woody plants. National guidance documents advise against allowing tree growth on embankment dams. The Federal Emergency Management Association’s Technical Manual for Dam Owners: Impact of Plants on Earthen Dams is an accepted document used by dam owners and state dam safety agencies. It states that trees and woody vegetation have no place on embankment dams, for three reasons:

- Trees and dense vegetation hinder effective dam inspections
- Tree roots can cause serious structural instability or hydraulic problems, which could lead to dam failure and possible loss of life
- Trees and woody plants attract burrowing animals, which can in turn cause serious structural or hydraulic problems

The U.S. Bureau of Reclamation manages some 8,000 miles of canals in the Western states, along with numerous dams. Its guidance in Canal Operation and Maintenance: Vegetation addresses the same canal and feeder embankment hazards caused by vegetation.

All dams, including canal and feeder embankments, must be inspected for seepage, cracking, sinkholes, slumping, settlement, deflection, and other signs of stress in periodic safety inspections. Vegetation is a major hindrance for dam inspections.”

Comment: As noted above, government publications pertaining to *dams* and irrigation canals out west have no application to the canal embankments of New York. Indeed, the dismissive, even hostile, view of trees by the author of FEMA guidance most heavily relied upon by NYSCC demonstrates the close-mindedness of certain federal regulators: riffing on Joyce Kilmer’s famous lines, “I think that I shall never see / A poem as lovely as a tree,” the author quips, “I think that I shall never see / A sight so wonderful as a tree / Removed from an earthen dam / Whose future safety we wish to see.” *FEMA, Technical Manual for Dam Owners: Impact of Plants on Earthen Dams (FEMA Publication 534, Sept. 2005), at 1-1.* In fact, there is no consensus in the *dam* safety technical community over the impact of woody vegetation on earthen slopes. Dr. Donald H. Gray, a highly credentialed slope stability engineering expert who contributed an affidavit in the prior litigation against NYSCC referred to above, has compiled a literature review of the effect of woody vegetation removal on the hydrology and stability of slopes. See, <http://greenbeltconsulting.com/assets/pdfs/VegLitReview.pdf>. Among his observations are the following paragraphs:

“One way to settle the argument about the effect of woody vegetation on the hydrology and stability of slopes is to cut down all the trees and see what happens. The effects of wide spread vegetation removal on the stability of natural slopes have been studied extensively as a result of a timber harvesting practice known as clear-cutting. It is useful and instructive to examine the consequences of such a practice vis a vis a policy promulgated and now being carried out by the US Army Corps of Engineers to remove all woody vegetation over 2 inches in diameter growing on or near the toe of earthen embankments or levees.

Widespread removal (clear-cutting) of trees on natural slopes and streambanks generally leads to an increase in slope failures. This is the overwhelming consensus of papers published in the scientific and technical literature as documented in the attached literature review. In some cases there may be a short-term benefit from tree removal resulting from a decrease in shear forces transmitted to a slope from wind. The adverse effect of wind depends, however, on such factors as the size and height of the canopy, stand density, and wind direction. The presence of tall, rigid trees growing near the water line of levees may also promote scour erosion around the base of the tree. These offending trees can be identified, selectively removed and/or pruned as part of an alternative vegetation management policy.

In the long run, cutting of trees on slopes leads to a gradual decrease in mass stability as a result of the decay of roots which previously acted as tensile reinforcements in the slope. Root decay can also lead to the formation of pipes in a slopes [*sic*] which promote internal or seepage erosion. The removal of tree canopy results in the loss of interception and evapo-transpiration which tends to promote wetter and less secure slopes. Canopy removal also results in less attenuation in the delivery rate of rainfall to the ground surface.

Considerably fewer studies have been carried out on the effects of woody vegetation removal on the mass stability of artificial embankments and levees. However, many of the results and findings from clear-cutting studies of natural slopes apply.... and are a cause for alarm in the case of a blanket, unexamined removal policy on levees. Such a policy is tantamount in effect to an uncontrolled, national experiment. At the very least the position, size, age, etc. of every tree that is removed on or near a levee should be entered into a GPS data base so that possible cause and effect relationships can be studied and the wisdom of such a policy properly evaluated at a later date.

One of the main arguments advanced by proponents of tree removal on levees is improved access, visibility, and flood fighting. It would be a great irony if all these goals were realized only to better witness, gain access to, and attempt to fight floods on a levee that is disintegrating and failing because of woody vegetation removal.”

Notice that the issue of trees and burrowing animals is not addressed in the above comments by Dr. Gray. However, in his affidavit, he stated the following:

“A consideration that has not been addressed (reported) in the Canal Corporation tree removal plan is the effect on burrowing animals. Tree removal and conversion to grass can promote the incursion [of] burrowing animals and construction of their underground tunnels. Evidence in the technical literature indicates that these underground tunnels can pose a much great danger to embankment stability than any possible threat from tree roots. Tree removal can also eliminate or compromise the control that raptors have on burrowing animals (e.g., muskrat) populations.” *Town of Pittsford v. Power Authority, supra, Gray Aff.* ¶ 19.

Statement at 3-9:

“Change in Vegetation Cover: The principal EEIP activity to affect vegetation would be removal of trees and brush, and replacement with turf grass. All vegetation should be removed in Zones 1, 2A, 4 and 5 of the embankment, under ideal conditions extending to a distance of H/2, where H is the embankment height from the toe to the crest, but not less than 15 feet beyond the toe of the embankment. Absent emergencies, vegetation removal would only occur on non-NYSCC owned property pursuant to written authorization of the property owner. The embankment zones are shown in Figure 3.2-2 below.”

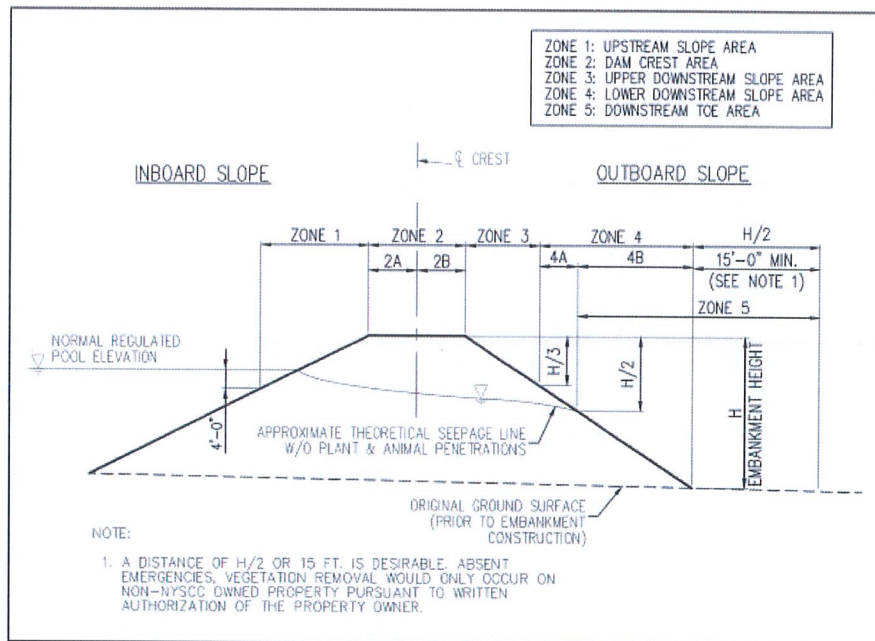
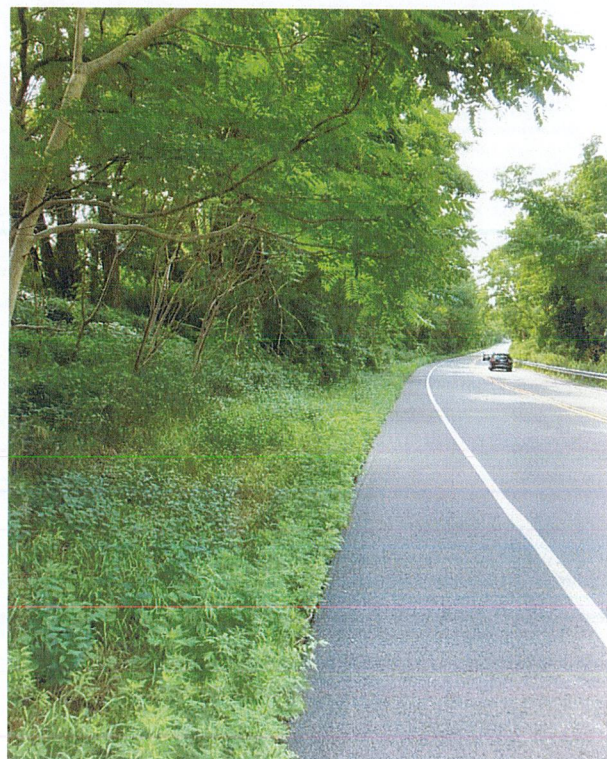


Figure 3.2-2: Embankment Zones for Vegetation Management
 Source: DGEIS

Comment: This figure shows the typical shaped embankment and the “zones” that have been designated for tree removal. Note that under the EEIP, all trees on all zones of the embankments would have to be removed, except that trees might be selectively thinned in zone 2B, which is the side of the crest approaching the outboard slope, and zone 3, which is the top 1/3 of the outboard slope. The following photographs show what this removal would look like in Pittsford.



All of these trees photographed above left along Marsh Road, the outboard slope toe of the Great Embankment, would have to be removed. This removal would continue at least two-thirds up the entire 70-foot embankment, where some trees could be saved before the crest.

These trees, above right, along State Route 96 are on the canal embankment directly across the canal from the Great Embankment. They provide a nice tunnel effect for the cars, shield the noise from cars to canal towpath users, and help secure the bank. They, too, would be removed under EEIP.

Statement at 3-16:

“Under the Null or No-Action Alternative, any earthen embankments would be left to fail.”

Comment: This statement, repeated in the “Potential Impact of Alternatives” sections throughout the DGEIS, should be removed throughout the DGEIS, because the no-action alternative is not the cessation of all canal maintenance of any kind which might lead to failure, but rather the continuation of current NYSCC maintenance procedures which do not include tree clear-cutting. As the canal embankments have never failed because of trees, there is no evidence that the continued level of maintenance without clear-cutting would render the embankments “left to fail.”

Statement at 3-17:

“Under the Ad-Hoc Alternative or Project-By-Project Approach, the ultimate impact to land use inside or outside of the earthen embankments would be similar to that of the proposed action.”

Comment: This statement, also repeated in the “Potential Impact of Alternatives” sections throughout the DGEIS, doesn’t make sense. Under the project-by-project approach, only the harmful trees are removed and the multiple benefits of trees remain. Under EEIP, all trees are taken and none of the benefits remain. The ultimate impact of selective tree removal and EEIP clear-cutting is entirely different.

Statement at 3-62:

“As discussed in the Guide Book, woody vegetation with robust root systems can disturb the soil structure in the embankment. Roots that penetrate the phreatic surface in the embankment increase the risk of internal erosion known as piping, the early stages of which can go undetected for decades resulting in a sudden failure of an earthen embankment. Animal burrows pose a similar piping potential. The animal burrow shortens the seepage path potentially leading to piping at the burrow location. Furthermore, large trees can be uprooted by winds/erosion and leave large holes in the embankment, root systems can decay and rot creating passageways for water through the embankment. Once a significant seepage pathway is initiated, catastrophic embankment failure could be expected to occur within one to two hours.”

Comment: NYSCC has not identified one embankment failure caused by trees in the history of the canal, and yet predicts that a “significant seepage pathway” caused by trees will lead to a “catastrophic embankment failure” in “one to two hours.” This is mere fear-mongering.

Statement at 3-63:

“According to the Guide Book, all non-compatible vegetation must be removed from Zones 1, 2A, 4 and 5 of the embankments at least to the NYCC [sic]-owned property line (see Figure 3.2-2). Some non-compatible vegetation may be allowed in Zones 2B and 3 in accordance with Section 8 of the Guide Book and Section 3.9 of this GEIS.”

Comment: Non-compatible vegetation “includes most brush, bushes, and trees.” *DGEIS at 3-62.* The statement above confirms that under the EEIP, all of it must be removed from all zones of the embankments, except zones 2B and 3, where “some” non-compatible vegetation “may” be allowed. No exceptions are granted.

Statement at 3-64:

“Although the proposed action would cause loss of existing woody vegetation, the width of woody vegetation cover planned for removal would be less than 200 feet wide in most locations.”

Comment: The Great Embankment outboard slope appears to exceed 200 feet. The EEIP would have a disproportionate negative impact there.

Statement at 3-88:

“On the other hand, many areas of cleared embankment will open up new scenic views from the adjacent trail or from the waterway that were not visible before due to the intervening embankment vegetation. Tree clearing in some areas surrounded by dense wooded areas may also add some variety to the visual experience for area users.”

Comment: Although this statement is theoretically possible, clear-cutting the embankments in Pittsford would not “open up new scenic views” nor “add some variety to the visual experience for area users.” Instead, it would desecrate the views, remove beauty and desirable shade, exacerbate vehicular noise, and diminish the privacy of abutting private landowners.

Statement at 3-90:

“Select vegetation may be retained only on the landward side of the embankments in Zone 2B and Zone 3.”

Comment: This statement in the “Mitigation” section of the DGEIS concerning “Aesthetic Resources” is part of a longer discussion of the “planned manner” in which trees would be removed from the canal embankments. While the discussion gives the appearance of providing for a careful, judicious process for tree removal, the simple fact is that the EEIP requires tree clear-cutting on all parts of all canal embankments, except zones 2B and 3, where “a minimal amount of vegetation including trees” could be saved. *DGEIS at 3-90.*

Statement at 3-96:

“The removal of trees should not be considered an effect/impact on the New York State Barge Canal Historic District. During the period of significance (1905 to 1963) the earthen embankments for the Barge Canal had just been constructed, and any trees developed after that time. (See Fig. 3.9-1 below.)

The criteria for listing (Criteria A and C as stated above) did not include trees or historic landscapes. In fact, in addition to undermining the structural integrity of the earthen embankment resource, there is potential that trees are obscuring views of some of the contributing features to the district in addition to compromising the integrity of the earthen embankments. Some of the EEIP activities include the clearing of trees and reconstruction of the earthen embankment in order to restore the integrity of the earthen embankment. In so doing, the EEIP activity would be restoring the earthen embankment. The National Park Service defines restoration as the act or process of accurately depicting the form, features, and character of a property as it appeared at a particular period of time by means of the removal of features from other periods in its history and reconstruction of missing features from the restoration period. The removal of the trees and reconstruction of the earthen embankments may be done as a treatment of a historic property and would be a beneficial effect to the historic district/NHL.”

Comment: Whether or not the presence of trees on the canal embankments was among the criteria for listing the canal system as an historic district, the removal of all trees would clearly have a significant, deleterious impact on the use and enjoyment of the district. There is no “potential” for the existing trees to be “obscuring views of some of the contributing features of the district.” Certainly, removal of trees would *not* be “a beneficial effect to the historic district/NHL.” It is also noted here that NYSCC appears to have missed an important historic resource existing on the canal embankment directly across the canal from the Great Embankment, which is an early Seneca Native American trail. A photograph of the sign commemorating the trail is shown below. It was taken from State Route 96 of the canal embankment directly across from the Great Embankment. Removing all of the trees from the trail would not “restore” the trail’s natural condition.



Statement at 3-112:

“In one of the highest embankment sections on the Erie Canal system, the “Great Embankment” near where Irondequoit Creek crosses under the Erie Canal, in Pittsford, NY, the height of the towpath above the surrounding ground is approximately 65 feet, and the distance from the outside shoulder break of the canal embankment to the base of embankment is approximately 180 feet. It is possible, therefore, that there could be lines of sight between noise sensitive active use areas in this residential community that exceed 200 feet and have significant opacity due to the tall, dense existing vegetation. The embankment in this area is forested, and there is a residential neighborhood on the north side of Marsh Road. For the loss of vegetation to have a noise impact, there needs to be a noise source that is presently obscured by the vegetation. In this neighborhood, New York State Route 96, located on the south side of the canal embankment, is a significant noise source. However, in this case, *even if the forested portion on the north side of embankment is cleared*, the embankment itself will still behave as an earth berm noise barrier, providing significant all-season noise reduction of New York State Route 96 and other noise sources. Based on this worst-case example, the effects of loss of tree vegetation on noise levels in the residential neighborhood north of Marsh Road are expected to be unnoticeable to tolerable.” [Emphasis added].

Comment: Is NYSCC tipping its hand here? Will the Great Embankment be clear-cut? Neighbors of the Great Embankment have not concentrated their adamant opposition to clear-cutting on the potential for increased noise from State Route 96 vehicular traffic. Instead, they have expressed their concern that clear-cutting will weaken, rather than strengthen, the stability of the embankment which looms over them, that their sylvan view will be destroyed, that their privacy will be lost, and that the market value of their properties will be significantly reduced. See, e.g., *Town of Pittsford v. Power Authority, supra, Affidavit of Eric J. Norsen at 2*. However, if all of the trees on the canal embankment across the canal from the Great Embankment abutting State Route 96 were cut down, the increased noise and visibility of cars would be substantial at the towpath enjoyed by so many people. A photograph showing the trees that would be lost is shown below.



Statement at 3-113:

“As discussed in Section 1.3.4, the NYSCC is not subject to procedural or substantive requirements of Community Plans, local laws, etc.”

Comment: Again, please identify the community plans, local laws, and “etc.” that NYSCC is not “subject to,” and the authority for making this assertion.

Statement at 3-121:

“The NYSCC is not subject to procedural or substantive requirements of Community Plans, local laws, etc., as complying with hundreds of different local laws would make maintaining earthen embankments in a safe manner impossible and unduly prejudices the NYSCC when it comes to implementing its statutory authority.”

Comment: The Town understands why NYSCC does not want to comply or contend with lots of local laws which might make its canal security responsibilities more time-consuming. But again, what authority allows NYSCC to avoid compliance with these local laws and requirements?

Statement at 3-125, 3-126:

“The LWRP is the only planning and regulatory tool that allows a local community to refine statewide coastal policies to apply to the local situation. According to 19 CRR-NY 600.3 [sic], “No State agency involved in an action shall carry out, fund or approve the action until it has complied with the provisions of article 42 of the Executive Law.” Article 42, § 919. Coordination of state actions and programs, states that “the secretary shall review actions proposed by state agencies which may affect the achievement of the policies of this article and shall make recommendations to such agencies with respect to achievement of such policies.” The following Erie Canalway communities have NYSDOS-approved LWRPs:

...

- Town/Village of Pittsford (Monroe County)

...

For example, the Town and Village of Pittsford LWRP (2006) provides the following policy statement about natural resource protection:

Policy 1.3 Maintain and enhance natural areas, recreation and open space

The preservation of significant open space areas should continue to be pursued. The concept of a ribbon of green along the canal, should be incorporated into all existing and new projects. For example, in existing commercial areas, the expansion of green space and planting areas can be used to improve the aesthetic nature of the site. In new projects, open space should be required as an integral component of the design scheme, rather than a remnant of the development process. This may be accomplished using buffer areas between different land uses, cluster development, incentive zoning and the transfer of development rights.”

Comment: Let’s take a look at the Town and Village of Pittsford LWRP. For starters, consider the following statement contained therein: “A survey of residents conducted for the preparation of the town’s comprehensive plan noted that the canal trail was the ‘favorite place’ among Pittsford residents.”

Pittsford LWRP at II-2. It is safe to assume that Pittsford residents appreciate the canal trail with its trees, not without them. Here's another quote from the LWRP: "Jefferson Road (NYS route 96) runs along the south shore in this section [across from the Great Embankment], but a narrow strip with trees and picnic areas has been maintained between the road and the canal as an informal linear park." *Id. at II-6.* These trees would have to go under the EEIP. Under "Woodlots," the LWRP begins: "Wooded areas provide habitats for varied flora and fauna. They also protect watersheds and soils from flooding and erosion, act as storm buffers by slowing winds and moderating temperature extremes, and purify the air through removal of carbon dioxide and creation of oxygen. In addition wooded areas provide an important source of recreation and visual pleasure." *Id. at II-8.* This statement is entirely inconsistent with canal clear-cutting. It is in this context that the "concept of a ribbon of green along the canal" referenced in Policy 1.3 above should be understood. The "ribbon of green" certainly does not mean the "green" left over after all of the trees are cut down and replaced by grass. It means the trees that are there and meant to be preserved. Other LWRP policies support tree protection. For example, Policy 4.2, "Preserve and restore natural protective features," includes "Avoiding alteration or interference with natural conditions," and "Using practical vegetative approaches to stabilize natural features." *Id. at III-14.* It is also noted that the Town's waterfront consistency law and local waterfront overlay district law are annexed to the LWRP, approved by the Secretary of State, as Appendices B and C.

Statement at 3-129:

"The activities of federal, state, and local government are required to be consistent with a locally adopted LWRP that has been approved by the Secretary of State. This 'consistency' provision is a strong tool that ensures government agency actions at all levels are guided by the local program. Municipalities with an approved LWRP also conduct local review for local actions. State agencies conduct consistency review for state agency actions."

Comment: Does NYSCC maintain that any consistency review on the EEIP applied within the Town of Pittsford would be conducted by a state agency, and that the Town would be without power to perform and enforce its own consistency review on the project within the Town? If so, please supply the authority for that position.

Statement at 3-131:

"As noted in Section 3.15, the NYSCC is not subject to procedural or substantive requirements of local governments."

Comment: Once again, please cite the authority for this statement.

Statement at 4-4:

"Section 3.15 Community Plans points out that the NYSCC is not subject to procedural or substantive requirements of Community Plans, local laws, etc., as complying with hundreds of different local laws would make maintaining earthen embankments in a safe manner impossible and unduly prejudices the NYSCC when it comes to implementing its statutory authority. However, the activities of federal, state, and local government are required to be consistent in communities where a locally adopted Local Waterfront Revitalization Program (LWRP) has been approved by the Secretary of State. The section discusses how community plans can provide guidance to assess potential impacts; and help in identifying where mitigation measures may be important to consider and incorporate into the

implementation of the EEIP in a specific location. NYSCC will assess whether site specific proposed earthen embankment maintenance activities may have the potential for significant adverse impacts on areas that have been identified as part of a Community Plan. These identified areas will be given consideration for the NYSCC to avoid, minimize or mitigate to the extent practicable.”

Comment: Are there any circumstances under which any trees can be spared from clearcutting in zones 1, 2A, 4, and 5 of the canal embankments, and if so, what are those circumstances?

Guide Book

Statements at 1-3:

“Vegetation management practices for earth dams are universally accepted within the engineering community with the rule that woody vegetation is not permitted on earth dams....The dam safety engineering community recommends clearing of all woody vegetation from the embankments to eliminate concerns of seepage paths created by tree roots, the possibility of tree blowdowns creating large depressions that could weaken the embankment or cause a breach and the difficulty the vegetation causes to embankment inspection, among other factors.”

Comment: As explained above, it is not universally accepted in the engineering community that woody vegetation should not be permitted on earthen embankments. On the contrary, trees can stabilize earthen embankments, not necessarily weaken them. As the previous photographs of the Great Embankment have shown, trees do not impede access to inspection, particularly the “bank walk” inspections which NYSCC says it undertakes.

Statement at 1-3, 1-4:

“Adjacent landowners and canal users view the trees and vegetated slopes as beneficial to the canal setting for such things as shade, visual site barrier to adjacent properties, wildlife refuge, and more. Finding a solution that addresses the needs and desires of both sides is critical. Reducing the risk of a catastrophic embankment failure is a clear need. Developing a cost-effective option that allows *some* woody vegetation to remain is a goal.” *[Emphasis added.]*

Comment: Change the word “some” to “most” and we are getting somewhere. But imposing an across-the-board policy of clear-cutting all trees on all embankments save possibly in a few areas is incomprehensible to the Town. Surely, NYSCC can propose a policy that gives some leeway to canal adjoining municipalities like the Town.

Statement at 1-8:

“Section 7.16 of the California guidance says:

Policies and criteria regarding removing trees and other woody vegetation that have grown and matured on levees are evolving and will be informed by ongoing and future research. Engineers and levee maintaining agencies are encouraged to consider the results of this research when deciding how to manage trees and other woody vegetation on levees.

It goes on the *[sic]* say:

The criteria provide significant flexibility for engineers and levee maintaining agencies to remove or retain existing trees and other woody vegetation. Because of the importance of these critical resources, it is anticipated that implementation of these criteria will result in near-term retention of the vast majority of existing trees and other woody vegetation that provide important and critical habitat. In the long-term, it is anticipated that the vast majority of trees and other woody vegetation on the lower waterside levee slope would continue to grow with little or no management.”

Comment: Why can't NYSCC adopt this California approach?

Statement at 1-11:

“Although canal and feeder embankments are not regulated as dams ...”

Comment: This concession, also made in the DGEIS as noted above, demonstrates that NYSCC is not required to clear-cut, but is proposing to do so as a policy choice, which it can change.

Statements at 7-7, 7-8:

“Zone 1: ... NYSCC policy is to remove all woody vegetation growth located in Zone 1.

Zone 2: ... NYSCC policy is to remove all woody vegetation growth located in Zone 2A. NYSCC will consider retaining existing vegetation in Zone 2B following the Scenic Management Guidelines.

Zone 3: ... Due to the relatively small dimensions of the canal embankments in relationship to the size and influence of root penetration, NYSCC policy is that woody vegetation in Zone 3 shall be removed except in very limited instances, following the Scenic Management Guidelines.

Zone 4: ... NYSCC policy is to remove all woody vegetation growth located in Zone 4.

Zone 5: ... NYSCC policy is to remove all woody vegetation growth located in Zone 5.”

Comment: These bold-print Guide Book rules make clear the proposed policy of removing all trees from all parts of the canal embankments, with the very limited exception for partial removal on zones 2B and 3. The Town seeks greater flexibility.

Statement at 8-11:

“Table 8.5-1: Commonly Encountered Invasive Species in New York State ... Black Locust ...”

Comment: While eradication of many invasive species of plants might make sense in ordinary circumstances, the removal of black locust trees on the canal embankments is counter-productive to stabilizing the banks. They should be protected, not removed. Thus, Scenic Management Guideline 3 set forth at 8-14 of the Guide Book which does not allow any invasive species trees to remain in zones 2B or 3 of the embankments, should be modified to make exception for trees such as the black locust which stabilize embankments.

Statement at 8-14:

“The Scenic Management Guidelines include:

...
2. If a mix of semi- to mature trees are identified in Zones 2B and 3, a site visit would be performed with an arborist, landscape architect, and engineer to assess the potential of preserving any trees. The arborist would determine the tree’s health and viability; the landscape architect would determine the aesthetic suitability of the preserved tree within the context of the overall project limits; and the engineer would determine the feasibility of its retention with respect to its effect on embankment integrity and trail user safety. Specifically, where a recreational trail is present, no tree in Zone 2B will be allowed to remain within the allowable clear zone distance specified outside the edge of travel way in accordance with AASHTO’s Guide for the Development of Bicycle Facilities (AASHTO, 2012). Select vegetation may be retained only on the landward side of the embankments in Zone 2B and Zone 3.”

Comment: The photograph below shows large, healthy black locust trees adjoining the canal recreational trail at the Great Embankment being enjoyed by bicyclists. A long line of these and other healthy trees hug the trail. Would all of these have to come down under the EEIP?



Statement at 8-14:

“The Scenic Management Guidelines include:

3. Assuming the tree vegetation (> 3” DBH) is not an invasive species, is healthy, is not a danger tree, is appropriately located, and falls within Zones 2B or 3, it would be a candidate for preservation. No trees located within Zone 2A which are lands on the canal side of the center line of the embankment crest, or in Zone 1 will be allowed to remain.”

Comment: Just to be clear, would any non-invasive, healthy, safe tree over 3” DBH not in zones 2B or 3 be a candidate for preservation?

Statement at 8-14:

“The Scenic Management Guidelines include:

4. In areas where there is a very wide Zone 2B relative to embankment height, vegetation should be preserved to the greatest extent possible, whether or not the embankment section falls within a threshold area as identified in Section 8.15.”

Comment: Describe how this would operate on the Great Embankment.

Statement at 8-22:

NYSDOS		
Coastal Consistency – Required for any State or Federal Permits	Any work in areas within Coastal Zones (i.e., Erie Canal between Niagara River and 900 feet upstream of SR 62, and Oswego Canal between Lake Ontario and 150 feet upstream of Varick Dam ²¹) and within municipalities that have Local Waterfront Revitalization Programs approved by the NYSDOS	<ul style="list-style-type: none"> Requires review by NYSDOS for consistency with State Coastal Policies and/or Local Waterfront Revitalization Program (LWRP) Policies

Source: Guide Book

Comment: Does EEIP work within Pittsford require consistency review by the Town’s Planning Board in accordance with the Town’s LWRP policies and local law, or is the only consistency review of EEIP work within Pittsford done by the NYSDOS? If it is the latter, when does NYSDOS do its consistency review? At the time NYSCC adopts the EEIP for statewide application? At the time NYSCC selects Pittsford for EEIP work? Will NYSCC notify the Town before the consistency review is performed and provide a copy of the review document to the Town as soon as it is completed?

Statement at 8-23:

NYSCC		
State Environmental Quality Review	Any work not consistent with that described in this Guide Book or beyond the scope or parameters of the SEQR GEIS.	<ul style="list-style-type: none">• Will require additional environmental review by qualified personnel

Comment: Can NYSCC provide any examples of EEIP work within the Town of Pittsford which would not be consistent with the work described in the Guide Book or beyond the scope or parameters of the DGEIS, such that a separate, additional SEQRA review would be required?

Statements at 8-23, 8-24:

The “SEQR Thresholds and Decision Procedure” set forth in section 8.15 of the Guide Book is the same procedure set forth in the DGEIS at 1-13, 1-14, which is copied and commented upon above.

Comment: The same comments there apply here. The core concern is: is there any flexibility to the clear-cutting rules outside of the limited discretion for trees in zones 2B and 3?

Statement at 9-1:

“All maintenance activities, except those considered routine (e.g., mowing, clearing debris) should include, where prudent:

- Notification to adjacent property owners
- Notification to local municipalities if necessary”

Comment: Will there be personal notification to adjacent property owners? When will notification to local municipalities not be “necessary?” How will local municipalities be notified? How soon before site mobilization will municipalities be notified?

Conclusion

As noted in the first comment of this letter, the Town supports NYSCC’s goal of maintaining canal embankments so that they will continue to be safe. When it comes to vegetation on the embankments, the Town routinely receives “Dangerous Tree Determinations” from NYSCC and regularly acquiesces to the removal of those dangerous trees. A photograph of such a dangerous tree recently provided by NYSCC to the Town is shown below.



The Town recognizes that canal embankment vegetation management is much more than removing large dead trees. To that end, the Town appreciates all of the vegetation inspection, monitoring, risk assessment, and necessary remediation that NYSCC already undertakes, and the Town encourages NYSCC to make vegetation management more robust to address observed problems. But the science of such vegetation management is not settled, and blanket clear-cutting as proposed in the EEIP may not only be ineffective but harmful to embankment security, and will undoubtedly forfeit the environmental qualities of trees. We can all do better.

The Town asks NYSCC to revise its EEIP to reject embankment clear-cutting as its underlying, rigid policy, to embrace a more thorough, robust program of inspection, monitoring, risk assessment and remediation which allows flexibility in management for differing circumstances, and collaborates with localities such as Pittsford and its residents to preserve both public safety and environmental quality.

Thank you for your consideration.

Very truly yours,


Robert B. Koegel
Town Attorney