New York State Canal Corporation
Comments on Draft Generic Environmental Impact Statement issued June 23, 2021

Subject Number	Subject/Comment	Comment Numbers	DGEIS/Guide Book References	Response
EIS-C	Cover			
EIS-C1	Why is this document Prepared by: Bergmann and New York Power Authority	1045	EIS Cover	The New York State Canal Corporation (NYSCC) is a subsidiary of the New York Power Authority. The NYSCC has jurisdiction of and responsibility for maintaining the earthen embankments. Bergmann was competitively procured to provide support for development of Earthen Embankment Guidebook and completion of State Environmental Quality Review Act requirements.
EIS-1	SEQR and Description of Proposed Action			
EIS-1.1	Project Background			
EIS-1.1a	Is the proposed tree removal influenced by differences between maintenance strategies by previous NY Thruway Authority and NYPA? i.e., budgetary and/or resource changes? What has changed that now requires the canal to be clear cut? The only thing I can discern is that the NYPA took control of the canal corporation and it's just administratively easier to clear cut.	1022, 1023		Best Management Practices (Army Corp of Engineer, Federal Emergency Management Authority) and regulatory requirements for similar structures as well as programs implemented by other states, serve as the basis for development of the Guidebook. NYPA/Canals cannot speak to strategies previously employed by NYSDOT or NY Thruway Authority. NYSCC's decision to undertake the EEIP is explained in the GEIS. The Earthen Embankment Integrity Program does not call for clear cutting the canal. That alternative was ruled out. The entire canal system is approximately 524 miles, the mapped embankments comprise approximately 130 miles. This program only applies to earthen embankments. Further, the guidebook includes 1) modifications to the recommendations provided by federal and state authorities for best management of water impounding structures to allow trees to remain on certain areas of the embankments, and 2) a transparent decision process which considers objective local priorities (i.e., comprehensive plans, zoning, etc.) involving tree removal on embankments.

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EIS-1.1b	What does hinder inspection mean?	1045	EIS p. 1-3	In some locations, overgrown brush and trees make access to or visual inspection of the earthen embankments difficult to impossible without clearing brush and/or trees.
EIS-1.1c	"Key components of the NYS Canal System are earthen embankments (embankments) that impound water to form navigable waterways or feeders. Proper maintenance of the embankments is imperative to maintain integrity of the structures: for minimizing risks of embankment failures to people that live, work or recreate along the NYS Canal System; for minimizing the risks to property and the environment; and for maintaining the integrity of the NYS Canal System in a cost-effective manner." Vegetation already presents a minimal risk so does removing trees remove the risk? Is the EEIP really cost effective? What data do you have to support this premise?	1045	EIS p. 1-3	Comment includes assumptions that are not factually supported by the submitter. For adoption of the EEIP, NYSCC's risk assessment and tolerance, along with its consideration of costs, is set out in the GEIS. For work performed on embankment segments under the EEIP, the Guidebook provides for evaluating risk as part of the EEIP's implementation, including prioritizing actions and best management practices for inspections, planning and undertaking physical activities. Removal of brush and trees will allow more accurate and efficient investigation and monitoring of embankment conditions with the goal of long-term maintenance conducted in a balanced approach that limits future emergency actions due to deferred maintenance.
EIS-1.1d	"Parts of the embankments have become overgrown with trees, brush and unwanted vegetation, are subject to animal burrowing, and are experiencing erosion, seepage, or settlement." Are "trees, brush and unwanted vegetation" three different categories? What parts of which embankments, have experienced "erosion, seepage, or settlement"? What proportion of the embankments have experienced erosion, seepage, or settlement"? "Concrete and masonry surfaces that follow the embankment lines and grades also suffer from various types of deterioration." What does "Concrete and masonry surfaces that follow the embankment lines and grades" mean? Does embankment vegetation interfere with "Concrete and masonry" maintenance? Has any "Concrete and masonry" maintenance been initiated in sections where the vegetation has already been removed? Which "conditions compromise the integrity of the embankments" and which "hinder safety inspections"? Where are safety inspections hindered? How do they "impede the safe operation of the NYS Canal System"? Which can cause embankment failures."?	1045	EIS p. 1-3	The comment is acknowledged. Please refer to Section 1.2 – New York State Environmental Quality Review Act and Section 1.3.1 – Purpose, Need and Benefit of the Project, of the Generic Environmental Impact Statement for a discussion of the need for the project.

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	"Together they represent significant public safety, environmental and economic risks that must be properly managed." Together what? Is it being stated, the failure to maintain "Concrete and masonry" represents a significant risk?			
EIS-1.1e	"To address this pressing need, the NYSCC will implement a comprehensive, system-wide embankment maintenance program (hereafter referred to as the Earthen Embankment Integrity Program, or EEIP) to restore, maintain and manage the integrity of embankments within the NYS Canal system, and has developed the NYSCC Inspection & Maintenance Guide Book (Guide Book) to carry out the program." What is "the integrity of embankments"? What specific examples demonstrate degraded integrity? "The Guide Book provides a system-wide approach to embankment inspections, evaluations..." While the word "evaluation" is used within this document, no actual evaluation is defined. Is there a chapter on evaluations or evaluation processes missing from this document?	1045	EIS p. 1-3	"Integrity of embankments" refers to the general condition of embankments and their ability to function as designed (i.e., impound water). As infrastructure approaches or exceeds its design life or expectancy, it loses ability to perform its intended purpose due outside forces acting on the infrastructure (e.g., weather, watering and dewatering events, animal or manmade actions), particularly where the physical structures were not maintained as designed. As the embankments are nearing 100 years in age or 200 in some cases, the NYSCC continues to respond to seeps on earthen embankments across the system. Seeps are regularly monitored (where able) to assess the integrity of embankment sections. The evaluative process is in the Guide Book, but substantially within Section 3 Embankment Rating System, Section 4 Embankment Inspections, and Section 8 Environmental Considerations.
EIS-1.1e	Over the years, trees have grown on the canal embankments, whether intended or not. It was not until 1998 the NYSCC decided that it didn't want trees on the embankments anymore, through the adoption of a guideline directing embankments to be 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.*	1071		The project described in the comment was discontinued. For areas that had vegetation removed, NYSCC undertook a separate restoration project that was reviewed under SEQR and completed. The NYSCC elected not to appeal the lower court's decision and given the court's decision and order, an ad hoc approach to canal integrity would pose implementation challenges and may not provide for full evaluation of the totality of potential environmental impacts over time and distance, which are addressed through conducting a generic environmental impact

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	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*.			study on a programmatic approach to earthen embankment maintenance as set forth in the Guide Book.
EIS-1.2	State Environmental Quality Review Act			
EIS-1.2a	Some comments allege that the law was not followed in the process, with a number of comments expressing disappointment in the perceived lack of public input into the process.	60, 353, 503, 511, 1080		The regulations implementing the New York State Environmental Review Act, 6 NYCRR 617, were followed, including those regarding notice on draft scope and its public comment period, and then public input during preparation of the generic environmental impact statement (GEIS). The SEQR regulations do require that the NYSCC consider public comments, and this has been done. Public meetings are not required in those regulations. The regulations do allow for an optional public hearing on the DGEIS, which was included in the review of the EEIP. Indeed, NYSCCC's DGEIS process provided for: two public hearings; submission of written comments through multiple methods; public accessibility to staff involved in programmatic approach through multiple question and answer sessions; public website; and

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				direct communications with interested members of the public. A draft Guidebook was attached as an exhibit to the DGEIS and made available for public comment as part of the SEQR review noted above. In the course of NYSCC's implementation of the EEIP, Sections 9 and 10 (revised in response to comments) of the Guide Book provide how the public will be notified and/or consulted as specific EEIP activities are identified and implemented.
EIS-1.2b	Some commenters felt that the public comment period is too short and the public meeting plan is unacceptable. There were complaints that the public hearing was not a question/answer live meeting.	4, 1089, 1097		The public comment period was extended to September 5, and then again October 15, 2021 for a total of 115 days, which is greater than required under SEQRA and its regulations. NYSCC provided this additional time given the amount of public interest, recognition to better inform the public about the programmatic approach, and allow time for public review of the documentation. A hearing on a Draft EIS is optional in SEQR but the regulations regarding how and when to conduct one are addressed. These public comment sessions required by SEQR regulations are not question and answer sessions; rather, they are limited in purpose to providing a forum for public comments, which may be in the form of a question. The public hearings were conducted in accordance with 6 NYCRR 617.9(a)(4). In addition to the two public hearings conducted under 6 NYCRR 617.9(a)(4), the NYS Canal Corp voluntarily

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				held four public information sessions for questions and answers with communities.
EIS-1.2c	How has the permitting process taken into account the current economic recovery in light of the pandemic?	485, 486 (a duplicate of 485)		The SEQR process did not specifically address pandemic impacts or the current economic recovery. The SEQR process did consider potential economic effects as related to the identified significant adverse impacts.
EIS-1.2d	The DGEIS does not include specific numbers of embankments or impacts. Consider on an individual basis.	207		The program will consider on individual basis when specific projects are planned. Refer to Section 1.3 – Project Description, of the Generic Environmental Impact Statement.
EIS-1.2e	Adoption of the Guidebook would violate SEQRA's requirement that, after weighing and balancing alternatives, the Lead Agency chose the alternative that minimizes adverse environmental impacts to the maximum extent practicable. In this case, the "No Action" alternative is the one that would mitigate adverse environmental impacts to the maximum extent practicable and satisfy the lead agency obligations under SEQRA. Compliance with SEQRA requires that agencies, after reviewing relevant public comment, identify and focus attention on any environmental impact of a proposed action, balance the consequences of the impact against other relevant social and economic considerations, minimize environmental impacts to the maximum extent practicable, and articulated a basis for their choices. Jackson, 67 N.Y.2d 400, 416 (1986). Moreover, the Court of Appeals has unequivocally stated that "strict, not substantial, compliance is required." King v. Saratoga County Bd. Of Supervisors, 89 N.Y.2d 341, Schenectady, 83 A.D.2d at 463 ("permitting substantial compliance would not only frustrate the laudable purposes behind SEQRA, but would inevitably lead to numerous lawsuits wherein courts would be asked to weigh the acceptability of alternative procedures").	1032		NYSCC disagrees with the legal conclusions drawn by the commenter. Programmatic approaches are allowable under SEQRA and its regulations; where a positive declaration is issued, a scoping is performed and a Generic Environmental Impact Statement is drafted and finalized in accordance with legal and regulatory requirements, The Guide Book provides processes to mitigate the adverse environmental impacts identified and addressed during the SEQR process. NYSCC addressed other alternatives in the GEIS, including the "No Action" but that alternative was not selected.
EIS-1.2f	Chapter 9 [of the Guide Book] remits the reader to the FAQ page https://www.canals.ny.gov/Earthen_Embankment/FAQ.html The following (self generated) question does not have a real answer. It does not explain what a GEIS is. "5. What is a GENERIC Environmental Impact Statement (GEIS)?	1037		The following description of a Generic Environmental Impact Statement from 6 NYCRR 617.10, is provided: (a) Generic EISs may be broader, and more general than site or project specific EISs and should discuss the logic

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	The SEQR regulations permit agencies to conduct Generic EISs when a proposed program or plan would have wide geographical application. The Earthen Embankment Integrity Program is a programmatic approach on how to maintain earthen embankments across the entire Canal System."			and rationale for the choices advanced. They may also include an assessment of specific impacts if such details are available. They may be based on conceptual information in some cases. They may identify the important elements of the natural resource base as well as the existing and projected cultural features, patterns and character. They may discuss in general terms the constraints and consequences of any narrowing of future options. They may present and analyze in general terms a few hypothetical scenarios that could and are likely to occur. A generic EIS may be used to assess the environmental impacts of: …(2) a sequence of actions, contemplated by a single agency or individual;… (4) an entire program or plan having wide application or restricting the range of future alternative policies or projects, including new or significant changes to existing land use plans, development plans, zoning regulations or agency comprehensive resource management plans…. (c) Generic EISs and their findings should set forth specific conditions or criteria under which future actions will be undertaken or approved, including requirements for any subsequent SEQR compliance. This may include thresholds and criteria for supplemental EISs to reflect specific significant impacts, such as site-specific impacts, that were not adequately addressed or analyzed in the generic EIS . . . (e) In connection with projects that are to be developed in phases or stages, agencies should address not only the site specific impacts of the individual project under

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				consideration, but also, in more general or conceptual terms, the cumulative impacts on the environment and the existing natural resource base of subsequent phases of a larger project or series of projects that may be developed in the future. In these cases, this part of the generic EIS must discuss the important elements and constraints present in the natural and cultural environment that may bear on the conditions of an agency decision on the immediate project. See also DEC's SEQR Handbook, 4th Edition, 2020, Chapter 5, Section A (p. 97) & Chapter 5, Section H (p. 140)
EIS-1.2g	If a GENERIC environmental impact is allowed due to the large physical extent of the canal system, how and when will SPECIFIC environmental impact studies be handled to avoid local/regional negative environmental impacts and how will the public be informed and included?	1039		The GEIS considers all the potential moderate to large environmental impacts of adopting a programmatic approach across the entire system. NYSCC considered those impacts cumulatively (for the totality of the earthen embankments over an indefinite duration) and incorporated mitigation into the Guide Book. The mitigation is incorporated into the Guide Book processes, from planning through performing physical activities. . NYSCC will not perform separate SEQR on those activities. With regard to the question about the public being informed and included, the Guide Book provides for notification (Section 9) and, when a threshold is met (Section 8), for public engagement (Section 10).
EIS-1.2h	Environmental Conservation Law, declares that it is the State's policy to: "… encourage productive and enjoyable harmony between man and his environment; to promote efforts which will prevent or eliminate damage to the environment and enhance human and community resources; and to enrich the understanding of ecological systems, natural, human and community resources important to the people of the state." The	1045	EIS p. 1-4	NYSCC disagrees with the conclusions about adopting the EEIP as being contrary to the State's policy codified in the SEQRA. The comment does not specify the action being taken, but this response will address any actions that may be taken under the EEIP, all of which have

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	actions described are contrary to every aspect of this quote. When it states "enrich the understanding of ecological systems" does that mean ignore and defy understanding? What actions has the NYSCC taken to enrich understanding of the woody vegetation on embankments?			been considered in the GEIS. The earthen embankments are engineered structures designed to impound water. The priority of the NYSCC is to maintain the embankments in a manner which ensures they are safe for those that live around them while balancing other benefits, such as recreation and habitat, and minimizing and mitigating the environmental impacts of activities that will include removal of woody vegetation and trees.
EIS-1.2i	The Erie Canal continues to play an essential role in the economy, culture, recreation and history of the communities in its path. While these communities have been benefited from the Canal's presence, they are also essential partners in its continued success, and they must be treated as such. The EEIP fails in this regard.	1048		NYSCC values the input of local communities. Based on the public comments on the DGEIS and through conversations with both public officials and interested individuals, the public outreach sections of the Guide Book (Sections 9 and 10) have been revised to ensure public notifications of EEIP activities and the communities in the EEIP process.
EIS-1.2j	The DGEIS fails to adequately provide information and analysis as is required under SEQR and does not fulfill the requirements of the New York Power Authority's own regulations. (See, 21 NYCRR 461.9). The DGIES fails to provide a description sufficient to permit an understanding of the effects of the proposed action and alternatives. The DGEIS fails to provide a description and evaluation of reasonable alternatives to the action which would achieve the same or similar objectives	1049		NYSCC disagrees. These comments are unsubstantiated legal conclusions of the commenter, who failed to provide any specific information identifying the alleged regulatory inadequacy of the DGEIS. By way of example, the GEIS, in support of the alternative analysis and conclusions, cites to numerous best management practices and guidance documents prepared and used by experts from federal and state agencies responsible for management and maintenance of earthen structures throughout the United States and New York State. The comment fails to provide any expert opinion to rebut these well-established best management practices.
EIS-1.2k	Not a single scientist was consulted in preparing the document.	1098		Professionals were consulted for the various topics covered, including engineers, natural resources managers, biologists, historic preservationists, public health professionals, landscape architects, and planners.

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				Scope to include, "the extent and quality of information needed for the preparer to adequately address each impact, including an identification of relevant existing information, and required new information, including the required methodology(ies) for obtaining new information; 617.8(e)(3)
EIS-1.3	Project Description			
EIS-1.3a	Commenters have expressed their understanding of the project as a number of erroneous characterizations, including: • Indiscriminate cutting of all trees along both sides of the canal to the private property lines along 400 to 525 miles • The cutting of thousands and hundreds of thousands of trees • To decimate the trails and convert them to a sand-blasted wasteland or a war zone • Many refer to the project as a clear-cut plan	87, 98, 152, 189, 218, 342, 360, 395, 410, 518, 521, 544, 571, 575, 582, 590, 596, 747, 840, 929		The Earthen Embankment Integrity Program describes how specific practices are to be implemented as detailed planning (not indiscriminate cutting) is undertaken for specific segments of canal embankment. Section 1.3 provides a description of embankments, which is not the same as "banks." Section 1.3.2 now includes the fact that to date, about 130 miles of embankment have been identified, as opposed to 400 or 525 miles. Embankments may be found on either side or both sides of the canal in some locations. Embankments may or may not include the Canalway Trail or the Empire State Trail at any particular location. NYSCC has developed a searchable web-based map where the public can see the sections of the canal comprised of earthen embankments: https://www.nyscanalintegrity.org/program-and-maps The number of trees to be cut will not be known until the individual segments area planned. Section 3.7.2 now includes an analysis which roughly estimates the upper limit to the acreage of brush (323) and acreage of forest (843) that could be converted to pollinators, small shrubs, turf grasses and other acceptable

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				vegetation on the 130 miles of inventoried embankments. Implementation of the Guide Book will require cutting of trees and removal of other vegetation to accomplish the goals of the EEIP. The Guide Book BMPs identify the kinds of replacement vegetated cover that may be planted in various situations. The completed site will look different, but it will not look decimated or sand blasted. Section 2.3.4 describes how the clear cutting of all embankments is an alternative that was considered and dismissed. The EEIP (the preferred alternative) allows for solutions to embankment integrity under given circumstances and situations which are described in Section 1.3..
EIS-1.3b	Commenters requested information on locations where the Guide Book will be implemented next. Some expressed a need to know the exact locations where trees are to be removed before anything happens. Some suggested that a map be generated to identify where the embankments actually exist.	8, 216, 622, 859, 1071, 1079, 1091, 1098		Locations of embankments and general locations of seeps are available online (https://www.nyscanalintegrity.org) and have been added to the Final GEIS (Figure 1.3-1a). Priorities for implementing the EEIP for embankment segments are adjusted based on findings from the inspection programs and risk evaluations that are ongoing, as well as funding constraints. As described in Sections 9 and 10 of the Guide Book, the public will be notified and/or consulted as projects are identified.

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EIS-1.3c	Address the environmental concerns one area at a time as required by that particular environmental situation according to local needs, preferences and the scientific evaluation of the situation.	338, 859		The Guide Book calls for each segment to be inspected, rated and the identification, review and programming for corrective actions (See Sections 3 and 4 of the Guide Book). Section 8 of the Guide Book provides a summary of environmental review to be done for each segment prior to maintenance activities.
EIS-1.3d	Questions regarding the plan for implementation (how many miles to be done on an annual basis, and for how many years).	21		Projects will be prioritized based on risk rating, which considers the hazard classification (a rating of the potential impact if a failure were to occur) and condition (a numeric system that rates the level of deterioration or deficiency of a given section of an earthen embankment). The number of projects completed in one season will depend on time to complete (i.e., the projects must be completed during non-navigation season when the canal is dewatered), design resources and funding.
EIS-1.3e	On Page 1-7 there are 6 Implementation steps outlined in the EEIP process, Step 1 being Identify potential EEIP candidate embankments based on Desktop review & Field visits. Will it be possible for a section of Erie Canal Neighbors to "petition" the NYSCC to have EEIP done in their sections as well? These may be 2-3 mile long sections bounded by existing canal access points.	21		The lengths, limits and priorities of each embankment section are primarily set based on the findings of the inspection program and risk assessments. The NYPA public outreach team can be contacted through the EEIP web page to obtain more specific information on embankment segments.
EIS-1.3f	Is it only earthen embankments that are affected by the plan? Are cement embankments excluded?	531		Yes. The Generic Environmental Impact Statement covers activities on earthen embankment slopes. There are no cement embankments, however, some portions of the raised, water retaining embankment are concrete lined, and those embankments are included in the EEIP.
EIS-1.3g	Observations and concerns regarding the need for repair of concrete structures on the canal and the impact that growing trees are having on those structures.	256, 611		Comment acknowledged. Concrete structures will be handled under other programs, and as separate actions under SEQR.

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EIS-1.3h	Many areas of the canal do not have elevated berm embankments at all, including much of the south side distance between Pittsford village and Bushnell's Basin, excepting a short stretch beyond East St.	549		The EEIP only applies to earthen embankments which represent about 12% of the canal system. The locations of earthen embankments are show on Figure 1.3-1a of the GEIS and online at: https://www.nyscanalintegrity.org/
EIS-1.3i	What is going to be done with the wood? Stumps? Undergrowth?	582		Where trees are to be removed from an earthen embankment, the disposition of the wood, stumps and undergrowth will be determined as part of the planning and design process for individual sections of embankment. Typically, wood, stumps or undergrowth (i.e., chipped wood) would become property of the contractor working on the job. The contractor would be responsible for proper disposal of any material leaving the site in accordance with all applicable regulations.
EIS-1.3j	Those with docks - will they be protected from tree damage during the operation?	582		The NYSCC will make all reasonable efforts to protect private property during implementation of the site specific projects. For example, this may include working with property owners to temporarily relocate items such as docks.
EIS-1.3k	Will canal side residents have any say in what happens to the area in front of their property?	582		For embankment segments where community thresholds are exceeded a more engaged community process has been incorporated as Sections 9 and 10 of the Guide Book.
EIS-1.3l	The action is a one-time project.	591	EIS Page 1-6	The EEIP is not a one-time project. The EEIP Guide Book covers the integrity of earthen embankments over time. Page 1-6 of the EIS reads, "The EEIP will require thorough, regular, and systematic inspections of canal and feeder embankments. This will be followed by prioritization and implementation of maintenance by embankment segment. Implementation will include the specific maintenance

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				actions to address damaged linings, inadequate drainage, installing instrumentation, repairing surfacing, protecting embankment slopes, correcting embankment geometry deficiencies, removing vegetation, filling animal burrows, and repairing seeps." The EEIP does not preclude the need for additional inspections and assessments. The NYSCC has already implemented robust inspection programs that employ local laborers to inspect the earthen embankments and use technologies like drones and thermal imaging to enhance the inspection program.
EIS-1.3m	The project is based on the presumption that **all** trees are unsuitable vegetation along the canal. It appears that the chosen approach is to perform clear-cutting and removal on a periodic basis instead of ongoing maintenance of the canal banks.	671, 672		The project concerns earthen "embankments" and not necessarily "banks." The definition of an earthen embankment is provided in the Draft GEIS on page 1-6 and in the Guide Book on pages xii and 1-2. The EEIP process is described in Section 1.3. Following any removal of trees from an embankment, the Guide Book describes additional maintenance include inspections (Section 4) and maintenance (Section 7). Location of earthen embankment subject to this program are available for review on the EEIP web page (https://www.nyscanalintegrity.org/) and Appendix C of the DGEIS.
EIS-1.3n	This is a jobs program, not a maintenance program.	852		Reasons for the EEIP are discussed in Section 1.3 of the GEIS, and it does not include jobs.
EIS-1.3o	Will all stumps and roots be removed? Will dirt/Fill be added in areas where the current slope does not meet standards? If so, it seems that it would be necessary to encroach on people's private property in order to change the slope angle.	967		The need to remove stumps and roots will vary with the specific location. There are many locations where this will be necessary, and some portions of the earthen embankment will need to be re-built. Work covered under the EEIP would be performed on earthen embankments on lands under jurisdiction of the NYSCC or on lands where the NYSCC has easements or

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				agreements with public or private entities that allows the work of the project to be carried out. Where there is a potential need for temporary access to accomplish the work, temporary easements or a Site Access/Vegetation Management Permit would be obtained by the property owner, but the rebuilt embankment would not be located on adjacent property.
EIS-1.3p	Will all freeboards be cleared on all embankments, including non-earthen?	1045		If "freeboards" refers to the portion of the embankment between water's edge and top of embankment, yes. This portion is Zone 1 and 2A.
EIS-1.3r	"The proposed action involves implementing the EEIP to restore, maintain and manage the integrity of earthen embankments located throughout the NYS Canal System." What specific embankment integrity locations require restoration? What is the definition of restore for the EEIP? What is the definition of restoration for the EEIP? How many "embankment segments are there? What is "inadequate drainage"? Does "correcting embankment geometry deficiencies" include altering the rise-run ratio of slopes? What experience does the NYSCC have "repairing seeps"? "The EEIP scope does include all embankment material and impairments..." What are "impairments"? "...from outside the toe of the outboard slope of the canal or feeder to the toe of the inboard embankment slope..." Is the channel of the canal prism included in the EEIP?	1045	EIS p. 1-6	Mapped earthen embankments are available on the EEIP web page (https://www.nyscanalintegrity.org/) and Appendix C of the DGEIS. In general, restoration of the embankments means to perform actions necessary so that the embankment is performing as originally designed. Correcting embankment geometry deficiencies does include altering rise-run (i.e., height and width) of slopes. The NYSCC routinely repairs seeps on the embankments through a variety of methods including cutoff walls and filter blankets.
EIS-1.3q	Costs. What is the total estimated cost of the EEIP? What is the cost to develop the Guide Book? If completed what is the estimated annual cost to maintain these embankments? What is the cost to maintain turf embankments? What is the maintenance cost of treed embankments? Where is the money coming from to pay for all this work?	21, 967, 1045	EIS page 1-7	Vegetation on embankment impairs regular inspection and proactive maintenance resulting in reactive emergency actions. The NYSCC is funded through NYPA operations. The number of earthen embankment projects to be implemented per year will vary based on the type of intervention required (i.e., brush clearing, filter blanket

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				installation, sheet piling, cut-off walls, etc.), available funding, and other factors.
EIS-1.3s	"Due to the previous long period of deferred maintenance, many embankments will require tree clearing..." How long a "period of deferred maintenance" is associated with trees? What is the documentation that demonstrates the deferral of tree removal? "The process for implementing the proposed project includes the following steps: 1. Identify and locate canal and feeder embankment segments based on desktop reviews..." Does this mean that no locations have been identified so far? "2. Utilize the ... ...prioritize the order in which embankment inspections" Does this mean no inspections will take place until after risk assessment?	1045	EIS p. 1-7	Vegetation maintenance on the embankments had been deferred for a period of approximately thirty years as evidenced by the vegetation present on the embankments. Mapped earthen embankments are available on the EEIP web page (https://www.nyscanalintegrity.org/) and Appendix C of the DGEIS. Inspections of embankments occur on an on-going basis and include professional engineering inspections, bank walk inspections as well as technologically assisted inspections using drones and thermal imaging.
EIS-1.3t	The proposed EEIP represents the most recent effort to propose a major and unanticipated departure from the nearly 200 years of vegetation management.	1048		The Earthen Embankment Integrity Program represents the first time a comprehensive program has been developed for embankment maintenance. It is unclear what prior proposals are being referenced. The reasons for undertaking a programmatic approach have been stated throughout the environmental review process, its documentation, and at public forums.
EIS-1.3u	NYSCC is abandoning its current practice of regular inspections and selective tree removal as problem trees are identified.	1049		NYSCC disagrees with this conclusion, which is not substantiated by the commenter. NYSCC is adopting a programmatic approach to its management of earthen embankments. Through the EEIP, NYSCC continues to recognize that inspections of embankments are a critical component of embankment maintenance; this will continue as described in the Guide Book. Also, when trees that pose a significant risk are identified, they will be assessed and managed according to the Guide Book or under NYSCC's

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				danger tree program (as may be applicable based on the tree's condition).
EIS-1.3v	Projections of project generated vehicle and truck traffic must be provided. A detailed description, discussion and justification for all proposed site(s) access points and any proposed roadway improvements must be discussed.	1049		The programmatic approach addresses the moderate to large impacts identified during the SEQR process and its scoping. Additional traffic for implementing the program is minimal. Vegetation management activities would be conducted in a manner that would not significantly increase activity on roadways in or around earthen embankments. Permanent new access points that would result in environmental impacts are not part of the EEIP. Where there is a need for temporary access points, those activities will be implemented in a manner to minimize impacts and in accordance with applicable regulations and permits.
EIS-1.3w	The waste disposal sites to be used for the project debris must be identified and any impacts from, or limitations presented by, the presence of any waste disposal sites in the project vicinity must detailed.	1049		NYSCC disagrees with this assertion. In undertaking a programmatic approach, NYSCC conducted scoping and drafting of a DGEIS, consistent with the SEQR regulations, to address significant environmental impacts. The basis on which NYSCC would be required to assess and determine specific waste disposal sites is unsupported by the commenter. As described in the programmatic approach, where trees are to be removed from an earthen embankment, the disposition of the wood, stumps and undergrowth will be determined as part of the planning and design process for individual sections of embankment. Typically, wood, stumps or undergrowth (i.e., chipped wood) would become property of the contractor working on the job. The contractor would be responsible for proper

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				disposal of any material leaving the site in accordance with all applicable regulations.
EIS-1.3x	There appear to be contradictions within the report. For example, the EEIP suggests that natural vegetation would be planted in place of trees. However, appendices suggest that these areas would be continually mowed. In-person meetings confirm this. Renderings and images of the plan's intent should be produced to accurately describe the final conditions and help the community know what to expect the area to look like. These should be of real locations along the canal.	1050		The public outreach process may include the use of renderings to show final conditions. Regarding mowing, the Guide Book Best Maintenance Practices provides information on mowing frequency for turf. For example, turf would be mowed twice a year whereas pollinators would be mowed on a less frequent basis as determined to maintain pollinator health and allow for inspections or other maintenance.
EIS-1.3y	The project is that all vegetation over 3 feet tall must be removed so that it is easier to inspect the embankment.	1053		The statement is an oversimplification of the definition of one aspect to the project. A full description of the project is provided in Section 1.3 of the GEIS.
EIS-1.3.1	Purpose, Need and Benefit of Project			
EIS-1.3.1a	It is not necessary to cut trees from embankments. There is no good reason for it. There is no evidence that trees de-stabilize banks. A number of comments dismissed the purpose and need for the project, calling it "unnecessary," a "waste of money," and "an excuse to make someone's job easier."	332, 360, 404, 480, 484, 527, 562, 565, 573, 579, 596, 604, 615, 656, 671, 672, 739, 747, 903, 922, 1053		Section 1.3 of the GEIS presents the purpose and need for the EEIP. The main purpose is public safety from potential breaches of earthen embankments. One of the needs for the EEIP is to establish a program for the management of earthen embankments that replaces the current policy of managing dangerous situations on an emergency basis, which is neither cost-effective nor optimal for public safety. The NYSCC relies on the policies and industry standards of agencies who manage earthen embankments and similar structures. Section 1.4 of the Guide Book includes vegetation management and the experience of other agencies. Appendix B provides a discussion of risk factors for embankment dam failures, including industry standards for tolerable risk, and event and failure mode

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				probability for Canal embankments compared to dam embankments and levees. The presence of roots within earthen embankments that don't retain water (similar to non-navigation season conditions on the Erie Canal system) has been demonstrated to provide hydrologic and mechanical mechanisms that can be both beneficial and detrimental in terms of embankment stability. Live and dead components of root systems can either promote or dissipate soil pore water pressure and can act as mini-conduits for water discharge. When windy conditions prevail, stems of trees bend and preferential flow along the roots can occur. Commenters have noted that forested slopes are more stable and resist erosion better than clear cut slopes. This is true for rainfall caused surface erosion, but not for seepage flow through a water containing embankment (sub-surface erosion). Any slopes where tree removal may occur for Canal maintenance will be revegetated and maintained. The key difference between the Canal embankments and a forested slope is the presence of the pool of water at the inboard embankment slope. During the navigation season where a pool of water, up to 12 feet deep, supplies water to the trees and other vegetation on the outboard side of the water retaining earthen embankments, higher pore water pressures are even greater within the embankments, which are an additional detriment to embankment stability. In other words, the Canal embankments are subject to internal

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				pressure from seepage flow. Tree roots provide preferential paths for seepage and can jeopardize the embankment stability through sub-surface erosion. Also, Canal embankments contain water for six months a year, unlike levees which are subject to water loading for periods of only a few days a year. Canal embankments become fully saturated. The stability of engineered earthen embankments of the Erie Canal system is based on structural and seepage analyses of the earthen embankments as structures comprised of a uniform material (compacted, non-organic soil with an appropriate grain size distribution). Tree roots and other intrusions make earthen embankments more vulnerable to seepage and stability failures because root systems don't possess engineering properties consistent with because a properly compacted soil material. In the course of developing the EEIP, no published studies have been found stating beneficial or neutral effects of tree roots in water -containing embankment stability, nor have any been provided through the comment period. Appendix B includes historical analysis that show piping (seepage) through earthen embankments is the most likely cause of dam embankment failure. The EEIP therefore follows the recommendations of dam safety agencies for vegetation management of the earthen embankments.
EIS-1.3.1c	Are there documented incidents of trees causing a problem? Has there ever been an actual documented case of tree roots causing a canal breach anywhere in the world? There are no documented incidents of trees causing a breach or erosion.	11, 12, 156, 241, 295, 302, 351, 369, 391, 459, 522, 538, 549, 553, 589, 601, 618, 620, 672, 682, 734,		The presence of roots within earthen embankments that don't retain water (similar to non-navigation season conditions on the Erie Canal system) has been demonstrated to provide hydrologic and mechanical mechanisms that can be both beneficial and

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	In the canal's history (100 years/200 years), trees have never caused a breach. There is also no history of earthen dam failure due to vegetation in other places in the country. There have been no breaches because of the trees. 200 years proves that natural vegetation succeeds. Historically, when has clear cutting ever turned out to be the right answer? Related to the previous comment, commenters asked for any documented incidents where trees caused a problem on the canal or caused a breach anywhere in the world. Others submit their own experience that trees have never caused a breach. Some comments point out that the breach in Bushnell's Basin was not caused by trees. A number of comments content that if vegetation has not caused a breach over various numbers of years, there is no potential for that to happen.	742, 761, 763, 771, 775, 778, 870, 887, 891, 940, 971, 1006, 1047, 1053, 1058, 1096, 1098, 1099, 1102, 1103		detrimental in terms of embankment stability. Live and dead components of root systems can either promote or dissipate soil pore water pressure and can act as mini-conduits for water discharge. When windy conditions prevail, stems of trees bend and preferential flow along the roots can occur. Commenters have noted that forested slopes are more stable and resist erosion better than clear cut slopes. This is true for rainfall caused surface erosion, but not for seepage flow through a water containing embankment (sub-surface erosion). Any slopes where tree removal may occur for Canal maintenance will be revegetated and maintained. The key difference between the Canal embankments and a forested slope is the presence of the pool of water at the inboard embankment slope. During the navigation season where a pool of water, up to 12 feet deep, supplies water to the trees and other vegetation on the outboard side of the water retaining earthen embankments, higher pore water pressures are even greater within the embankments, which are an additional detriment to embankment stability. In other words, the Canal embankments are subject to internal pressure from seepage flow. Tree roots provide preferential paths for seepage and can jeopardize the embankment stability through sub-surface erosion. Also, Canal embankments contain water for six months a year, unlike levees which are subject to water loading for periods of only a few days a year. Canal embankments become fully saturated. The stability of engineered earthen embankments of the Erie Canal system is based on structural and

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				seepage analyses of the earthen embankments as structures comprised of a uniform material (compacted, non-organic soil with an appropriate grain size distribution). Tree roots and other intrusions make earthen embankments more vulnerable to seepage and stability failures because root systems don't possess engineering properties consistent with because a properly compacted soil material. In the course of developing the EEIP, no published studies have been found stating beneficial or neutral effects of tree roots in water -containing embankment stability, nor have any been provided through the comment period. Appendix B includes historical analysis that show piping (seepage) through earthen embankments is the most likely cause of dam embankment failure. The EEIP therefore follows the recommendations of dam safety agencies for vegetation management of the earthen embankments. Statements that vegetation has not caused breaches do not provide sufficient evidence to ignore the recommendations and policies of dam safety agencies with respect to implementing a program of vegetation management on water containing embankments. The condition of any infrastructure asset deteriorates with age and that is true with earthen embankments. To date, NYSCC has avoided catastrophic failure of embankments by monitoring seeps and implementing emergency repairs when deficiencies are identified. For example, the NYSCC recently responded to seepage in Brockport by installing sheet piling and repaired sinkholes in Royalton.

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EIS-1.3.1d	There is no scientific reason for clear cutting. Scientific evidence shows that the presence of trees reduces the risk of soil erosion and flooding. Science based vegetation studies of canals in California and in Europe show no correlation between trees and shrubs and bank degradation. The NYSCC cannot produce one iota of evidence to support its case for clear-cutting. I question the junk science that concludes that roots do more damage than good in holding soil. Why do all the hillsides in California turn to mud slides after a fire has 'clear cut' all the trees? The FEMA publication called the Technical Manual for Dam Owners lacked input from any plant biologist or ecologist. Haven't shown sufficient data/evidence that clear cutting is needed. NYSCC has not demonstrated why and how wholesale clear-cutting of trees on all canal embankments is necessary to provide that security. Comments were submitted questioning the need for the EEIP based on scientific evidence, claiming that science says it is unnecessary. • Some state that the scientific and engineering evidence of the need for the EEIP is missing or poorly explained. • Some request more research. • Some comments express concern that the removal of vegetation will leave an embankment open to erosion • Some contend that the presence of trees reduces the risk of soil erosion. • Some comments apply principles of erosion along banks or on natural slopes with seepage through engineered earthen embankments that hold back water for much of the year. • One comment states the Federal Highway Administration and the US Army Corps of Engineers as organizations that recognize the value of nature-based solutions for maintaining banks and preventing erosion. • Another named Dr. Donald H. Gray, and a California Guidance document. • Others express concern that construction activities on the embankments themselves put the embankments at risk. • Another comment charged the NYSCC and FEMA with insufficient knowledge of biology in removing trees from embankments.	12, 37, 38, 42, 90, 98, 102, 165, 168, 180, 189, 216, 236, 263, 264, 271, 300, 332, 409, 459, 482, 503, 511, 637, 640, 659, 804, 840, 859, 892, 894, 909, 944, 974, 976, 989, 1008, 1010, 1011, 1012, 1022, 1023, 1028, 1047, 1049, 1050, 1069, 1070, 1071, 1091, 1095, 1096, 1097		The presence of roots within earthen embankments that don't retain water (similar to non-navigation season conditions on the Erie Canal system) has been demonstrated to provide hydrologic and mechanical mechanisms that can be both beneficial and detrimental in terms of embankment stability. Live and dead components of root systems can either promote or dissipate soil pore water pressure and can act as mini-conduits for water discharge. When windy conditions prevail, stems of trees bend and preferential flow along the roots can occur. Commenters have noted that forested slopes are more stable and resist erosion better than clear cut slopes. This is true for rainfall caused surface erosion, but not for seepage flow through a water containing embankment (sub-surface erosion). Any slopes where tree removal may occur for Canal maintenance will be revegetated and maintained. The key difference between the Canal embankments and a forested slope is the presence of the pool of water at the inboard embankment slope. During the navigation season where a pool of water, up to 12 feet deep, supplies water to the trees and other vegetation on the outboard side of the water retaining earthen embankments, higher pore water pressures are even greater within the embankments, which are an additional detriment to embankment stability. In other words, the Canal embankments are subject to internal pressure from seepage flow. Tree roots provide preferential paths for seepage and can jeopardize the embankment stability through sub-surface erosion. Also, Canal embankments contain water for six months

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				a year, unlike levees which are subject to water loading for periods of only a few days a year. Canal embankments become fully saturated. The stability of engineered earthen embankments of the Erie Canal system is based on structural and seepage analyses of the earthen embankments as structures comprised of a uniform material (compacted, non-organic soil with an appropriate grain size distribution). Tree roots and other intrusions make earthen embankments more vulnerable to seepage and stability failures because root systems don't possess engineering properties consistent with because a properly compacted soil material. In the course of developing the EEIP, no published studies have been found stating beneficial or neutral effects of tree roots in water -containing embankment stability, nor have any been provided through the comment period. Appendix B includes historical analysis that show piping (seepage) through earthen embankments is the most likely cause of dam embankment failure. The EEIP therefore follows the recommendations of dam safety agencies for vegetation management of the earthen embankments. Section 1.4 of the Guide Book includes vegetation management and the experience of other agencies. The NYSCC will continue to monitor and apply research as it becomes available and established. Written policies of the US Army Corps of Engineers with regard to earthen levees and earthen dams were

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				consulted (see Guide Book, Section 1.4. The Federal Highway Administration does not manage earthen embankments. The NYSCC did review a number of scientific papers on the role of trees in soil stability and found evidence of both positive and negative effects of trees on slope stability, most citing that more research is needed. These studies include: • The Influence of Plant Root Systems on Subsurface Flow: Implications for Slope Stability • Assessment of grass root effects on soil piping in sandy soils using the pinhole test • Sediment detachment in piping-prone soils: Cohesion sources and potential weakening mechanisms • Ecological mitigation of hillslope instability: ten key issues facing researchers and practitioners A full reference of documents reviewed in support of the EEIP can be found in Section 6 of the GEIS and Section 12 of the Guide Book. 859 Some commenters have discussed erosion of forested slopes that have been clear cut. The protection provided by tree roots is a known factor for rainfall induced erosion of cut slopes. However, there are two reasons why this situation is not directly applicable to the Canals embankments EEIP program: • Clearcuts of forested hillsides (or wildfires) are not provided with prompt revegetation, which is part of the Canal embankment maintenance

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				• Canal embankments are water containing structures and subject to internal seepage and pore pressure. This requires a prudent approach to what vegetation is allowed in order to not allow seepage paths that can destabilize the embankments. 1047 The California guidance mentioned *Urban Levee Design Criteria*, May 2012 is more nuanced than would be indicated from the quote from Sec 7.16. That section continues with "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" Waterside vegetation is an important element for levees along rivers subject to erosive streamflow, but not for the inboard slope of Canal embankments where velocities are low. As water containing embankments, the critical sections are the outboard land side slopes. Section 7.16 also contains requirements for engineering evaluation of vegetation, removal of vegetation that poses an unacceptable threat, routine inspection, and provides for landscape planting berms which are additional embankments on the land side of the levee beyond the dimensions required for levee integrity.. Note that all of these recommendations are for levees subject to flood levels of a few days a year duration, not water-containing embankments with high water levels six month a year.

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EIS-1.3.1e	Trees and vegetation along the embankments actually support the structure of the embankment. A number of comments contend that trees and vegetation along the embankments actually support the structure of the embankment. There is one commenter who refuted this concept.	61, 63, 463, 481, 604, 1091, 1100 1091		The presence of roots within earthen embankments that don't retain water (similar to non-navigation season conditions on the Erie Canal system) has been demonstrated to provide hydrologic and mechanical mechanisms that can be both beneficial and detrimental in terms of embankment stability. Live and dead components of root systems can either promote or dissipate soil pore water pressure and can act as mini-conduits for water discharge. When windy conditions prevail, stems of trees bend and preferential flow along the roots can occur. Commenters have noted that forested slopes are more stable and resist erosion better than clear cut slopes. This is true for rainfall caused surface erosion, but not for seepage flow through a water containing embankment (sub-surface erosion). Any slopes where tree removal may occur for Canal maintenance will be revegetated and maintained. The key difference between the Canal embankments and a forested slope is the presence of the pool of water at the inboard embankment slope. During the navigation season where a pool of water, up to 12 feet deep, supplies water to the trees and other vegetation on the outboard side of the water retaining earthen embankments, higher pore water pressures are even greater within the embankments, which are an additional detriment to embankment stability. In other words, the Canal embankments are subject to internal pressure from seepage flow. Tree roots provide preferential paths for seepage and can jeopardize the

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				embankment stability through sub-surface erosion. Also, Canal embankments contain water for six months a year, unlike levees which are subject to water loading for periods of only a few days a year. Canal embankments become fully saturated. The stability of engineered earthen embankments of the Erie Canal system is based on structural and seepage analyses of the earthen embankments as structures comprised of a uniform material (compacted, non-organic soil with an appropriate grain size distribution). Tree roots and other intrusions make earthen embankments more vulnerable to seepage and stability failures because root systems don't possess engineering properties consistent with because a properly compacted soil material. In the course of developing the EEIP, no published studies have been found stating beneficial or neutral effects of tree roots in water -containing embankment stability, nor have any been provided through the comment period. Appendix B includes historical analysis that show piping (seepage) through earthen embankments is the most likely cause of dam embankment failure. The EEIP therefore follows the recommendations of dam safety agencies for vegetation management of the earthen embankments.
EIS-1.3.1f	There is no reason for the clear cut except to benefit the Canal Corporation in annual surveys. A decision based solely on convenience for maintenance. The state is NOT authorized by the public to destroy nature because that nature is "inconvenient." The argument for clear cutting as an efficiency/cost-effective measure for maintenance purposes is penny wise and pound foolish. Clear-cutting is easier and less expensive than removal on a case-by-case basis. Clear cutting vs the cost of alternative methods.	17, 83, 133, 136, 156, 211, 230, 236, 271, 282, 297, 338, 438, 464, 541, 547, 556, 563, 597, 671, 672, 747, 761, 767, 840,		In the past 10 years the Canal Corporation, on average, has experienced one earthen embankment incident per year that has resulted in closure of a section of canal or feeder and/or the reduction of navigation depths for a period of time. The Canal Corporation is presently

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	Some commenters expressed their opinion that the EEIP program is a waste of financial resources. Others pointed out the lack of benefits to the public and others noted the great cost (in lost attractiveness and tourism) to the public. Others contend that the EEIP benefits only the Canal Corporation in making maintenance easier.	844, 852, 858, 984, 988, 989, 990, 1031, 1044, 1085, 1105		monitoring over 300 active seeps in the 130 miles of inventoried canal embankment. The EEIP represents a balanced approach to fulfill the requirements to maintain a safe Canal embankment system within the limits of financial resources while considering environmental and community effects of maintenance actions. As noted in the Guide Book Section 10, in areas where specific projects may exceed community thresholds, there will be a community taskforce who will work with the Canal Corporation during alternative selection.
EIS-1.3.1g	These trees are just plants, large ones that were not cut back or managed over the past 100 years. A field of grass will turn into a small forest if left alone for just 25 years. The canal banks were not designed to have enormous cottonwoods, oaks, maples, poplar, ash, willow or any sort of tree on its banks. For this reason alone, what doesn't belong on the canal banks now has to be removed, regardless of their size, shape or aesthetic beauty. You can't leave just one since that would contradict your entire reasons for removing the trees. It's that one tree that may be the weak link in the system and can cause a breach.	2		The EEIP represents a balanced approach to fulfill the requirements to maintain a safe Canal embankment system within the limits of financial resources while considering environmental and community effects of maintenance actions. As noted in the Guidebook Section 10, in areas where specific projects may exceed community thresholds, there will be community advisory teams who will consult with the Canal Corporation during the planning and design phase.
EIS-1.3.1h	Natural vegetation is largely self-maintaining, as compared with grass which requires fuel to mow etc.	264		Vegetation impedes the ability to properly inspect and maintain the embankments. Trees require removal when they die or are damaged (e.g., storms).
EIS-1.3.1j	The only reason to remove trees from the canal is if the tree(s) is damaged or diseased. Remove the clutter and non-native species. Healthy trees should never be removed.	305, 364, 514		The presence of roots within earthen embankments that don't retain water (similar to non-navigation season conditions on the Erie Canal system) has been demonstrated to provide hydrologic and mechanical mechanisms that can be both beneficial and detrimental in terms of embankment stability. Live and dead components of root systems can either promote or dissipate soil pore water pressure and can act as

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				mini-conduits for water discharge. When windy conditions prevail, stems of trees bend and preferential flow along the roots can occur. Commenters have noted that forested slopes are more stable and resist erosion better than clear cut slopes. This is true for rainfall caused surface erosion, but not for seepage flow through a water containing embankment (sub-surface erosion). Any slopes where tree removal may occur for Canal maintenance will be revegetated and maintained. The key difference between the Canal embankments and a forested slope is the presence of the pool of water at the inboard embankment slope. During the navigation season where a pool of water, up to 12 feet deep, supplies water to the trees and other vegetation on the outboard side of the water retaining earthen embankments, higher pore water pressures are even greater within the embankments, which are an additional detriment to embankment stability. In other words, the Canal embankments are subject to internal pressure from seepage flow. Tree roots provide preferential paths for seepage and can jeopardize the embankment stability through sub-surface erosion. Also, Canal embankments contain water for six months a year, unlike levees which are subject to water loading for periods of only a few days a year. Canal embankments become fully saturated. The stability of engineered earthen embankments of the Erie Canal system is based on structural and seepage analyses of the earthen embankments as structures comprised of a uniform material (compacted, non-organic soil with an appropriate grain size

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				distribution). Tree roots and other intrusions make earthen embankments more vulnerable to seepage and stability failures because root systems don't possess engineering properties consistent with because a properly compacted soil material. In the course of developing the EEIP, no published studies have been found stating beneficial or neutral effects of tree roots in water -containing embankment stability, nor have any been provided through the comment period. Appendix B includes historical analysis that show piping (seepage) through earthen embankments is the most likely cause of dam embankment failure. The EEIP therefore follows the recommendations of dam safety agencies for vegetation management of the earthen embankments.
EIS-1.3.1k	Can't see how our environment or local communities will benefit from a clear cut.	345, 484		The EEIP is not a clear cut of the Erie Canal shoreline but a risk reduction measure involving approximately 130 miles (~12%) of the Erie Canal shoreline where water retaining earthen embankments raise the water level above the adjacent ground. For this approximately 130 miles of Erie Canal shoreline, the benefit will be a significant reduction in risk of earthen embankment failure.
EIS-1.3.1m	If the concern is tree roots destabilizing the canal banks, then why were the trees in Brockport not uprooted? They were only chopped down, so the allegedly harmful roots are still in place; and the NYSCC left Brockport an unsightly mess.	263		Tree roots have been removed from the previously cleared embankments in Brockport. The vegetation removal project in 2018 cut trees on the embankments, followed by the Embankment Restoration project which removed the stumps and roots >1" in diameter.
EIS-1.3.1n	The Erie Canal embankments are not dams. The canal is fundamentally not a dam and should not be managed as a dam. Removing trees in the name of dam management therefore does not make sense.	98, 157, 205, 579, 595, 761, 1047, 1053, 1058, 1071		NYSCC disagrees with the conclusions drawn, which substitute commenters judgment for NYSCC's decision-making and commenters do not provide a foundation for their conclusions that should be considered by

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	As the canal embankments run parallel, rather than perpendicular, to the flow of the current, it is unreasonable to treat the structures as dams. 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 in conducting its environmental review. NYSCC may consider engineering standards and practices for management of earthen structures that impound water, if not as binding but as a reasonable practice to mitigate structural risks. In locations where the Erie Canal is raised above the surrounding ground (approximately 130 miles or 12% of the mileage of the Erie Canal System), the Erie Canal embankments are water retaining structures similar to dams and levees. When water retaining embankments are watered, they present a danger to the public and to infrastructure located downstream. The primary difference between the Erie Canal embankments, dams and levees is the duration of time during the year that they are watered. The Erie Canal embankments are filled with water for approximately50% of the year (6 months). Most dams are filled with water the entire (100% of the time) year. Levees are designed for flood events that have an annual exceedance probability considerably greater than 1%. Functionally, the Erie Canal embankments are dams for 50% of the year and retain water far more frequently than the well maintained Federally constructed and State maintained levees that have been built along some major rivers in New York State. New York State, therefore, has a responsibility to protect its public and infrastructure from the risks of Erie Canal embankment failures, and has chosen to implement the EEIP to meet this responsibility. The discourse around the definition of earthen embankments as dams, levees, or something different

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				and unique to canals is not limited to the NYS canal system. Canal embankment owners and stewards in other states and countries contend with the same challenges as those of the NYSCC and have the opportunity to develop new bodies of evidence for these unique and distinct water-impounding structures.
EIS-1.3.1o	The clear cut of trees would substantially interfere with the usefulness of the nature pathways along the Canal, with no real structural / engineering benefit to the Canal itself.	128		The EEIP is not a clear cut of the Erie Canal shoreline but a risk reduction measure involving approximately 130 miles (~12%) of the Erie Canal shoreline where water retaining earthen embankments raise the water level about the adjacent ground. For this approximately 130 miles of Erie Canal shoreline, the benefit will be a significant reduction in risk of earthen embankment failure.
EIS-1.3.1p	7-FEMA, NYDEC, ASDSO Army Corp of Engineers, Rizzo Engineering and more all say trees are not allowed on embankment dams. The dam from Fairport to Pittsford has been classified C High Hazard dam, and could potentially drown hundreds of people in the Fairport Jefferson Ave area. 210- All anyone needs to realize is that these trees on the embankments are a constant variable. Over the span of 75-100 years these trees have turned a man made series of containers of water into an ever changing organism, complicated with evolving tree roots, moving earth, shading, seepage paths, layers of decaying debris, burrowing animals and many variables that were in no way factored into the lifespan or failure rate of the earthen dam portions of the canal. Call it a dam, an embankment, levee, ditch, trough, linear pond, reservoir or whatever you choose. These structures all have similar functions, are constructed to hold back tons of hydrostatic pressures (in this case, a man made river of water) and trees are not part of their design.	7, 210		In locations where the Erie Canal is raised above the surrounding ground (approximately 130 miles or ~12% of the mileage of the Erie Canal System), the Erie Canal embankments are water retaining structures similar to dams and levees. When water retaining embankments are watered, they present a danger to the public and to infrastructure located downstream. The primary difference between the Erie Canal embankments, dams and levees is the duration of time during the year that they are watered. The Erie Canal embankments are filled with water for approximately half (50% of the time) the year (6 months). Most dams are filled with water the entire (100% of the time) year. Levees are designed for flood events that have an annual exceedance probability considerably greater than 1%. Functionally, the Erie Canal embankments are dams for 50% of the year and retain water far more frequently than the well maintained Federally constructed and State maintained levees that have been built along

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				some major rivers in New York State. New York State, therefore, has a responsibility to protect its public and infrastructure from the risks of Erie Canal embankment failures, and has chosen to implement the EEIP to meet this responsibility. The discourse around the definition of earthen embankments as dams, levees, or something different and unique to canals is not limited to the NYS canal system. Canal embankment owners and stewards in other states and countries contend with the same challenges as those of the NYSCC and have the opportunity to develop new bodies of evidence for these unique and distinct water-impounding structures.
EIS-1.3.1s	If root structure is a real fear for the integrity of the canal embankment, why wasn't that proactively maintained instead of reactively over-corrected?	553		Vegetation on the embankments adds to the risk associated with those embankments. Vegetation impedes inspection. To date, research has not established a reliable method to quantify effects of roots on embankments. NYPA/NYSCC cannot speculate as to why previous stewards didn't conduct maintenance.
EIS-1.3.1t	Commenters noted that trees long the canal bank work as mechanical weathering agents, and that wandering invasive roots and tree limbs are the enemies of infrastructure that must be controlled.	583, 975		Comment is acknowledged.
EIS-1.3.1u	I'm not sure how cutting down trees align with the "green" initiatives of New York State.	735		The EEIP represents a balanced approach to fulfill the requirements to maintain a safe Canal embankment system within the limits of financial resources while considering environmental and community effects of maintenance actions.
EIS-1.3.1v	The corporation is using guidance from an antiquated document produced by the US Army Corps of Engineers. According to Dr Maier, the current staff of the Corps no longer	763, 766, 1044, 1053		The USACE has not issued any updated guidance to support the assertion that the published criterion is no

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	supports this criterion. The NYSCC need to contact the scientist at the USACE provided by Virginia Maier. Based on up-to-date research and case studies, the EEIP is not a sensible approach to canal maintenance or public safety.			longer appropriate. The latest published documentation (2019) has been used to develop the Guide Book. In 2011 the USACE published an initial report regarding the effects of woody vegetation on water impounding structures. The press release associated with the research findings stated: "The results of this initial research do not warrant a change to the USACE national vegetation management standard." Reference: https://www.usace.army.mil/Media/News-Releases/News-Release-Article-View/Article/475429/usace-releases-report-on-initial-research-into-the-effects-of-woody-vegetation/
EIS-1.3.1w	The canal structure is unnatural. A major part of its survival is to keep it that way.	773		Comment is acknowledged.
EIS-1.3.1x	What controlled studies have been conducted to prove the necessity of this practice?	937		The action proposed under the EEIP are established by practices employed by federal and state agencies which are based on engineering analyses and risk management practices developed to maintain water containing embankments in a safe state of repair.
EIS-1.3.1y	Given that you claim to know of 200 seeps along the canal, wouldn't it be a better use of funds to deal with the repairs that are necessary, rather than looking for more (probably non-existent) problems? Your lack of attention to these known "problems" is evidence enough that seeps are not an emergency, and clear-cutting the canal to look for more is unnecessary.	938		Implementation of the EEIP will result in removal of brush and trees less than 3" diameter to aid in identifying additional seeps and other deficiencies requiring attention. Furthermore, the EEIP will through its embankment inspection and risk evaluation program prioritize the locations needing maintenance so that embankments with the greatest deficiencies and highest risk to the public and to infrastructure will be repaired first. Repair of seeps and other deficiencies is not precluded by the EEIP. The NYSCC continues to monitor, evaluate, and address known seeps, sink holes,

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				erosion, and other deficiencies. The EEIP will allow the NYSCC to better identify and monitor such deficiencies.
EIS-1.3.1z	Given that there is no need for clear cutting, what is the driving force behind this project?	967		Comment is acknowledged and response is reflected in other comment replies throughout this document. .
EIS-1.3.1aa	Comments to the Press regarding the purpose and need for the program. In September local news quoted Canal Corporation representatives in ways that are inconsistent to my understanding, which is that the determinative issue about trees by this canal is that they inhibit visibility and maintenance. Spectrum News, 9/21/21: *Trees line a large portion of the trail along the Erie Canal, but the New York State Canal Corporation says their growth is creating leaks along the waterway. The state wants to fix those leaks by clearing some of the trees.* Is that the Canal Corporation's position, that by removing the trees the leaks will be fixed? Rochester Democrat and Chronicle, 8/11/21: *"It is a common misconception that tree roots stabilize the soil mass," according to the environmental impact statement. "On the contrary, tree roots actually loosen the soil mass."* Is this the Canal Corporation's position, that problems occur on the Erie from tree-loosened soil? I understand that dead roots decay and shrink. But I am told by arborists that healthy tree roots generally grip the soil, not loosen it. Rochester Democrat and Chronicle, 8/30/21: *The Canal Corp. and some other advocates say that the roots of large trees and shrubs are causing damage to the engineered earthen embankments. If those plants are not removed or sharply pruned, the dams could break and cause severe flooding or damage, according to the Canal Corp.* Section 7.3 in the Guidebook elaborates and refers to USACE, FEMA, and others. Examples given of mechanisms are: "Roots that penetrate the phreatic surface" increase the risk of piping (Guidebook 7.3.1), and "uprooted trees [can] produce large voids" (FEMA-534 page 2-5).	971		In locations where the Erie Canal is raised above the surrounding ground (approximately 130 miles or 12% of the mileage of the Erie Canal System), the Erie Canal embankments are water retaining structures similar to dams and levees. When water retaining embankments are watered, they present a danger to the public and to infrastructure located downstream. The primary difference between the Erie Canal embankments, dams and levees is the duration of time during the year that they are watered. The Erie Canal embankments are filled with water for approximately half (50% of the time) the year (6 months). Most dams are filled with water the entire (100% of the time) year. Levees are designed for flood events that have an annual exceedance probability considerably greater than 1%. Functionally, the Erie Canal embankments are dams for 50% of the year and retain water far more frequently than the well maintained Federally constructed and State maintained levees that have been built along some major rivers in New York State. New York State, therefore, has a responsibility to protect its public and infrastructure from the risks of Erie Canal embankment failures, and has chosen to implement the EEIP to meet this responsibility.

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	Does the Canal Corporation contend these are significant risks for the Erie? If so, what mechanism has caused an embankment break on the Erie in the past 100 years? FEMA-534, "Impacts of Plants on Earthen Dams," asked Federal agencies and all 50 states about problems with and policies about trees on earthen dams. "The problem most commonly noted by state officials is that trees, woody vegetation, briars, and vines interfere with effective safety inspections" (page 2-3). I think comments to the press about trees by the Erie Canal should emphasize the visibility problem even if examples could be given of trees in themselves causing damage. Otherwise, the public is diverted from the main issue.			
EIS-1.3.1ad	Public safety is paramount. Were the canal embankments to fail, there is the potential for loss of life and significant property damage.	983, 991, 1100		In locations where the Erie Canal is raised above the surrounding ground (approximately 130 miles or 12% of the mileage of the Erie Canal System), the Erie Canal embankments are water retaining structures similar to dams and levees. When water retaining embankments are watered, they present a danger to the public and to infrastructure located downstream. The primary difference between the Erie Canal embankments, dams and levees is the duration of time during the year that they are watered. The Erie Canal embankments are filled with water for approximately half (50% of the time) the year (6 months). Most dams are filled with water the entire (100% of the time) year. Levees are designed for flood events that have an annual exceedance probability considerably greater than 1%. Functionally, the Erie Canal embankments are dams for 50% of the year and retain water far more frequently than the well maintained Federally constructed and State maintained levees that have been built along some major rivers in New York State. New York State, therefore, has a responsibility to protect its public and infrastructure from the risks of Erie Canal embankment

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				failures, and has chosen to implement the EEIP to meet this responsibility.
EIS-1.3.1af	As noted on page 1-9 in the DGEIS, steel sheeting was recently installed along the canal embankment in the Town of Perinton (near Woodcrest Circle and across the canal from Old Post Road). Did this emergency repair improve embankment integrity to a level that avoids the need to remove additional vegetation in this area?	1015		When this section is inspected the presence of sheet piling would be considered in its condition rating. Which would determine if or when this section is rehabilitated under the EEIP. Section 2.3.3. states…. The addition of a continuous seepage barrier would have the benefit of eliminating the need for some of the vegetation removal, animal burrow filling, and seepage type repairs that would be required under the proposed action.
EIS-1.3.1ag	The example of Royalton seems to demonstrate success in targeted brush clearing then targeted tree clearing. The necessity to clear approximately 100 feet of embankment does not justify the clearing of 660,000 feet (125 miles) of earthen embankments.	1045. 1084		Vegetation management is necessary to properly inspect the embankments and determine where additional work is needed. For example, three seeps initiated action at Royalton but when the vegetation was removed 12 seeps in total were identified.
EIS-1.3.1ah	The purpose of the EEIP is to restore the integrity of embankments…" What aspects of integrity will be restored? How is the integrity to be restored? "Without implementation of an embankment maintenance program, embankments will continue to be weakened by various forms of deterioration…" Does that mean that embankments are not being maintained because there is no program? What specific examples are there of embankment deterioration? How significant is the NYSCC "ability to detect deficiencies… …impaired"? Can the NYSCC circumvent, overcorrect, offset, or mitigate the impairment with additional inspection resources such as time and personnel?	1045	EIS p. 1-8	Vegetation management is necessary to properly inspect the embankments and determine where additional work is needed. For example, three seeps initiated action at Royalton but when the vegetation was removed 12 seeps in total were identified. Repair of seeps and other deficiencies is not precluded by the EEIP. The NYSCC continues to monitor, evaluate, and address known seeps, sink holes, erosion, and other deficiencies. The EEIP will allow the NYSCC to better identify and monitor such deficiencies.
EIS-1.3.1ai	"When construction of the original Erie Canal began in 1817… " Were there "engineering standards…" when the Barge Canal was rebuilt and realigned starting in 1903? Are any in-service earthen embankments unmodified from before the Barge Canal reconstruction?	1045	EIS p. 1-8	Best Management Practices (Army Corp of Engineer, Federal Emergency Management Authority) and regulatory requirements for similar structures as well as programs implemented by other states, serve as the basis for development of the Guidebook. NYPA/Canals

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	Have "The effects of the lack of design and construction standards..." been associated with any embankment failures on the Erie or Barge canals since 1903? Has improper evaluation or expertise been associated with any embankment failures on the Erie or Barge canals since 1903?			cannot speak to strategies previously employed by NYSDOT, NY Thruway Authority or Canal managers predating those entities.
EIS-1.3.1aj	"The public benefits of the Project include..." How will removing all trees in most zones lead to a "Reduction in the risk of life loss, and damage to private property, public infrastructure, utilities, and the environment"? "This will be accomplished by prioritizing embankment maintenance on the basis of condition, hazard classification and risk urgency. " Is "condition" relating to embankment integrity? Is "condition" relating to embankment cosmetics? Will the costs shifted to EEIP related "programmed maintenance dollars" exceed emergency repairs? "...frequency and extent of canal and trailway closures will be significantly reduced..." What value does "significantly" have?	1045	EIS p. 1-9	Please refer to Section 2 of the GEIS.
EIS-1.3.1am	I am quite dubious of the corporation's claim that trees weaken embankments. I believe that the truth is much more nuanced, depending on the type of tree and stand density. Tree roots typically do not grow very deep, particularly in compacted soil. They need oxygen to grow, so only in very sandy soil do they grow more than 4 feet deep. Typically they only grow 2-4 feet down at most, and most roots of any given tree actually only occupy the top 3 inches of soil -- the same soil space that turf grass does (see the research conducted by Ed Gilman from the University of South Florida, summarized here: https://hort.ifas.ufl.edu/woody/roots-intro.shtml). Stand density matters because trees are less likely to get blown over when their roots are intertwined with their neighbors'. Stand density will also affect the canopy, which can shade out understory plants that can make inspection difficult. So a healthy mature forest may be the EEIP's best friend since unlike turf grass they do not need to be mowed.	1062		The presence of roots within earthen embankments that don't retain water (similar to non-navigation season conditions on the Erie Canal system) has been demonstrated to provide hydrologic and mechanical mechanisms that can be both beneficial and detrimental in terms of embankment stability. Live and dead components of root systems can either promote or dissipate soil pore water pressure and can act as mini-conduits for water discharge. When windy conditions prevail, stems of trees bend and preferential flow along the roots can occur. During the navigation season where a pool of water, up to 12 feet deep, supplies water to the trees and other vegetation on the outboard side of the water retaining earthen embankments, higher pore water pressures are even greater within the embankments, which are an additional detriment to embankment stability. The stability of engineered earthen embankments of the

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				Erie Canal system is based on structural and seepage analyses of the earthen embankments as structures comprised of a uniform material (compacted, non-organic soil with an appropriate grain size distribution). Tree roots and other intrusions make earthen embankments more vulnerable to seepage and stability failures because root systems don't possess engineering properties consistent with because a properly compacted soil material.
EIS-1.3.2	Location and Physical Dimensions			
EIS-1.3.2a	How far is the clear cut intended to be from the canal itself? Both sides?	582		The EEIP only applies to earthen embankments. Embankment rehabilitation would not extend beyond the property owner by NYSCC. Mapped embankments and seep information can be found online: https://www.nyscanalintegrity.org/program-and-maps. The EEIP is not a clear cut as discussed in Section 2.3.4. The EEIP pertains to embankments. The Final GEIS includes a description and location of known embankments at the time was written in Section 1.3.2. Embankment dimensions are discussed in Section 1.2 of the Guide Book.
EIS-1.3.2b	In order to accommodate the potential for temporary access by means of temporary easements or a Site Access/Vegetation Management Permit, an additional 100 feet beyond property under jurisdiction of the NYSCC is included as part of the project area." Have all property owners within an additional 100 feet" been notified of this EEIS?	1045	EIS p. 1-9	All property owners will be notified prior to work to be done (Sections 9 & 10 of Guide Book) Notice of the availability of the draft Guidebook and DGEIS were posted in the ENB, DOS, Social Media. In addition, letters were mailed to all municipalities in the project area. Individual property owners will be notified for specific projects.

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EIS-1.3.2c	"A full inventory of embankments on the NYS Canal System." What data or information is being collected as part of this inventory? Is sufficient data being collected or will a new inventory be necessary to capture crucial missing data?	1045	EIS p. 1-10	The inventory of earthen embankments is available online: https://www.nyscanalintegrity.org/ Inspections are discussed in Section 4 of the Guide Book. Inspections and inventory will be updated as needed to incorporate any regulatory, best management or criteria advancements.
EIS-1.3.4	Thresholds for Alternate EEIP Activities			
EIS-1.3.4a	If the plan goes forward as outlined, it also seems to raise environmental justice issues. Many of the small towns and villages that might not have the funds to have a comprehensive plan with deep analysis will suffer as a result of the decision tree within the report, leading to a lower quality of life for less fortunate communities. Before the plan can move forward, and any work commence, the Canal Corporation should take at least one year to meet with every town along the canal, inform them of how the plan will affect their town, and give a 5 year period for each town to incorporate language into their comprehensive plans that would trigger the Canal Corp decision tree.	944		NYSCC will consider compliance with applicable laws, regulations and policies regarding Environmental Justice and disadvantaged communities as may be applicable based on the impact of those activities on the community. Those impacts were not identified as being of such a significance during scoping to be considered within the GEIS for the EEIP. This consideration will include NYSCC's consideration of New York's Climate Leadership and Community Protection Act and its implementing regulations and any governance documentations.
EIS-1.3.4b	DGEIS Page 1-14, Regulatory and community threshold (also Figure 1.3-3): We recommend "Step 3" (Engage with stakeholders based on specific thresholds identified) b moved to "Step 1" once a community threshold is exceeded, rather than after removal of hazard trees and brush. Timely communication is critical to maintaining good rapport with residents and local municipalities.	1015		Community engagement is covered in Sections 9 and10 of the Guide Book. However, "Step 1" and "Step 2" are required to evaluate an embankment segment and to determine appropriate scope of repairs.
EIS-1.3.4c	"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…" Would this action be applied to the entire embankment, including sections that are stable and show no signs of risk? What is the process and result of "a tree inventory"?	1045	EIS p. 1-13	Embankments cannot be property inspected in a vegetated state (e.g., heavy ground cover). Vegetation maintenance is necessary to accurately determine condition rating and risk. Embankments cannot be property inspected in a vegetated state (e.g., heavy ground cover). Vegetation

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	Why is "7. If the results of the seepage and stability monitoring indicate instability or that safe conditions are deteriorating, corrective engineering solutions would be implemented." delayed? Shouldn't some form of inspection happen before step 1? Seriously, is your plan is to drastically disturb the embankment before inspection?			maintenance is necessary to accurately determine condition rating and risk. The results of an intensive stability analysis would be used to allow trees to remain on areas of the embankment outside of the preferred zones.
EIS-1.3.4d	Figure 1.3-3: Why is vegetation under 3" to be cleared?	1045	EIS p. 1-15	Embankments cannot be property inspected in a vegetated state (e.g., heavy ground cover). Vegetation maintenance is necessary to accurately determine condition rating and risk.
EIS-1.3.4e	Figure 1.3-3" Why is the type so small and unreadable with so much white space remaining?	1045	EIS p. 1-16	This figure has been revised and made to fill a page to help with readability.
EIS-1.3.4f	In a public meeting, it was mentioned that there is some process for requesting an exception to the rules about cutting the trees on some of these affected areas. I'd like information on that process. Under what conditions could an exception to cutting the trees be made and what is the process for making a request for an exception? And what is the process for how these requests are then handled by the Canal Corporation?	1056		The EEIP represents a balanced approach to fulfill the requirements to maintain a safe Canal embankment system within the limits of financial resources while considering environmental and community effects of maintenance actions. As noted in the Guidebook Sections 8 and 10, in areas where specific projects may exceed community thresholds, there will be a community taskforce who will work with the Canal Corporation during the alternative selection.
EIS-1.3.4g	Comment on "Statement at 1-13, 1-14:" Let's see how this would work. . . just what "potential mitigation measures" would be implanted 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 these solutions be separate site-specific action under SEQRA? See action no.1 above regarding 3" DBH trees. May live, healthy, safe trees greater that 3" DBH be allowed to stay on any embankment zones other than zones 2A and 3?	1071	EIS p. 1-13	If a project is identified within a municipality that triggers the threshold criteria only dead/dying hazard trees would be removed. No furthers trees would be removed from the embankment until after the process added as Section 10 of the *Guide Book*. If the stability analysis indicated additional action was needed and that engineered solutions or other techniques were proposed that was not studied in the GEIS, the work could be subject to additional SEQR review This approach is consistent with SEQR

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				regulations as set forth in 6 NYCRR 617.10, If emergency action was needed the work required to mitigate the emergency condition would not be subject to additional SEQR review.
EIS-1.3.5	Timing and Scheduled			
EIS-1.3.5a	What month are the programmed maintenance projects set?	1045	EIS p. 1-16	Scheduling considerations have been added to the *Guide Book* as Section 7.3.3.
EIS-1.3.7	Approvals and Permits Required			
EIS-1.3.7a	Are "concrete and masonry walls" within the embankment part of the EEIP?	1045	EIS p. 1-17	"Concrete and masonry walls" are not included in the EEIP. Please refer to section 1.3 of the GEIS for a full project description.
EIS-2	Alternatives Considered			
EIS-2c	Chapter 2, Alternatives Considered, was there ANY consideration to something in-between what we have now with the Erie Canal at 120' wide & 12' deep, and the "drain & abandon" idea? If the idea is to reduce risk, then having more embankment in-between the inboard sea and the humans living along it, would be better I presume. Maybe incorporate some method to have the canal as a 60" wide, 6' deep version from say 1880s may have been a solution that would fit better. Maybe tie that in with restoring wetland areas in the Western Section as part of your Reimagine Ideation would help.	21	EIS page 2-1	The width and depth requirements for each section of the canal are established in the Canal regulations Section 155.2 Channel. However, temporary reductions in water levels may be used to reduce risk of structure failure until or while embankment rehabilitation is completed. Permanent reductions of water levels or canal dimensions would require a separate SEQR and SHPO review. From the Canal Regulations: a) Waterford to Oswego route. Minimum bottom width, land line, earth section-104 feet Width of channel, water surface, land line, earth section-160 feet Minimum bottom width, land line, rock section-120 feet Bottom width of channel in canalized rivers, generally-200 feet Design depth- 14 feet (b) All other routes. Minimum bottom width, land line, earth section-75 feet Width of channel, water surface, land line, earth section-123 feet Minimum bottom width, land line, rock section- 94 feet Bottom width of channel in canalized rivers, generally-200 feet

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				Design depth-12 feet
EIS-2d	Have you ever "clear-cut" any embankments to date? So far all of the projects have been well defined, like the 27 mile Embankment Restoration Project. Isn't clear cutting only used in context of harvesting woody vegetation for profit? Seems like this EEIP work is more in-line with Embankment Maintenance & Upkeep, isn't that true?	21		There is no clear cutting planned. The EEIP intends to restore and maintain the approximately 130 miles of raised, water retaining earthen embankments.
EIS-2l	There is a lack of discussion about alternatives. Without knowing what the alternatives are, it is impossible to understand why cutting is the best option that holistically addresses the goals of each town and village, the safety of people and property, as well as the stated goals of the recently completed Empire Trail.	944		The DGEIS addresses a process rather than the methodology and a range of alternatives were evaluated. The removal of vegetation allows the NYSCC access to embankments for inspections and assessments. If a deficiency is identified, a range of solutions (i.e., filter blankets, cut off walls, sheet piling, etc.) may be employed.
EIS-2p	The NYSCC Should adopt an Ad Hoc alternative or project-by-project- approach to canal embankment maintenance. Such an approach would ensure that only harmful trees would be removed leaving the healthy trees in place to provide stability and a recreationally attractive viewshed.	1049		The Ad-Hoc Alternative was considered in DGEIS and was not selected by NYSCC. NYSCC disagrees with the commenter's conclusion that an ad hoc approach "would ensure that only harmful trees would be removed." The commenter does not support this statement with information that NYSCC could consider, review and analyze. Moreover, SEQR regulations and NYSDEC SEQR Guidance expressly authorizes the use of a non-project-by-project analysis under SEQR in the form of a Generic EIS for, among other things, when an entire program or plan having wide application or restricting future alternative polices or projects, which is exactly with the Guidebook does. See 6 NYCRR 617.10.
EIS-2q	Moreover, as pointed out in the correspondence from the Town of Pittsford, the Guide Book spends two pages plus discussing the California program for embankment management which incorporates a process by which existing trees and vegetation can be retained under specific criteria. Mr. Koegel in his correspondence on behalf of the Town of Pittsford inquired "Why can't NYSCC adopt this California approach?" I ask "why was the California approach entirely omitted from the alternatives section of the	1049		Section 1.4 of the *Guide Book*, "Vegetation Management and Experience of Other Agencies," was written to summarize some of the examples considered in developing the EEIP. Section 1.4.2.1.5 of the *Guide Book* states, "With respect to California's guidance and its applicability to the NYSCC canal embankments, it is

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	DGEIS?" Omitting an alternative program which the NYSCC clearly was aware of evinces a callous disregard for the regulation's requirements and renders the DGEIS incomplete. The DGEIS should have not only inserted the California approach as an option, but it also should have included a detailed discussion of the alternative to allow evaluation sufficient to permit a comparative assessment with the significant negative environmental impacts of the proposed EEIP.			important to consider the differences between levees and canal embankments noted in Section 1.3. The California approach is applied to levees that are watered infrequently compared to the Erie Canal watered embankments. The Erie Canal embankments are water retaining structures similar to dams. The primary difference between the Erie Canal embankments, dams and levees is the duration of time during the year that they are watered. The Erie Canal embankments are filled with water for approximately 50% of the year (6 months). Most dams are filled with water the entire (100% of the time) year. Levees are designed for flood events that have an annual exceedance probability considerably greater than 1%. In the California Levee document, a "frequently loaded levee means a levee that experiences a water surface elevation of 1 foot or higher above the elevation of the landside levee toe at least once a day for more than 36 days per year on average (10 percent of the number of days in a year)." Functionally, the Erie Canal embankments are dams for 50% of the year and retain water far more frequently than the well maintained Federally constructed and State maintained levees that have been built along some major rivers in New York State. As quoted in Section 1.3 of the *Guide Book*, *Embankments that are subject to water loading for prolonged periods (longer than normal flood protection requirements) or permanently should be designed in accordance with earth dam criteria rather than the levee criteria given herein.* This is based on a quotation from

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				the California Levee document of the USACE's EM 1110-2-1913. The California Levee approach was therefore not considered as an alternative for the earthen embankments.
	The EEIP does not effectively communicate why the clear cut option outlined was determined to be the best course of action. Alternatives are not discussed to inform the decision. As such it appears that only one was conceived of either before the report began, or without extensive research into alternatives. Alternatives should be thoroughly investigated and presented with a rationale into why one is recommended over the others. These should include potential costs and benefits to establish what is "reasonably practicable."	1050		The clear-cut alternative (Clear Cutting of Embankment Trees and Vegetation, Section 2.3.4) was an alternative that was considered and dismissed in the DGEIS because it would not consider the regulatory and community thresholds.
	The Draft Environmental Impact Statement released as part of the EEIP program has dispelled the myth being spread by a local Facebook group about what some are calling a clear cutting that is going on. The SEQR EIS document explains that a clear cut approach was an option that was rejected along with actually abandoning the canal and leaving it empty. The owners and caretakers of the canal system actually thought the seriousness of unsafe dams was enough to warrant closure to save the cost of repair, which will be nearly 300 million for the hundred miles of earthen embankments that still need repair, as just one way to ensure public safety.	1100		Comment is acknowledged.
EIS-2.1	Null or No-Action Alternative			
EIS-2.1a	The Canal Corporation, as lead agency under SEQRA, improperly rejected the "No Action" alternative. To discharge its responsibility under SEQRA, an agency must comply with both the letter and the spirit of SEQRA. Matter of Schenectady Chems. v. Flacke, 83 A.D.2d 460 (3d Dept. 1981) ("Schenectady"). SEQRA requires each EIS to include a discussion of alternatives to the proposed action. ECL 8-0109(4) (EIS "shall discuss" reasonable alternatives to the action; ECL 8-0109(2)(an EIS must include "alternatives to the proposed action") and ECL 8-0109(2)(d) (EIS must "suggest alternatives to such an action	1032		NYSCC disagrees with the legal conclusions drawn by the commenter.

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	so as to form the basis for a decision whether or not to undertake such action"). This requirement is reiterated in SEQRA's implementing regulations, which require an EIS to include "a description and evaluation of the range of reasonable alternatives to the action." 6 NYCRR 617.14(f)(5). This "alternatives analysis" has been repeatedly described as the "heart of SEQRA." Shawangunk Mountain Environmental Association v. Planning Board of Gardiner, 157 A.D.2d 273 (3d Dept. 1990) ("Shawangunk"). See also Akpan v. Koch, 75 N.Y.2d 561 (1990) ("Akpan"). The goal of the alternatives analysis is to investigate ways to avoid or reduce potentially significant adverse impacts.[4] To be meaningful and to comply with SEQRA, an alternatives assessment must be based on an awareness of all reasonable options other than the proposed action. Webster Associates v. Town of Webster, 59 N.Y.2d 220, 228 (1983) ("Webster"). The description and evaluation of the alternatives "should be at a level of detail sufficient to permit a comparative assessment of the alternatives discussed" and must include a "no action" option. 6 NYCRR 617.9 (b)(5)(v). Here, the DGEIS for the Program does not consider the "No Action" alternative. Rather, it summarily concludes that no action is "unacceptable," even though embankment failures due to trees are unheard of. The lead agency's failure to consider the No Action alternative violates the letter and spirit of SEQRA. _____ [4] See ECL 8-0109(1)-(2)(d) (explaining that an alternatives analysis is required so that the lead agency can satisfy its obligation to choose alternatives that minimize or avoid adverse environmental impacts).			
EIS-2.1b	This action is misstated. It should be called the "Abandonment Alternative" This would be an action because of the choice to alter current inspection and maintenance would be made.	1045	EIS p. 2-1	The definition of the "Null or No-Action Alternative" has been clarified to read, "The null or no-action alternative assumes the minimum effort in maintaining earthen embankments to meet basic statutory duties of the NYSCC. This alternative is unacceptable. NYSCC is required by law to perform annual inspections of the Canal System and

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				maintain the Canal System in good condition, which includes the earthen embankments. Under this alternative, trees and vegetation would be allowed to grow on embankment slopes, weakening them and creating seepage paths. The complete absence of a program means there is no active monitoring and inspections of earthen embankment conditions, and there are no policies or guidelines for evaluating and prioritizing embankment maintenance and repairs. " Based on the clarification, no other analysis was required.
EIS-2.1c	Another question is: what's the baseline risk of no action? I didn't see that quantified anywhere on the Draft GEIS. In Section 2.3, it states that the model parameters were based on written and anecdotal information provided by Bergmann, supplemented with personal experience of the modelers. So, would the personal -- would the modelers be willing to write down and state what their personal experience was and tell us how they use this in the model? It looks like they use data from the Mississippi River. Maybe they could also explain how the Mississippi River is analogous to the Erie Canal here and quantify that. They didn't seem to talk about whether the risks for a large river are different than say, for example, the risks in Pittsford. They didn't talk about what the effect of gates and locks are within the space of limited number of miles, so I didn't understand that.	1099		Appendix B of the DGEIS provides an explanation of the risk exposure presented by canal embankments. In the event of a breach, the closure of locks and guard gates would diminish the volume of an embankment breach but not the peak flow. The inundation modeling does not suggest that a breach of the Erie Canal is analogous to a breach of the Mississippi River. Rather, the models utilize some of the geotechnical and erodibility data from inundation modeling on the Mississippi River among many other data points that inform the model including calculations of water volume specific to the Erie Canal.
EIS-2.1d	Listed in the New York State Canal Corporation's EEIP Environmental Impact Statement, are the consequences of doing nothing and letting trees continue to grow along the canal. The Canal Corporation has shown that a flood, with possible loss of life and property could be the result in all cases along the canal if this were to happen anywhere.	1100		See Potential Impact of Alternatives in any of the topics in Chapter 3 of the GEIS.
EIS-2.2	Ad-Hoc Alternative-Project-By-Project Approach			
EIS-2.2a	Canal walkers have done an excellent job for decades identifying small leaks well before any significant damage was done. Let's not mess with a system that is working. Seeps	11, 761, 763		In some cases, bank walkers are forced to rely on sound to identify potential seeps due to overgrown embankment sections. Sections that are impassable

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	continue to be identified, indicating that the system is working. The Royalton incident is an excellent example of how seepage was detected without the area being clear-cut.			due to poison ivy, brambles, and vines cannot be adequately inspected. Bank walk inspections are supplemented by drone inspections and thermal imaging, both of which are limited due to the tree canopy. Limiting observation ability (e.g., visual inspection,) is not conducive to efficient or comprehensive monitoring of embankment condition. The EEIP will not replace bank walk inspections. Rather, it will further enable inspections to take place more safely and efficiently.
EIS-2.2b	This is actually the "Null or No-Action Alternative" because you are not altering the current process. The repair in Royalton involved incremental vegetation trimming and a targeted localized removal. By Canal Corp. staff accounts, that process was successful. This is more of an Ad-Hoc Alternative, adapting new processes and learning. Why isn't this type of approach included as a program alternative considered? If you honestly included this type of approach as one of the "ALTERNATIVES CONSIDERED," would it lay bare the folly of the EEIP?	1045	EIS page 2-1	The current ad-hoc process is considered in the Guide Book as an alternative, but was dismissed because it "lacks clearly defined, cohesive planning processes to ensure long-term integrity of earthen embankments." Although the Royalton project was advanced in a manner similar to the Ad-Hoc alternative, and although the repairs were successful, the intent of the EIS is to improve the process under which the earthen embankments are inspected, evaluated and maintained. The EEIP is an improvement to the process.
EIS-2.2c	"Ultimately, this alternative would address over time, the existing under-maintained conditions of the embankments. Eventually, this approach would significantly reduce the risk of embankment breaching in locations of the NYS Canal System where capital projects have been implemented." These are your words. Is this an admittance that this process along with some adjustment is very viable? "However, the public would continue to be exposed to risk of embankment breaching for a period of time..." The embankments would still be high hazard earthen embankments and the risk of breaching never goes away." Do you understand this? "This alternative would not differentiate between capital and operations..." The money would come from one source and be split into two pots, then costs would be paid by	1045	EIS Page 2-1	The Ad-Hoc Alternative, which continues a practice of non-programmatic and intermittent maintenance and repairs but is not holistic and does not provide a long-term strategy for managing and maintaining embankments.

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	money from one or both pots, but still from the original source. This is a semantic shell game not safety.			
EIS-2.2d	The regulations require that the section describing and evaluating alternatives should be at a level of detail sufficient to permit a comparative assessment of the alternatives discussed. The discussion of alternatives is lacking in this regard. While there is a passing discussion of continuation of what the NYSCC refers to as "ad hoc" inspections and removals of trees, the level of analysis as to what has historically been achieved by this very program has been omitted. The discussion and analysis cannot possibly be considered complete when the NYSCC omits the very fact that its so called "ad hoc" program it has pursued since its inception has, in fact, achieved the very goals stated in the DGEIS for the new proposed EEIP. Moreover, the comment in the DGEIS that the so called "ad hoc" approach might be less protective of the environment (DGEIS p 2-2 Sec.2.2) is unsupported and absurd. If the DGEIS is to properly evaluate the alternative that is the NYSCC's present practice, it must do so at a level of detail sufficient to permit a comparative assessment of the alternative and no simply cast the alternative aside as being potentially less protective of the environment. The description and analysis must address the many areas of environmental impact which the proposed action is anticipated to have and make a true comparison with the magnitude of the impact. For example, clear cutting will have a much more significant negative impact on habitat than will selective removal of trees and vegetation. There is simply no analysis included to allow for this necessary comparison of this alternative.	1049		In the past 10 years the Canal Corporation, on average, has experienced one earthen embankment incident per year that has resulted in closure of a section of canal or feeder and/or the reduction of navigation depths for a period of time. The Canal Corporation is presently monitoring over 300 active seeps in the 130 miles of inventoried canal embankment. Mapped embankments and seep information can be found online: https://www.nyscanalintegrity.org/program-and-maps The Ad-Hoc Alternative, which continues a practice of non-programmatic and intermittent maintenance and repairs but is not holistic and does not provide a long-term strategy for managing and maintaining embankments. The actual effects of the Ad-Hoc Alternative are that issues are identified that require costly, on-call emergency construction contracts. Emergency maintenance and repairs have disrupted NYSCC operations and causes unscheduled closures of canal system segments and trails. Staff resources under this alternative have continued to be diverted in order to respond to emergency closures impacting other important maintenance and capital projects along the canal systems.
EIS-2.2e	". . . 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.	1071	EIS Page 2-1, 2-2	Clear-cutting (Section 2.3.4 of the GEIS) was an alternative that was considered and dismissed. It is not the preferred alternative. Some items in the commenter's description of what should be done is similar to what may be done by NYSCC in its

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	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.			implementation of the Guide Book for any specific location.
EIS-2.2f	"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.	1071	EIS Page 2-2	Clear-cutting (Section 2.3.4 of the GEIS) was an alternative that was considered and dismissed. It is not the preferred alternative. The programmatic approach is designed to consider the moderate to large impacts identified during the scoping process and consistent with SEQR regulations, including 6 NYCRR 617.10 on use of Generic EIS for programmatic approach to asset management. Those impacts are identified across the entirety of NYSCC's earthen embankments so as to be no less protective of the environment.
EIS-2.3	Alternatives Considered and Dismissed			
EIS-2.3a	In Section 2, Subsection 2.3, the Paragraph starts with the word "Three" alternatives were considered, which doesn't match the fact that Section 2.3 contains FOUR well defined alternatives that were being reviewed as alternatives. The fourth alternative being the term "clear-cutting", which didn't meet all requirements set on this program. Just may want to change that 2.3 intro sentence to read *Four Additional Alternatives were considered...*	1003	EIS Page 2-1	Thank you for catching this. It has been corrected.
EIS-2.3b	An awful lot of work was put into some farfetched alternatives. However, a Membrane or cutoff walls may actually be localized solutions.	1045	EIS Page 2-2	Membranes and cutoff walls are considered Engineered Solutions that could be implemented in accordance with the EEIP Mitigation Procedure in Section 8.15 of the Guide Book.
EIS-2.3.1	Drain and Permanent Abandonment			
EIS-2.3.1a	If NYSCC/NYPA feel that strongly about the perceived risk, they could achieve the same goal by draining the canal. No water, no flood risk.	1022	EIS Page 2-3	This alternative was evaluated (Section 2.3.1) but implementing it would violate the New York State Constitution and would have significant adverse impacts on tourism and recreational uses because 80% of the Upstate population lives within 25 miles of the

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				Erie Canal. This alternative was therefore considered and dismissed.
2.3.3	Install Continuous Cutoff Walls Along Embankment Crests on Both Sides of Canals and Feeders			
EIS-2.3.3a	There could be a way to create a vertical root-stopping barrier before the earthen bank that didn't require clear-cutting.	542		Installing continuous cutoff walls was evaluated as an alternative in the DGEIS, considered and dismissed; however, cutoff walls are considered Engineered Solutions that could be implemented in accordance with the EEIP Mitigation Procedure in Section 8.15 of the Guide Book..
EIS-2.3.3b	DGEIS Page 2-6 & 2-7, Cut-off Walls Along Embankment Crests: The document outlines the alternative to install continuous sheeting, cement-bentonite or deep soil mixed cut of walls along ***both sides*** of the embankment sections at a cost between $5 Million and $17 Million per miles, with a total cost of $0.6 Billion and $2.0Billion for the entire 120 miles of embankment. Please clarify why cut off walls would be required on ***both sides*** of the canal in embankment sections) at double the cost, rather than just in the areas of vegetation slope concerns in accordance with the Embankment Maintenance Guide Book. Furthermore, the Town of Perinton would like to discuss with NYSCC the possibility of installing cut off walls in specific embankment sections where full vegetation would have dramatic visual impact (e.g. areas of over steepened embankments in close proximity to homes, public park areas, etc..)	1015		We agree with this comment. Cut-off walls would only be priced per embankment segment. Although there are locations where there are water retaining earthen embankments on both sides of the canal, the prices should have been provided on a per mile basis along an embankment (not both sides). This section has been edited to correct this information. In addition, an adjustment in total identified embankment length to approximately 130 miles was made.
2.3.3a	Why would you install a cutoff wall on both sides of the canal rather than just the earthen embankments? "Due to the high capital ... ... duration of time... ... would expose the adjacent property owners to an unsafe condition for an extended period of time." Are any embankments unsafe now? Would the CC not inspect or monitor embankments during this time?	1045	EIS Page 2-7	Cut-off walls would only be priced per embankment segment. Although there are locations where there are water retaining earthen embankments on both sides of the canal, the prices should have been provided on a per mile basis along an embankment (not both sides). This section has been edited to correct this information. In addition, an adjustment in total identified embankment length to 130 miles was made. Providing continuous cutoff walls would for approximately 130 miles of embankment would divert

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				financial and manpower resources away from other canal inspection and maintenance efforts.
EIS-2.3.4	Clear Cutting of Embankment Trees and Vegetation			
EIS-2.3.4a	If you remove all vegetation in an area, it is a "clear-cut." Zones 1 and 2a are contiguous and the intention is to clear all vegetation Zones 4 and 5 are contiguous and the intention is to clear all vegetation. These are still clear-cuts. The selective cut in Zone 2b/3 is a screen. This is a trust issue.	1045		The clear cutting of embankment trees and vegetation would return the canal embankments to the vegetated condition that existed soon after 1918. All trees and shrubby vegetation along embankments within the NYSCC right-of-way would be removed and turf would be established. Excavations to remove root balls of trees larger than 4 in. diameter at breast height (dbh) trees would be backfilled with impervious backfill material. The EEIP is markedly different in that it includes an inspection, evaluation and prioritization process and allows for some compatible vegetation to remain.
EIS-2.3.4b	"So, while clear… …the potential long term adverse effects on resources such as aesthetics, community plans and community character could be significant. Thus, this alternative is not a practicable alternative." The EEIP is a clear-cut plan in Zones 1, 2A, 4 and 5, and a culling in Zones 2B and 3. The negatives for a clear-cut are essentially the same for the proposed EEIP. Do you understand the considerable similarities and likely outcome? What would be the % loss to the 1.5 Billion tourism industry, local and state taxes and fees? Please do not use the word practicable unless you are a junior lawyer.	1045	EIS Page 2-8	The comment is acknowledged.
EIS-3	Environmental Setting and Potential Impacts			
EIS-3a	Many pictures of the original Barge Canal are shown, for reference, without trees on embankments. Should what's represented in these original photos be considered the "baseline" for what to expect after the EEIP work is completed?	21	EIS page 3-1	The purpose of the EEIP is not to return embankments to their original state, but to ensure integrity of earthen embankments.
EIS-3b	Would you please do this section over with a targeted brush and tree removal approach rather than the EEIP.	1045	EIS Page 3-1	Section 1.3 of the GEIS presents the purpose and need for the EEIP. The main purpose is public safety from potential breaches of earthen embankments. One of the needs for the EEIP is to establish a program for the management of earthen embankments that replaces

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				the current policy of managing dangerous situations on an emergency basis, which is neither cost-effective nor optimal for public safety. Limiting the program to a targeted brush and tree removal approach alone would not accomplish the purpose and need and was therefore not studied in detail.
EIS-3c	This section should contain an evaluation of all temporary construction related impacts including noise, dust and soil erosion, access and the need for temporary/permanent construction easements. Emphasis should be placed on impacts to residents in adjacent and nearby residences and to potential water quality impacts to downstream receiving waters. Suitable mitigation measures should be recommended to minimize such construction impacts.	1049		Site-specific analyses are outside of scope of the EEIP.
EIS-3d	"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 the 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 "alternative engineering solution" would be subject SEQRA review?	1071	EIS Page 3-2	As stated: When the planned activities do not fall within the parameters of the EEIP
EIS-3e	I didn't see anywhere where the extra environmental impact of maintenance was. What's the extra environmental impact of maintenance and where was it quantified?	1098		Potential impacts of maintenance activities are evaluated in the context of specific impacts such as noise, in the GEIS.
EIS-3e	There was a statement in the Full Environmental Assessment Form, Section D 2.B, where you talk about if chemical herbicide treatments will be used specified product, and it says to be determined. So, my understanding is you started this process four years ago, and you don't know what products you're going to use for chemicals or herbicides, right? Or if you do know it hasn't been written down. So, with that, that's the last of the questions I have.	1099		As stated in the Maintenance Best Practices, NYSDEC refers to pesticides and herbicides collectively as pesticides and their application is regulated. The use of pesticides for vegetation removal must be reviewed and approved by the Director of Environmental Health & Safety. The selected herbicide, when used, is

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				informed by the type of vegetation to be removed, proximity to water, and other factors.
EIS-3.2	Land			

EIS-3.2a	Commenters provided information on the value of root structures of trees in stabilizing slopes, preventing soil erosion and preventing nutrient loading in waters downhill of the slope. Other details include the concern that grass will not stabilize steeper slopes, potential for mudslides, sediments entering the canal and needing to be dredged, Some refer to "science" and even to agencies such as the U.S. Army Corps of Engineers as substantiating their claims.	20, 29, 61, 63, 81, 99, 100, 102, 125, 132, 148, 154, 155, 157, 162, 174, 195, 196, 202, 205, 206, 208, 209, 211, 222, 228, 248, 275, 277, 278, 287, 288, 289, 297, 315, 337, 351, 364, 359, 372, 385, 422, 432, 437, 453, 514, 535, 537, 556, 569, 574, 577, 580, 596, 597, 602, 613, 654, 671, 672, 675, 683, 686, 714, 721, 734, 747, 765, 778, 848, 854, 859, 902, 917, 992, 988, 1008, 1012, 1025, 1066, 1078, 1096, 1103, 1105		The potential for impact in performing work on embankment slopes is acknowledged in Section 3.2.2 of the GEIS. This impact would be minimized using appropriate erosion control measures until the slopes are stabilized with new vegetation. No slopes would be left void of vegetation. The nutrient storage function in soils would be taken up with the new embankment vegetation. Most EEIP activities will take place on the outboard slopes of earthen embankments. Those slopes do not drain into the canal. Numerous comments relate to the root systems of trees and other plants providing stability to embankments, and the reduction of runoff compared with bare soil surfaces. While these statements are true in general of slopes that do not retain water, they do not address the instability of embankments containing water, which are subject to seepage. (Section 1.1 Project Background). Uncontrolled breaches of canal embankments could result in damage to life and property. The NYSCC did review a number of scientific papers on the role of trees in soil stability and found evidence of both positive and negative effects of trees on slope stability, most citing that more research is needed. These studies include: • The Influence of Plant Root Systems on Subsurface Flow: Implications for Slope Stability • Assessment of grass root effects on soil piping in sandy soils using the pinhole test

				• Sediment detachment in piping-prone soils: Cohesion sources and potential weakening mechanisms • Ecological mitigation of hillslope instability: ten key issues facing researchers and practitioners A full reference of documents reviewed in support of the EEIP can be found in Section 6 of the GEIS and Section 12 of the Guide Book. Federal and State dam safety agencies require that trees not be allowed on earthen embankment dams or levees because the root systems provide seepage paths that can lead to embankment failure. Agencies require that earthen embankments be vegetated with turf and be maintained in good condition. As discussed in Sec. 3.2.2 and in Figure 3.2-2, the EEIP would generally remove trees and brush in Zones 1,2A 4 and 5 of the embankment and replaced with turf. Trees greater than three inches in diameter at breast height would have root balls removed and backfilled. Smaller trees would be cut off flush with the ground. Supplemental plantings may be used in Zones 2B and 3 (upper third of outboard slope). These would include Vegetative Screen Plantings (non-woody plants with shallow root systems and maximum mature height of 12 ft.) or pollinator plantings (non-woody, erosion resistant, provide food and shelter for pollinators, and mowed once per year).

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	In many places trees (not huge) are used to stabilize embankments. If the huge trees were removed individually, the danger of undermining the banks would be reduced.	577		The comment is acknowledged.
EIS-3.2d	What about homes that will be fully exposed with extensive clear cut of trees? Won't that affect their property with water issues that bank used to absorb?	337		An analysis in Section 3.2 of the GEIS shows runoff rates for different ground covers on embankments indicates that implementation of the EEIP would increase surface runoff to the historic rate when the embankments were constructed, if restored with a turfed surface. If the outboard slope was changed to 50% turf cover and 50% stone blanket drain, the runoff would generally increase. The amount of runoff would depend, in part, on the surface area of the different ground cover types. Where blanket drains are constructed, they would provide additional infiltration. The analysis summarized that there would be no significant increase in peak runoff flow or volume beyond the embankment limits due to construction of turf and the porosity of the blanket drains. Individual projects would be designed such that runoff is not diverted to damage adjacent properties and would ideally be conveyed in a swale along the toe of slope to a watercourse.
EIS-3.2e	Commenters point to trees used to help stabilize shorelines, relating this practice to question the destabilizing effects of trees on earthen embankments.	358, 541, 552, 669		See response to EIS-1.3.1a and EIS 3.2a. The EEIP does not address soils along banks affected by wave action, but rather earthen embankments in need of maintenance. A lakeshore application where trees and vegetation are beneficial and there is wave action is different from a raised, water retaining earthen embankment where stone fill protects the inboard side against wave action, and the critical concern is to protect the embankment against destabilization due to seepage.

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EIS-3.2f	Concern was expressed that heavy equipment used to remove vegetation could cause serious harm to the integrity of the embankment, including causing a breach and flooding.	63, 100, 105, 374, 493, 618, 940, 1049		The potential for impact in performing work on embankment slopes is acknowledged in Section 3.2.2 of the GEIS. This impact would be minimized using appropriate erosion control measures until the slopes are stabilized with new vegetation. No slopes would be left void of all vegetation. The concern for potential erosion paths during construction activity is also acknowledged in Section 3.2,2, which is why work such as stump removal and backfill would be scheduled during the non-navigation winter season when the canal is drained, and the water surface levels are low. Section 3.3.2 of the GEIS states that all embankment repairs and vegetation management work would be done in full compliance with New York State regulations for excavations, stormwater management, and erosion and sediment control. Embankment excavation and earthwork will be performed during the non-navigation season when water has been drained from the canals and feeders.
EIS-3.2g	Some comments were concerned that tree roots left in the embankment would rot and destabilize the soil further.	549, 758, 834		The Best Management Practice for Tree and Brush Removal specifies that all roots from all trees > 3" DBH are to be removed down to a diameter of no greater than one inch, and backfilled with suitable approved compacted embankment material.
EIS-3.2i	Trees preserve soil integrity and soil diversity	598		The comment is acknowledged.
EIS-3.2m	Particular attention should be focused on an evaluation of the erosion potential of soils and mitigation measures necessary to control it during and following clearing activities. This should include a detailed discussion of soil erosion control measures which will be	1049		Section 3.2 of the GEIS includes a discussion of erosion control measures to be taken, including reference to the *New York State Standards and Specifications for*

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	taken to avoid discharge of sediment to off-site, downstream receiving waters. These measures should be in compliance with current stormwater and erosion control guidelines. Any proposed development within a Town of Brighton's Steep Slope, Watercourse and Woodlot EPOD must be identified and detailed provisions for disturbance within the EPOD's discussed. Detailed mitigation measures that address all adverse impacts must be presented and discussed.			*Erosion and Sediment Control*, widely known as the *Blue Book*. The *Blue Book* provides standards and specifications for the selection, design and implementation of erosion and sediment control practices for the development of Erosion and Sediment Control Plans for the SWPPP, which is needed for coverage under the NYSDEC State Pollutant Discharge Elimination System (SPDES) General Permit for Stormwater Discharges from Construction Activity.
EIS-3.2.1	Land: Environmental Setting			
EIS-3.2.1a	What is the source for "the typical canal prism" dimensions? "When canal and feeder embankments were originally constructed, the outboard slope was typically turf covered..." What is the source for this statement? "Over the course of about ... tree-covered, with root systems that create seepage paths..." What is the source of this statement? Do trees impair the regularity or the inspection of "impair their regular inspection?" Do trees prevent inspection? How much time does it take to inspect a grass covered embankment? How much time does it take to inspect a grass covered embankment when the grass has not yet been cut? Do trees provide hand holds on an embankment?	1045	EIS Page 3-4	The first paragraph of this section describes typical sections shown in a document entitled "New York's Canals & Connecting Waterways" Published by New York State Department of Transportation. Circa 1992. The reference will be added to this section. Canal construction plans and photographs of the recently completed construction circa 1910, show the 1918 Barge Canal expansion canal embankment slopes. Tree root systems create seepage paths in embankments containing water. This is discussed in *Synthesis of Levee Vegetation Research Results (2007–2014),* F. Douglas Shields for the California Levee Vegetation Research Program, among other sources. The 2017 guide document *Canal Operation and Maintenance: Vegetation*, published by the US Bureau of Reclamation states that overgrown vegetation can obscure canal embankment and prism slopes, making it difficult to perform visual inspections and detect issues such as seepage, boils, cracking, sinkholes, settlement, displacement, deflection, and animal burrows,

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EIS-3.2.1b	"See Figure 3.2-1 for historic photos of canal embankments when recently constructed, circa 1910. Note the absence of tree cover along the embankments." Note the absence of color. The canal was also unwatered when built. It takes years for trees to grow. Were any trees intentionally planted along the Barge Canal soon after completion for aesthetic purposes? Did the engineers for the Barge Canal understand the value of trees for soil stabilization?	1045	EIS Page 3-5	The comment is acknowledged.
EIS-3.2.1c	"The EEIP would require… … damaged linings, inadequate drainage, installing instrumentation, repairing surfacing…" Several of these actions seem to be in conflict with other statements that exclude such activities. Is "correcting embankment geometry deficiencies" a modification to original constructed geometry?	1045	EIS Page 3-6	Correcting embankment deficiencies will be performed by using Best Maintenance Practices referred to in the Guide Book.
EIS-3.2.1d	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. 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: [See Comment]	1071		The NYSCC did review a number of scientific papers on the role of trees in soil stability and found evidence of both positive and negative effects of trees on slope stability, most citing that more research is needed. These studies include: • The Influence of Plant Root Systems on Subsurface Flow: Implications for Slope Stability • Assessment of grass root effects on soil piping in sandy soils using the pinhole test • Sediment detachment in piping-prone soils: Cohesion sources and potential weakening mechanisms • Ecological mitigation of hillslope instability: ten key issues facing researchers and practitioners A full reference of documents reviewed in support of the EEIP can be found in Section 6 of the GEIS and Section 12 of the Guide Book.

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				Of the approximately 20 references included in the 2009 review by Dr. Gray (greenbeltconsulting.com), most are also in the USACE document *Literature Review – Vegetation on Levees* December 2010. Dr. Gray also contributed to the USACE review. Briefly summarized, the 2009 review presents these observations: • Forested slopes are more stable than the same slopes after clear cutting • Tree roots and vegetation contribute to levee stability, as noted for sandy soils. • Hydraulic fracturing can occur in earthen embankments or dams • Root reinforcement can improve streambank stability There is no question that there are beneficial effects of tree roots for slope stability as noted in the 2009 review. However, these findings are not directly applicable to conditions at the Canal embankments because: • A clear cut forested slope is much different than a water containing earthen embankment. • It is likely that the studied clear cut areas did not have revegetation measures applied. • Levees are subject to water loading for periods of only a few days to a few weeks a year vs. 6 months a year for Canal embankments. • The Canal earthen embankments are subject to internal seepage flow • Slope stability for stream bank erosion is a concern for the river side of levees, but the inboard slopes of Canal embankments are

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				protected with stone fill against the limited wave and current action in the Canal. The 2010 USACE levee literature review listed several issues and data gaps for further study of woody vegetation on levees: • The influence of woody vegetation on habitat (i.e., animal burrows), and the interaction of these specific habitats on levee integrity should be studied. • The effect of woody vegetation on maintenance, inspection and flood-fighting should also be considered. • Scientific and engineering principles should support guidance addressing woody vegetation on levees. • Another topic that should be further investigated is the effect of tree root decay and tree throw-down (the hole remaining after a tree has been uprooted) on seepage and levee stability. The studies cited in the 2009 literature review provided in the comments are interesting but do not present a compelling, science-based rationale for changing existing policy regarding the removal of trees from water-containing earthen embankments (not levees). The NYSCC will continue to evaluate further scientific research as it becomes available.
3.2.2	Land: Potential Impacts of Proposed Action			

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EIS 3.2.2a	Has there been a scientific review of "...soil boring and piezometer records available for portions of the western embankment or obtained in connection with planning EEIP activities"? Does the NYSCC have access to historic "...embankment design records"? Will embankments be modified to meet current "...engineering references regarding proper slope of embankments, soil types, vegetation, and other engineering solutions (including drainage)"? "Impermeable soils would be used to restore embankments and to fill stump holes." Will "Impermeable soils" be used on the outer slopes? Will "Impermeable soils" be used to modify outer slopes to 3 to 1 slopes?	1045	EIS Page 3-6	In the development of embankment projects under the EEIP, NYSCC and NYPA has and will utilize all embankment historic record drawings, soil borings, piezometer and other records. Embankments will be modified to correct the present deficiencies as identified as part of the ongoing inspection program within the confines of the existing lands owned by the NYSCC. Impermeable soils will be used but all work performed under the EEIP, will be performed within existing lands owned by NYSCC.
EIS 3.2.2b	"As an example, in 2019, Bergmann and McMahon & Mann Engineers conducted subsurface explorations..." What was the scope of this? What was the process? Is there a report that details this information? "Water levels in the embankment with the canal full are lower than expected for a homogeneous embankment..." What is the source of information for expected water level? Does the data support the previous statement, "Indications of seeps at or above the toe of existing embankments would indicate high ground water table on the adjacent lands"?	1045	EIS Page 3-7	While the comment is out of scope, NYSCC conducts studies on the earthen embankments on a continuous basis in order to better understand current conditions, identify potential areas of concern and design mitigation projects to reduce magnitude of identified risks. Data and reports can be requested through the Freedom of Information Act. Please note, that some information may not be released or released in a redacted format if it is determined to be sensitive to protecting public safety.
EIS 3.2.2c	What is the extent of current water table data for earthen embankments? What are the "...other embankment conditions that compromise the integrity of the embankments"?	1045	EIS Page 3-8	NYSCC conducts studies on the earthen embankments on a continuous basis in order to better understand current conditions, identify potential areas of concern and design mitigation projects to reduce magnitude of identified risks. Data and reports can be requested through the Freedom of Information Act. Please note, that some information may not be released or released in a redacted format if it is determined to be sensitive to protecting public safety.

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				Other embankment conditions that compromise integrity may include, but not be limited to, the following: poor soil conditions from original construction, erosion from concentrated flow, and voids created by uprooted trees.
EIS 3.2.2d	Chapter 3, Page 9 Change in Vegetation Cover… seems the bottom line is the 3" rule. Smaller than 3", shallow rooting vegetation can stay, everything else is cleared and marked or removed if larger than 3" trunks. Won't most of what's left eventually reach the point where it would qualify for removal? Seems maintain "grass" is always less expensive than "bushes & shrubs"…why keep them?	21	DGEIS Section 3.2 page 3-9	Vegetation less than 3" diameter as breast height would be removed as needed to facility embankment inspections. Please refer to Figure 8-1, EEIP Mitigation Procedure, in the Guide Book.
EIS 3.2.2e	Chapter 3, Page 13, First sentence states that outboard slopes are typically on a 1.5 to 1 slope, when they need to be more like 3:1 ratio of run to rise. Has NYPA of the Canal Corporation folding the INBOARD slope inward, to gain the ratios needed? Can the Barge Canal operate in some sections, at a 8' depth, and if so, would restoring it to an earlier Erie Canal width make more sense? One is an additive constructive process costing more, the other is a Redistributing process which will make best use of current materials.	21	DGEIS Section 3.2 page 3-9	The existing Canal cross section is required for water retention purposes. Significant water level reductions were evaluated (Section 2.3.1) but implementing it would violate the New York State Constitution and would have significant adverse impacts on tourism and recreational uses because 80% of the Upstate population lives within 25 miles of the Erie Canal. This alternative was therefore considered and dismissed.
EIS-3.2.2f	Figure 3.2-2. Where did the zones come from? Where did zone 2a and 2b come from? The example diagram shows a 16 foot crest. Where would the zones 2a and 2b fall on a 24 foot crest, a 50 foot crest? Where does zone 4a come from?	1045	EIS Page 3-9	The zones are based on FEMA/ACOE guidance. They have been modified based on construction details of canal embankments and engineering judgement to allow some woody vegetation to remain and to maintain the ability to inspect and respond to changes of embankment conditions (e.g., seeps)
EIS-3.2.2g	"For trees greater than 3 inches DBH, the roots would be removed to avoid hazards caused by seepage through the root system." What evidence is there of seepage caused by root system?	1045	EIS Page 3-10	Presence of seeps. Initial fertilization may be required to establish turf grass in accordance with the Best Management Practices in the Guide Book. However, long

Subject Number	Subject/Comment	Comment Numbers	DGEIS/Guide Book References	Response
	What quantity and what composition of "fertilizing" would be applied? What is the yearly cost of "fertilizing"? Is mowing "normal wear and tear"? Does turf seeding not resist "normal wear and tear" such as mowing? Will additional plantings to supplement screening occur in Zone 3 for the completed sections such as Brockport, Holley etc.?			term/ongoing fertilization of the turf grass is not desirable. Question 4 appears project-specific and not part of the EEIP
EIS-3.2.2h	"The drainage blanket may be covered either with soil and turf or with gravel fill." Are these standard practices for drainage blankets? Will gravel fill be a finish surface for any embankment outer slopes? How does a berm improve embankment stability.?	1045	EIS Page 3-11	In areas where aesthetic resources have been identified the use of drainage blankets with soil and turf cover are preferred. A berm constructed at a flatter slope improves embankment stability by creating a greater mass to resist the hydraulic force due to seepage.
EIS-3.2.2i	Have on-site evaluations been used to determine "typical" slopes? "Embankment slopes maintained or repaired under EEIP activities would be the same slope or flatter." Were "engineering investigations" used to determine if there was seepage at the embankments modified in the completed project areas in Brockport, Holley etc.? Why would the outboard slope be flattened but not the inboard? Where does a piping event originate? "Note that replacement of tree cover with turf represents a restoration of original turf conditions when the canal and feeder embankments were constructed between 1910 and 1920." What documentation is there for "original turf"?	1045	EIS Page 3-13	Flattening of inboard slope would result in reduced navigation channel. Piping is seepage flow in embankments that is increased due to the presence of channels or preferential flow paths within the soil mass. Causes of piping may include tree roots, animal burrows, water flowing along an impermeable surface, poorly compacted backfill and settlement. Appendix B notes that piping through the embankment is the most likely cause of embankment dam failure.
EIS-3.2.2j	What documentation is there for "stormwater and drainage facilities" during the 1910-1920 rebuild? What were the "stormwater and drainage" "engineering standards" of that time"?	1045	EIS Page 3-14	Stormwater and drainage practices utilized in the early 1900's is outside scope of the GEIS. Stormwater runoff

Subject Number	Subject/Comment	Comment Numbers	DGEIS/Guide Book References	Response
	"In summary, there would be no significant increase in peak runoff flow or volume beyond the embankment limits due to construction of turf and blanket drain embankment ground cover." Is this statement comparing assumed 1920 condition vs proposed EEIP condition? Is this statement comparing the existing tree cover condition vs proposed EEIP condition?			evaluations are completed using applicable modern methods.
EIS-3.2.2k	"Indirect Impacts No indirect impacts are anticipated for the EEIP activities." Was this section skipped? Were there any impacts that were considered and dismissed? Does an adverse tourism impact fall into this category?	1045	EIS Page 3-16	The Final Scoping Document for the Earthen Embankment Integrity Program identified potential environmental impacts.
EIS-3.2.2l	Have any seeps been identified on slopes that have been converted to turf or where the slope has been flattened? How many emergency repairs have occurred each year during the navigation season? 3.2.4 Mitigation "Supplemental plantings are non-woody, with shallow root systems and a maximum mature height of 12 feet." What plants qualify for "shallow root systems and a maximum mature height of 12 feet"? What is the source for this information?	1045	EIS Page 3-17	In the past 10 years the Canal Corporation, on average, has experienced one earthen embankment incident per year that has resulted in closure of a section of canal or feeder and/or the reduction of navigation depths for a period of time. A list of compatible vegetation is included in the Guide Book Best Management Practices.
EIS-3.2.2m	What "best practices for embankment repair and vegetation management", will be used other than "New York State Stormwater Management Design Manual... ...and the Blue Book"? Who decides which best practices to use? Are earthen embankments different from water impounding earthen embankments and, are there different best practices? "...Previous canal repair areas..." What does canal repair mean? Are there different meanings for "repair"? Are "embankment prisms" not part of the embankment?	1045	EIS Page 3-18	Appropriate guidance documents to achieve regulatory requirements are discussed in the GEIS.
EIS-3.2.3	Potential Impact of Alternatives			
EIS-3.2.3a	Statement 3-17:	1071		The project- by- project approach could result in the removal of the same number of trees as the EEIP

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	"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.			approach as well as greater cumulative impacts due to the uncoordinated nature of project progression
EIS-3.3	Geological Features and National Natural Landmarks			
EIS-3.3.3	Geological Features – Potential Impact of Alternatives			
EIS-3.3.3a	"....Ad-Hoc Alternative, the maintenance would be commenced when conditions become unsafe..." This statement contradicts the description of the Ad-Hoc Alternative.	1045	EIS Page 3-24	Comment acknowledged.
EIS-3.4	Surface Waters and Wetlands			
EIS-3.4a	Pesticides (Includes Herbicides). It is ridiculous to clear cut, then plant grass, then use pesticides to keep the weeds down. We need to decrease the use of pesticides rather than increase them, especially along a waterway.	538		Section 3.4 of the GEIS cites the NYSDEC in pointing out benefits of pesticides when properly used. Section 3.4.2 states that the NYSCC does not have a policy to apply pesticides to all embankment areas on a routine basis. Instead, the NYSCC Operations Manager makes the decision to use pesticides based on the need, on effectiveness and on consideration of potential environmental effects. When pesticides are used, they are used only by licensed, certified applicators who apply the products in strict conformance with manufacturer's instructions and NYSDEC regulations. The use of pesticides is also covered in Section 3.7 and 3.14 of the GEIS.
EIS-3.4b	I'm concerned about the "pesticides" you plan to use "as needed". Many of these herbicides and insecticides are "forever chemicals" that more enlightened countries have banned because of their dangers. I believe we have a right to know exactly what poisons you intend to spread in/over our environment. What chemicals, specifically, are in your arsenal?	950		Section 3.4 of the GEIS cites the NYSDEC in pointing out benefits of pesticides when properly used. Section 3.4.2 states that the NYSCC does not have a policy to apply pesticides to all embankment areas on a routine basis. Instead, the NYSCC Operations Manager makes

Subject Number	Subject/Comment	Comment Numbers	DGEIS/Guide Book References	Response
				the decision to use pesticides based on the need, on effectiveness and on consideration of potential environmental effects. When pesticides are used, they are used only by licensed, certified applicators who apply the products in strict conformance with manufacturer's instructions and NYSDEC regulations. The use of pesticides is also covered in Section 3.7 and 3.14 of the GEIS.
EIS-3.4c	The DEIS could note on page 3-29 that applications of pesticides within 100 feet of wetlands requires an Article 24 permit in addition to the requirements in Section 33 of the ECL.	1075		This has been added to the discussion of Article 24 in Section 3.4 of the GEIS.
EIS-3.4d	The DEIS should recognize that in addition to regulating protected streams, ECL Article 15 regulates excavation and fill in navigable waters such as the canal (3-27 of the DEIS).	1075		This has been added to the discussion of Article 15 in Section 3.4 of the GEIS.
EIS-3.4e	This permit could be used as a template with a list of authorized activities added – since it would not be project specific.	1075		See also Guide Book-8.3a
EIS-3.4f	Shaded waterways are important from maintaining water quality. Removing the trees will only cause the waterway to warm and increase the prevalence of Harmful Algal Blooms that continue to increase in frequency along the canal.	203		The following has been added to the Final GEIS: Removal of tree vegetation resulting in the loss of shade to surface waters: Removing shade from along surface waters could cause the water to warm, which could cause stress on aquatic species. Most earthen embankments where vegetative maintenance would occur are located on the outboard slopes, which would not shade water. Furthermore, the EEIP only applies to earthen embankments which comprise approximately twelve percent of system. In general, only embankments on the south side have potential to significantly shade the canal which further reduces the potential for impacts. Therefore, the frequency of such an impact would be at a negligible magnitude.
EIS-3.4.2	Surface Waters – Potential Impacts of Proposed Action			

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EIS-3.4.2a	Does the NYSCC have a pesticides use policy? This is problematic. "Implementation of the EEIP is not anticipated to increase the frequency of use of pesticides or in the way they are used." What happens when the Operations Manager chooses to use pesticides frequently? Therefore, due to the infrequent use… …there would not be a significant impact…"? The EEIP needs to specify no increase in use otherwise the assumption is baseless.	1045	EIS Page 3-32	Canals does not have a pesticide use policy. As stated in the Maintenance Best Practices, NYSDEC refers to pesticides and herbicides collectively as pesticides and their application is regulated. The use of pesticides for vegetation removal must be reviewed and approved by the Director of Environmental Health & Safety. The selected herbicide, when used, is informed by the type of vegetation to be removed, proximity to water, and other factors.
EIS-3.5	Groundwater			
EIS-3.5.2	Groundwater – Potential Impact of Proposed Action			
EIS-3.5.2a	"NYSCC uses pesticides to control vegetation in areas where mowing or other control measures are difficult or dangerous." What is the definition of difficult? What are locations considered difficult?	1045	EIS Page 3-39	Comment acknowledged.
EIS-3.5.2b	"None of the anticipated activities performed under the EEIP by themselves are anticipated to alter groundwater levels to an extent that approaches that of the seasonal water fluctuations caused by canal filling and emptying." Is there data from the completed sections in Holley etc. to support this conclusion? "At times, changes to groundwater elevations in an adjacent well or to drainage around or into basements may seem to coincide with EEIP activities, but the magnitude of such changes are expected to be insignificant because the magnitude of groundwater level changes at the canal right-of-way are also expected to be insignificant." Is this an assumption based on an assumption?	1045	EIS Page 3-41	Comment acknowledged.
EIS-3.5.2c	"Conclusion The potential for impacts resulting from EEIP activities on groundwater levels and contamination outside the canal right-of-way are expected to be insignificant." This conclusion is not supported.	1045	EIS Page 3-42	Comment acknowledged.
EIS-3.5.4	Groundwater - Mitigation			

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EIS-3.5.4a	As discussed above in Section 3.4.4, the potential contamination of groundwater would be minimized by following all NYSDEC pesticide regulations (which also cover herbicides), manufacturers regulations, and using proper application and disposal methods. See also the discussion in Section 3.7.4." Following regulations, and using proper application and disposal methods only affects specific application sites. Widespread use can significantly increase contamination. Therefore increased use, even if used correctly, can increase contamination.	1045	EIS Page 3-43	Comment acknowledged.
EIS-3.6	Floodplains			
EIS-3.6a	How does the EEIP relate to the EPA study of the flood plains in the Upper Hudson? Is there any area of the Upper Hudson that impacts more than others?	3		There are no earthen embankments on the Hudson River with the exception of a short east & west section immediately north of the Lock C6. The two studies are separate: The EEIP evaluates Canal Embankment maintenance and has no impact on the topic of the EPA fact sheet which is PCB contamination of the Upper Hudson River.
EIS-3.6b	Does the EEIP allow "engineering judgment" as a substitute for "through hydraulic analyses or the extent of rise in Base Flood Elevation"?	1045	EIS Page 3-45	Engineering judgment is based on a review of the technical findings and analyses.
EIS-3.6c	All areas located within designated floodways and/or floodplain areas should be identified and suitable mitigation measures proposed, if necessary.	1049		Prior to construction, project-specific hydraulic analyses will be performed for floodplain or floodway areas potentially affected, and suitable mitigation measures identified. This EEIP is a programmatic evaluation.
EIS-1.3.1r	A commenter asked if people in inundation areas should carry Flood Insurance.	21, 1089		Comment acknowledged.
	A commenter posed that clearcutting can destroy ecological buffers zones which reduce the severity of flooding by absorbing and holding water.	501		Replacement of existing vegetation with turf on the outboard slope of the embankments would result in the same runoff as the original turf covered embankments. For the condition where existing vegetation is replaced with 50% turf and 50% stone drainage blanket, the increase in peak runoff would be 0.3 gallons per minute per linear foot of embankment.,

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				or less than the pore volume of the embankment. No significant increase in peak runoff flow or volume beyond the embankment limits. The change would therefore not contribute to flooding.
EIS-3.6.2	Floodplains - Potential Impacts of Proposed Action			
EIS-3.6.2a	How does "removing brush and trees... ...maintain embankment integrity"?	1045	EIS Page 3-46	Federal and State dam safety agencies require that trees not be allowed on earthen embankment dams or levees because the root systems provide seepage paths that can lead to embankment failure. Agencies require that earthen embankments be vegetated with turf and be maintained in good condition. See Section 1 of the Guide Book.
EIS-3.6.3	Floodplains – Potential Impact of Alternatives			
EIS-3.6.3a	The ECNA has calculated, using NYSCC water flow rates, that in a canal breach the origin and all parts downstream will see 66 million gallons of water escaping before the water can be stopped. This can occur in many sections where embankments live, it all depends on Guard Gate Locations, and if they work when used. Brockport GG failed recently causing the one in Holley to be used, adding even more water in a breach event.	21	EIS Page 3-49	Comment acknowledged.
EIS-3.6.3b	Again, "while under the Ad-Hoc Alternative, the maintenance would be commenced when conditions become unsafe" conflicts with the Ad-Hoc Alternative.	1045	EIS Page 3-49	Comment acknowledged
EIS-3.7	Ecology (Plants and Animals)			
EIS-3.7a	Comments assert that the action would adversely affect ecosystems, flora and fauna, or cause fauna to move.	11, 15, 17, 156, 289, 293, 299, 315, 366, 380, 382, 501, 547, 565, 566, 570, 573, 579, 580, 581, 582, 595, 598, 669, 680, 747, 840, 844, 857, 909, 912, 917, 953, 957, 974, 986, 989, 992, 994, 997, 1007,		Please refer to the GEIS for discussions of Environmental Setting and Potential Impacts (Section 3) and Unavoidable Adverse Impacts (Section 4). Section 8.2 of the Guide Book addressed Rare, Threatened and Endangered Species. All practices follow NYS Codes, Rules, and Regulations: **6 NYCRR Part 18**

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		1049, 1059, 1069, 1097		
EIS-3.7b	Removing brush and trees along the canal, reduces the connectivity of habitat corridors for wildlife. Reduces diversity. Oaks for example are host to hundreds of species of moths and butterflies, which are critical food sources for migrating birds and other animals. The turf grass that has replaced embankment trees along some parts of the canal are host to none.	61, 63, 222, 276, 393, 407, 408, 420, 851, 859, 1008, 1012, 1058, 1062		Please refer to the Guide Book, Sections 7 & 8 and Best Management Practices, Section 2 which includes Pollinator Plantings where appropriate. Section 8.2 of the Guide Book addressed Rare, Threatened and Endangered Species. All practices follow NYS Codes, Rules, and Regulations: **6 NYCRR Part 18**
EIS-3.7c	Trees help to mitigate invasive plant species. What is the plan for not letting invasive plants fill in these sensitive areas? Should replace at least some of the abundant invasive species (e.g., tree-of-heaven, buckthorn, bittersweet vines) with various native trees (e.g., oaks, maples, cherries).	286, 488, 615, 859, 994, 1062		Please refer to the Guide Book Section 8.5 - Control of Invasive Species for additional information on how invasive species will be managed.
EIS-3.7h	There is concern regarding the use of chemicals to kill vegetation and the potential impacts to animals and people.	78, 224, 315		Pesticides are only applied by certified applicators in accordance with all regulations. Use of pesticide is limited to: invasive species control; control of vegetation where mechanical means is not practical or safe; and in the establishment of pollinators. As stated in the Maintenance Best Practices, NYSDEC refers to pesticides and herbicides collectively as pesticides and their application is regulated. The use of pesticides for vegetation removal must be reviewed and approved by the Director of Environmental Health & Safety. The selected herbicide, when used, is informed by the type of vegetation to be removed, proximity to water, and other factors.
EIS-3.7k	I under that Bats mate during this time of year and it is of general rule/ conservation efforts, that trees are not removed during this time. According to the NYS DEC tree	474		Removal of woody vegetation would occur during the non-navigation season (November – March). All woody

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	cutting is the primary action that may harm bats. Bats are crucial to our biodiversity and ecosystem. So why are you cutting now and not during the hibernation season?			vegetation removal would be completed in accordance with NYSDEC or USFWS guidelines for Rare, Threatened & Endangered species. See also Section 8.2 of the Guide Book.
EIS-3.7j	Wildlife will relocate and this is added to other construction/development projects in the area. Wildlife have no place else to go.	219, 225, 520, 1058, 1093		Comments acknowledged.
EIS-3.7l	The project will remove pollinators. It would be a problem for pollinators.	63, 591, 747, 994, 1062		Please refer to the Guide Book, Best Management Practices, section 2 which includes Pollinator Plantings where appropriate.
EIS-3.7m	The loss of shade from trees on the canal cause a rise in water temperatures and a lowering of dissolved oxygen which will affect fish.	655, 827		The EEIP only applies to earthen embankments which comprise approximately twelve percent of system. In general, only embankments on the south side have potential to significantly shade the canal which further reduces the potential for impacts.
EIS-3.7o	I appreciate the medicinal plants and have seen the exploitable vulnerable species Sanguinaria canadensis. This will detrimentally impact fungal species in the soil that keep other plants that aren't clear cut healthy.	690		Comment acknowledged.
EIS-3.7r	Why is a tree under 3" any less a tree? Where do you think the bigger trees come from? Cutting trees under 3" is clear-cutting by attrition. BTW- The DEC internal guideline about this was struck down by NY's highest court last week. A tree is a tree.	823		For the purposes of the EEIP the 3" DBH measurement serves as a useful delineation between vegetation that would require stump and root removal vs vegetation that would not require stump and root removal. In addition, there is no practical difference between brush and trees <3" diameter at breast height (dbh) from the perspective of embankment inspection as both prevent effective inspections activities and are unlikely to provide an aesthetic resource.
EIS-3.7s	How does removing vegetation achieve a "high level of safety"? Is the "original engineered configuration" documented? Is the "original engineered configuration" unsafe? Is the "original engineered configuration" durable? Has the "original engineered configuration" lasted 100 years?	1045	EIS Page 3-51	The original embankment configuration was designed and built according to the accepted engineering standards of 100+ years ago. Original calculations are unavailable. The Canal earthen embankments are now an existing resource to be maintained in a safe

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				operating condition for the residents of New York State. Vegetation management, flattening slopes and improving drainage are all engineering solutions that are available to address specific problem areas identified through regular inspections. The EEIP is the program that identifies and implements appropriate solutions for the Canal earthen embankments.
EIS-3.7.2	Ecology – Potential Impacts of Proposed Action			
EIS-3.7.2a	Statement 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.	1071	EIS Page 3-62	NYSCC disagrees and has based its decision-making on professional guidance and its risk analysis.
EIS-3.7.2b	If "The primary purpose of the vegetation-free zone is to "provide a reliable corridor of access to, and along, levees, floodwalls, embankment dams, and appurtenant structures." then does that mean there are not integrity issues associated with woody vegetation?	1045	EIS Page 3-62	The quote in the comment is from the Army Corps of Engineers. The NYSCC believes, consistent with the ACOE's guidance, as well as other professional guidance documents, that there are earthen embankment integrity issues associated with incompatible vegetation. See USACE ETL 1110-2-583, Guidelines for Landscape Planting and Vegetation Management at Levees, Floodwalls, Embankment Dams, and Appurtenant Structures, *[USACE, 2014]*.

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EIS-3.7.2c	"According to the Guide Book, all not compatible vegetation must be removed form 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.	1071	EIS Page 3.63	Sections 7 and 8 of the Guide Book have been revised to clarify where non-compatible vegetation may be allowed to remain. If no thresholds are triggered trees will on be retained on embankments if a sufficiently sized zone 2B exists (i.e., planting berm). If community thresholds are triggered the Canal Corporation will develop a minimum of two alternatives for review and selection by the community. In the event no alternative is selected either five years of enhanced monitoring with no tree removal or a separate engineered solution would be implemented.
EIS-3.7.2d	Does "Turf grass… …prevent the establishment of invasive species"? Does turf grass Turf grass of a "desired maximum 12-inch height" impede inspection?	1045	EIS Page 3-63	Properly maintained turf grass would inhibit the establishment of most invasive plant species. Turf grass of 12" height would not impede inspections.
EIS-3.7.2e	"Although the proposed action would cause loss of existing woody vegetation, the width of 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.	1071	EIS Page 3.-64	The assertion made by the comment is not correct. The widest point of the Great Embankment is approximately 192 feet.
EIS-3.7.2f	"…landscape is heavily developed due to human activities and lacks lands that can be considered as suitable habitat for plants and animals of any species." Is suburban development unsuitable "for plants and animals of any species"?	1045	EIS Page 3-65	Comment is outside the scope of the EEIP.
EIS-3.7.2g	"Water temperatures in the canal were collected in several locations including Medina, Eagle Harbor, Albion, and Holley during July and August of 2020." Were water temperatures recorded before the clear cut in those areas? What in the impact on local fishing?	1045	EIS Page 3-67	The temperatures were not measured in any areas where tree removal took place. In context of the paragraph, the measurements were cited to indicate the ambient temperature of the canal.
EIS-3.7.2h	"Indirect impacts caused by EEIP maintenance activities include the potential for a minimal increase in canal water temperatures and the spread of invasive species."	1045	EIS Page 3-68	The quote is taken out of context. The DEGIS discusses indirect impacts, including the spread invasive species

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	Where is the temperature increase detailed? Is the spread of "spread of invasive species" a serious issue?			and increases in water temperatures, and determined that the impacts were minimal.
EIS-3.7.2h	The narrative indicates when the project cannot fully avoid impacts to a listed species (potential presence identified using Natural Heritage data or other, e.g., DEC Environmental Resource Mapper or Environmental Assessment Form mapper) the Part 182 permit requirements come into play. See Comment GB-8.2c	1075	EIS Page 3-61	The need for Part 182 permit would be made on a project specific basis. Available data and site-specific screening would be used to avoid impacts where possible.
EIS-3.7.4	Ecology - Mitigation			
EIS-3.7.4a	How are you protecting or mitigating against the loss of habitat for bats, birds and other animals? Is there a plan to restore and increase habitat elsewhere?	190, 489		Potential ecological impacts and mitigation measures are discussed in Section 3.7 of the GEIS. When initial screening of state and federal databases returns RTE species, and, in consultation with NYSDEC, the species or its habitat are confirmed through site visits, efforts would be made to avoid the habitat. The action involves a change in vegetation cover and habitat, so there would still be habitat for some species. In the context of the magnitude of the impact compared with habitat available in the surrounding areas, the impact would not be significant and mitigation would not be necessary.
EIS-3.7.4b	Clearing non-compatible vegetation from earthen embankments is essential for maintaining safety and stability earthen embankments." How does "Clearing non-compatible vegetation from earthen embankments" essential for maintaining "stability… "of "… earthen embankments"?	1045	EIS Page 3-69	Please refer to Section 1 of the Guide Book for a detailed discussion regarding the potential failure modes for earthen embankments.
EIS-3.7.4c	DGEIS section 3.7.4 (page 3-69) Mitigation – when screening identifies a hit, and the species or habitat are confirmed through site visits, efforts will be made to avoid the habitat. If not feasible, Canals would initiate consultation with DEC. See Comment GB-8.2c.	1075	EIS Page 3-69	This comment has been incorporated in the FGEIS and Guidebook.
EIS-3.7.4d	Will it be the policy of the NTSCC to destroy "protected plants"?	1045	EIS Page 3-70	No. In preparation of the GEIS and Guidebook, the NYSCC reviewed the NYSDEC's list of RTE species. Additionally, procedures under Section 8 of the

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				Guidebook are in place to review as part of the planning of specific maintenance activities.
EIS-3.9	Aesthetic Resources			
EIS-3.9a	The removal of trees would negatively affect aesthetic resources, the natural beauty of the canal, canal trail, recreation, homes, villages.	2, 11, 12, 47, 64, 87, 93, 98, 106, 124, 128, 155, 156, 179, 188, 198, 200, 206, 208, 216, 218, 228, 236, 237, 252, 260, 266, 272, 281, 287, 288, 298, 318, 337, 342, 409, 411, 414, 421, 462, 499, 503, 516, 521, 573, 596, 711, 757, 769, 774, 840, 1032, 1043, 1049, 1093, 1097	EIS Page 3-76	The NYSCC followed the SEQR Scoping Document for the GEIS and examined the potential for significant environmental impact to Aesthetic Resources (Section 3.9), Open Space and Recreational Resources (Section 3.11) and Community Character (Section 3.16).
EIS-3.9b	Beneficial effects to views from grass-covered embankments.	324, 412 (duplicate), 554, 583		Comment acknowledged.
EIS-3.9c	Trees add beauty to canal-side roads which flank the canal.	158, 437		The NYSCC followed the SEQR Scoping Document for the GEIS and examined the potential for significant environmental impact to Aesthetic Resources (Section 3.9), Transportation Resources (Section 3.12) and Community Character (Section 3.16).
EIS-3.9.1	Aesthetic Resources – Environmental Setting			
EIS-3.9.1a	"It is important to note, however, that upon completion of the canal, embankments were free of trees and their main visual characteristic was the consistent landform created parallel to the new waterway."	1045	EIS Page 3-78	Please refer to the GEIS for a discussion of potential impacts (Section 3) and unavoidable adverse impacts (Section 4).

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	Is it also important to note that the trees that grew provided "positive scenic values ... ... that are valued for their scenic influence"?			
EIS-3.9.1b	What category do tourists that bike or hike the canal trail? Is there a missing category?	1045	EIS Page 3-83	Trail users and tourists are covered under Section 3.9 of the GEIS.
EIS-3.9.1c	"it is widely known that no one has "a right to a view."" What defines "widely known"? What constitutional or legal document states no one has "a right to a view"? Does the Erie Canal belong to the people of New York? Do the people of New York have a right to that which belongs to them?	1045	EIS Page 3-85	Comment is outside the scope of the GEIS
EIS-3.9.2	Aesthetic Resources – Potential Impacts of Proposed Action			
EIS-3.9.2a	"The EEIP has been developed to diminish the risk of failure of the canal and feeder embankments while preserving the aesthetic and natural character where appropriate and possible to do so in a manner that minimizes residual risk to adjacent communities." What was the primary purpose of development of the EEIP? Was it liability?	1045	EIS Page 3-85	The purpose for the EEIP is provided in Section 1.3.1 of the GEIS.
EIS-3.9.2b	"Indirect Impacts Vegetation removal may result in a reduction of enjoyment by users in select areas of the canal trail and waterway due from the direct impacts described above. This could result in fewer users in such areas; however, in the larger scope of the project, such impacts would not be considered significant." Why are such impacts not considered significant?	1045	EIS Page 3-88	The larger scope refers to the overall context of the GEIS and the magnitude of the impact within that context. Therefore, impacts (e.g., fewer users in on area) may be offset by increased used in other areas or be negligible in magnitude when considered across the entire scope of the system. For example, five fewer visitors out of one thousand would not be significant.
EIS-3.9.2c	"There is no meaningful information regarding previous impacts to the embankment areas, as this would be from the original construction of the embankments..." What impacts were there from the clear cut sections near Brockport, Holley etc.? Are those previous impacts?	1045	EIS Page 3-88	The previous Embankment Restoration project was completed under a separate SEQR review. Impacts from previous projects are outside the scope of the EEIP SEQR. However, cumulative impacts of the EEIP and potential future projects are discussed in the GEIS.
EIS-3.9.2d	"On the other hand, many areas of cleared embankments will open up new scenic views from 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."	1071	EIS Page 3-88	Clear cutting of embankments is an alternative evaluated in the GEIS and discarded. As described in Section 8.15, where community thresholds are exceeded Canal Corporation will develop a minimum of

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	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			two project specific alternatives which will be presented to the community.
EIS-3.9.4	Aesthetic Resources – Mitigation			
EIS-3.9.4a	In progressing EEIP activities, it would not be possible to avoid all potential impacts to visual resources while assuring the stability and safety of the earthen embankments." What assurances will be made regarding stability with the EEIP? What assurances will be made regarding safety with the EEIP?	1045	EIS Page 3-90	The comment is outside the scope of GEIS. The stability and safety of the embankments is the responsibility of the NYSCC which is discussed in the General Limitations section of the Guide Book.
EIS-3.9.4b	"Select vegetation may be retained only on the landward side of the embankments in Zones 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 the 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*.	1071	EIS Page 3-90	Section 7, 8 and 10 of the Guide Book have been revised to clarify the processes of when trees would be retained when no thresholds are triggered, when thresholds are triggered and how project information will be communicated to the public. If no thresholds are triggered trees will on be retained on embankments if a sufficiently sized zone 2B exists (i.e., planting berm). If community thresholds are triggered the Canal Corporation will develop a minimum of two alternatives for review and selection by the community. In the event no alternative is selected either five years of enhanced monitoring with no tree removal or a separate engineered solution would be implemented.
EIS-3.10	Historic and Archaeological Resources			
EIS-3.10a	Destruction of a National Register Treasure which could de-list the entire Erie Canal Corridor at Federal level.	376		Section 3.10 of the GEIS discusses the process for reviewing each application of the EEIP under the National and State Historic Preservation Acts. The process assures that application of EEIP would not result in 'delisting' of the Canal as a National Historic Landmark.

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EIS-3.10b	The trees are historic	832		Trees are not part of the historic integrity or historic significance of the canal and its embankments because the canal was not engineered to have trees as part of the structure. As an NHL property, removal of the trees would constitute a restoration of the historic engineering of the canal because the trees are harming the historic integrity of the embankments.
EIS-3.10c	Commenters described the procedure anticipated for the Town of Pittsford for historic review and expressed concern regarding the treatment of historic structures in the Village and Town of Pittsford as expressed in their Local Waterfront Revitalization Program (LWRP).	1032, 1047		Note: There are no inventoried embankments in the Village of Pittsford. There are embankments in the Town of Pittsford. The Village and Town of Pittsford share the same LWRP. Mapped embankments and seep information can be found online: https://www.nyscanalintegrity.org/program-and-maps Section 3.10 of the GEIS discusses the process for reviewing each application of the EEIP under the National and State Historic Preservation Acts. If an embankment maintenance project were identified in the Town of Pittsford, the LWRP would trigger a "community threshold" as identified in Section 8 of the Guide Book. The community would be consulted, as described in Section 10 of the Guide Book. See section 3.15 of the GEIS for more on this topic.
EIS-3.10d (see also EIS-3.15d)	It seems that the Power Authority's present course veers significantly from principles of historic preservation and conservation, comprehensive planning, and sensitive development that, if implemented, will negatively affect the quality of life for our community and many along the Erie Canal National Corridor.	1042		Section 8.15 of the Guide Book details the regulatory and community thresholds, which include historic resources and aesthetic resources. When these thresholds are exceeded either established regulatory processes or the process in Section 8.15 would be followed to mitigate potential impacts.

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EIS-3.10e	Will the "Programmatic Agreement (PA) with the Advisory Council on Historic Preservation and the New York State Historic Preservation Office (SHPO)" be legally binding?	1045	EIS Page 3-92	Yes.
EIS-3.10f	The preservation arguments that clear-cutting would somehow return the Canal back to its "original historic state" are specious and ill-considered.	1047		There is no impact under historic preservation laws as the original design of the canal system was to have no trees on the man-made earthen embankments.
EIS-3.10g	The adaptive re-use of a former commercial waterway into a thriving-recreational destination for tourists, boaters, hikers and cyclists has become a multi-million-dollar economic engine for New York State. Adaptive re-use, such as this, is strongly supported by every preservation entity at the local, state and federal level.	1047		No response needed.
EIS-3.10h	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-resident 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.	1071		Typical embankment cross-sections, as shown n figures 1.1 and 1.2 of the Barge Canal construction drawings do not specify trees to be planted on embankments. Regardless, current best management practices from federal and state agencies with expertise in dam, earthen dam and embankment maintenance provide clear guidance. Section 1 of the Guide Book discusses the logical application of maintenance guidelines to the earthen embankments.
EIS-3.10.2	Historic Resources – Potential Impacts of Proposed Action			
	"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,	1071	EIS Page 3-96	There is no impact under historic preservation laws as the original design of the canal system was to have no trees on the man-made earthen embankments. The Agency Preservation Officer (APO) or designee would coordinate with the SHPO in the event historic properties are identified within a project boundary.

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	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 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 and 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 directly across from the Great Embankment. Removing all of the trees from the trail would don't "restore" the trail's natural condition.			

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EIS-3.10.2a	"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." Does this statement declare that none of the trees along the canal (none of the trees subject to the EEIP) were present prior to 1963? How do trees "undermining the structural integrity of the earthen embankment"? How do trees compromise "...the integrity of the earthen embankments"? What is your source?	1045	EIS Page 3-96	Please refer to the Guide Book, Section 1 and the GEIS Section 1.
EIS-3.11	Open Space and Recreational Resources			
EIS-3.11a	Tree cutting negatively affects recreation resources.	11, 29, 53, 57, 157, 117, 218, 220, 252, 287, 288, 297, 298, 409, 410, 414, 442,	EIS Page 3-99	While some components of the comments are outside the scope of the EEIP, Section 3.11 of the GEIS evaluated potential impacts and mitigation measures to Open Space and Recreation Resources. Further, Section

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		443, 502, 516, 542, 543, 556, 564, 570, 573, 580, 581, 582, 588, 590, 595, 596, 597, 638, 653, 676, 680, 742, 747, 753, 756, 757, 769, 770, 774, 827, 841, 848, 852, 853, 854, 857, 859, 891, 900, 909, 973, 974, 989, 1004, 1008, 1012, 1043, 1049, 1053, 1058, 1067, 1072		8.15 of the Guide Book addresses impacts to aesthetic resources by establishing objective criteria in the form of community thresholds. Section 10 of the Guide Book details public outreach processes when community thresholds are exceeded.
EIS-3.11b	Tree cutting along public recreation areas should be performed only as a last resort based on a case-by-case assessment of risks to the maintenance of the embankment posed by the particular tree.	271		Please refer to the GEIS Section 1.3.4 which discusses thresholds for consideration of alternative EEIP activities.
EIS-3.11e	I think of canal path as a park. The canal is a recreational facility. It is a "(300, 350, 540) mile long park." The area around Rochester is a linear park. The EEIP undermines the public's vision for the Erie Canal corridor as a linear park and scenic, historic, and natural recreation way.			Please refer to Section 1.1 of the GEIS for a discussion of why the program is needed. Proper maintenance of the embankments is imperative to maintain integrity of the structures: for mitigating risks of embankment failures to health and safety of people that live, work or recreate along the NYS Canal System. Section 3.11 of the GEIS considered potential impacts to open spaces and recreation resources.
EIS-3.11f	I live in Spencerport and ride the Canal path west of Rochester. The path where the trees have been cut is wonderful! A benefit has been a decrease in the insect clouds that would hover around the trees next to the canal. These insect clouds diminished the experience of being on the Canal.	583		No response necessary.
EIS-3.11g	Have you conducted a "traffic study" to assess bicycle & pedestrian numbers?	866		To date a comprehensive study of bicycle or pedestrian usage of the trail system has not been conducted by the NYSCC.

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EIS-3.11h	Detour routes during trail closures and appropriate signage and design must be identified. Temporary impacts and permanent changes, and loss of desirability for recreational activities along the Canal must be discussed and presented.	1049		Detour routes would be developed on a project specific basis. Loss of use during construction is a temporary impact.
EIS-3.11.2	Recreational – Potential Impacts of Proposed Acton			
EIS-3.11.2a	"This review has determined that there are no direct permanent impacts from EEIP activities, nor are permanent indirect or cumulative impacts anticipated." Is the removal of trees and related shade a direct permanent impact on recreation use?	1045	EIS Page 3-101	While the specific impacts of trees providing shade are out of scope, potential impacts to Open Space and Recreation Resources were evaluated in Section 3.11 of the GEIS. This review has determined that there are no direct permanent impacts from EEIP activities, nor are permanent indirect or cumulative impacts anticipated.
EIS-3.12	Transportation Resources			
EIS-3.12a	The current forested Erie Canalway Trail also serves as a vital transportation route locally. For pedestrians and cyclists who commute daily to work or school, it is one of the few regional routes separated from motor vehicle traffic.	900, 909		Comment acknowledged.
EIS-3.12b	An evaluation of potential impacts of this project to the existing local roadway network must be presented.	1049		An evaluation of Transportation Resources is provided in Section 3.12 of the GEIS.
EIS-3.13	Noise, Odor and Light			
EIS-3.13a	Loss of trees/vegetation would cause an increase in noise. Trees provide sound barriers that affect adjacent property owners and canal users.	17, 87,145, 156, 218, 232, 306, 452, 545, 565, 573, 587, 669, 774, 859, 917, 969, 974, 1103	EIS Page 3-107	The effects of dense vegetation are considered in the analyses; however, only deep and dense vegetation has acoustical effects on reducing noise levels. Vegetation does provide a visual screen and by providing a visual screen may reduce the perception of noise. Please refer to Section 3.13 of the GEIS for additional discussion.
EIS-3.13b	In other areas where the Canal Corporation has clearcut vegetation (notably between West Henrietta Road and Kendrick Road) the trees provide a visual and audial barrier.	283		Previous projects are outside the scope of the Generic Environmental Impact Statement. However, visual and noise impacts have been considered, please refer to Section 3.13.
EIS-3.13c	Homeowners at the foot of tree-covered embankments could use more sun to dry out their yards and damp basements.	554		No response needed.

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EIS-3.13e	An evaluation of potential impacts including but not limited to noise, light, and loss of screening to neighboring properties due to proposed action must be presented. Mitigation measures that address the loss of screening and vegetation must be presented.	1049		These effects have all been considered in the GEIS.
	Concern for construction noise impacts on residents.	1093		Section 8 of the Guide Book includes provisions that the Canal Corporation will employ during construction to minimize the temporary noise effects from construction.
EIS-3.13.2	Noise, Odor and Light - Potential Impacts of Proposed Action			
EIS-3.13.2a	"...regular operations, such as mowing, which may occur two to three times each growing season." How many times a year will mowing occur?	1045	EIS Page 3-111	The Guide Book, BMP Page 2-6, Mowing, indicates mowing would occur a minimum of twice per year.
EIS-3.13.2b	Is the EEIP a "worst-case example"?	1045	EIS Page 3-112	The question is unclear. However, in order to evaluate potential impacts in the GEIS the 'worst case' was sometimes used (i.e., the outcome that would be likely to have the largest impact).
EIS-3.13.2c	"In one of the highest embankment sections on the Erie Canal system, the "Great Embankment" near where Irondequoit Creek crossed 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 and 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 96 and other noise sources. Based on this worst-case	1071	EIS Page 3-112	The Great Embankment is used an example as one area where distances of over 200 feet of treed embankment might be encountered to illustrate the likelihood of potential noise impacts, based on the established guidance parameters, adjacent to the canal. Projects will be advanced in accordance with the Guide Book which includes objective thresholds for aesthetic resource mitigation. This example in no way indicates vegetation removal would occur outside the established process.

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	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 for State Roue 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.			
EIS-3.13.2e	Does brush, bushes, and tree branches covered by snow provide noise mitigation benefits?	1045	EIS Page 3-113	Snow cover on brush, bushes or tree branches is not considered to provide additional noise mitigation based on the FHWA guidance in National Cooperative Highway Research Program Report 25-34, Supplemental Guidance on the Application of FHWA's Traffic Noise Model, Appendix I – Tree Zones (NCHRP 2014)
EIS-3.13.2f	"2. The proposed removal of dense vegetation... ...would significantly increase light pollution in these residential areas." Is this beneficial?	1045	EIS Page 3-114	The DGEIS considered the potential effects of light pollution and Section 8 of the Guide Book includes provisions for considering light pollution on a project level basis.
EIS-3.13.4	Noise, Odor and Light - Mitigation			
EIS-3.13.4a	Do you know that since most vegetation including trees does not pose a demonstrated risk to the integrity of embankments, you could leave the trees stand and not have to conduct a screening of individual embankment projects for lines of sight exceeding 200 feet between sensitive adjacent noise receivers and loud noise sources or light sources? Would leaving the existing trees and vegetation be cost effective?	1045	EIS Page 3-115	The comment is acknowledged.

Subject Number	Subject/Comment	Comment Numbers	DGEIS/Guide Book References	Response
EIS-3.14	Human Health			
EIS-3.14a	Shade provides a cool environment for people to experience the canal, both on the water and towpath. All people need the shade to avoid overheating, heat exhaustion. As we strategically increase access to the canal by people with disabilities and medical conditions, the benefits of shade while traversing the oaths are many. •	301, 859, 1067, 1077		The comment is acknowledged. Please refer to Section 1.3.1 – Purpose, Need and Benefit of the Project, of the Generic Environmental Impact Statement for a discussion of the need for the project.
EIS-3.14b	The shaded canal path promotes a healthy lifestyle. Drastic changes to the vegetation along the canal would greatly diminish the health benefits -- both physical and mental. •	315, 391, 459, 500		The comment is acknowledged. Please refer to Section 1.3.1 – Purpose, Need and Benefit of the Project, of the Generic Environmental Impact Statement for a discussion of the need for the project.
EIS-3.14c	This is right off the NY DEC site: Now, research is showing that visiting a forest has real, quantifiable health benefits, both mental and physical. Maintaining trees is a proactive approach to mental and physical health. •	28, 38, 354, 573, 996, 1016	GEIS Page 1-8	The comment is acknowledged. Please refer to Section 1.3.1 – Purpose, Need and Benefit of the Project, of the Generic Environmental Impact Statement for a discussion of the need for the project.
EIS-3.14d	The EEIP did not address human health after the Embankment is cleared and the Empire Trail / Canal Park Patrons start to overrun the Resident lives?	21	EIS Page 3-117	The Draft Scoping Document did not include crime as a topic to be studied. Public review of the Scoping document did not identify crime for inclusion in the Draft GEIS during review of the Draft Scoping Document.
EIS-3.14.3	Human Health - Potential Impact of Alternatives			
	I skipped a few but once again the statement "...while under the Ad-Hoc Alternative, the maintenance would be commenced when conditions become unsafe..." conflicts with the Ad-Hoc Alternative.	1045	EIS Page 3-119	The comment is acknowledged. Please refer to Section 3.14 – Human Health of the Generic Environmental Impact Statement.
EIS-3.15	Community Plans			
EIS-3.15a	It is my understanding that the NYPA has not established a need for clearcutting and that its actions are subject to approval by the Pittsford Planning Board, according to the Town's Local Waterfront Redevelopment Plan, which the NYPA is bound by law to observe. The Power Authority denies the Town's power to regulate the clearcutting despite being subject to the zoning provisions of Pittsford's Local Waterfront Revitalization District that covers the Canal throughout the town.	568, 1010, 1011, 1070, 1091		Canal Corporation disagrees with commentors' conclusions as to facts and law. In the past 10 years the Canal Corporation, on average, has experienced one earthen embankment incident per year that has resulted in closure of a section of canal or feeder and/or the reduction of navigation depths for a

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	The Power Authority retains all decision-making power to itself. • Impact Statement and the Final Guidebook should recognize this.			period of time. The Canal Corporation is presently monitoring over 300 active seeps in the 130 miles of inventoried canal embankment. Mapped embankments and seep information can be found online: https://www.nyscanalintegrity.org/program-and-maps Embankments cannot be property inspected in a vegetated state (e.g., heavy ground cover). Vegetation maintenance is necessary to accurately determine condition rating and risk. The NYSCC has developed a program for embankment restoration and maintenance. Proper maintenance of the embankments is imperative to maintain integrity of the structures: for mitigating risks of embankment failures to health and safety of people that live, work or recreate along the NYS Canal System; for mitigating the risks of damage to property and the environment; and for maintaining the integrity and operability of the NYS Canal System in a cost-effective manner.
EIS-3.15c	The Program is subject to a waterfront consistency determination under the Village LWRP, the special district requirements of the Village Zoning Code and the Village Local Waterfront Consistency Law. The Canal Corporation must obtain a waterfront consistency determination and site plan approval before it undertakes any Program activities in the Village of Pittsford. The Program cannot be implemented in the Village unless it is consistent with the Village Local Waterfront Revitalization Program and comply with the Village Waterfront Overlay District Requirements. Embankment clear-cutting appears to be inconsistent with the LWRP and Village zoning requirements.	1032		Canal Corporation disagrees with commentor's conclusions as to facts and law.
EIS-3.15d	As articulated in both Comprehensive Plans, the Town and Village of Pittsford embrace *Historic Preservation and Conservation as core community values* and are therefore committed to sensitive enhancement of the natural and built environment. Pittsford's joint Local Waterfront Revitalization Program (LWRP) dated June 26, 2006 clearly	1042		Canal Corporation disagrees with commentor's conclusions as to facts and law.

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	outlines the level of respect both hold for the importance of the historic Erie Canal to Pittsford's quality of life. It seems that the Power Authority's present course veers significantly from principles of historic preservation and conservation, comprehensive planning, and sensitive development that, if implemented, will negatively affect the quality of life for our community and many along the Erie Canal National Corridor.			
EIS-3.15e	Presentation of parts of the Town of Brighton Local Tree Law and the Brighton Town Code. The EEIP by NYSCC of effectively clear cutting trees and vegetation from nearly the entire embankment of the Erie Canal that runs through Brighton is anathema to our community and its values as related to trees and vegetation.	1049		Canal Corporation has considered and addressed aesthetics and community character impacts along with other significant adverse environmental impacts from the implementation of the EEIP. Where community thresholds are exceeded the Canal Corporation will present a minimum of two alternatives for the community's consideration.
EIS-3.15f	Impacts to surrounding lands, especial Town of Brighton's Town Parks and residential areas must be discussed. Consistency of the proposed project should be demonstrated with the Town of Brighton's Comprehensive Plans as well as with all other relevant local planning documents. Compliance should be demonstrated with the Town of Brighton Tree Law and any other similar laws or ordinances applicable in the project area.	1049		Canal Corporation disagrees with commentor's conclusions as to facts and law. Canal Corporation has fully addressed in its FGEIS the impacts identified in its final scoping document.
EIS-3.15g	By what authority does NYSCC assert that it is not subject to local lows? 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 implemented 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?	1071		Comments appear to be legal arguments and such, these comments will not be addressed as part of the FGEIS. Canal Corporation has considered the need to perform EEIP activities in a manner that is consistent with LWRPs and meets Canal Corporation's earthen embankment management and safety concerns.
EIS-3.15.1	Community Plans – Environmental Setting			
EIS-3.15.1a	"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	1071	EIS Page 3-121	Comments appear to be legal arguments and as such, these comments will not be addressed as part of the

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	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?			FGEIS.
EIS-3.15.1b	"The LWRP is the only planning and regulatory tool that allows a local community to refine statewide coastal policies to apply 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	1071	EIS Page 3-125, 3-126	Comments appear to be legal arguments and as such, these comments will not be addressed as part of the FGEIS. Canal Corporation has considered and addressed aesthetics and community character impacts along with other significant adverse environmental impacts from the implementation of the EEIP. Where community thresholds are exceeded the Canal Corporation will present a minimum of two alternatives for the community's consideration. Canal Corporation has considered the need to perform EEIP activities in a manner that is consistent with LWRPs and meets Canal Corporation's earthen embankment management and safety concerns.

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	for the preparations 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 the sections [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 soil 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 if 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 vegetation 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.			
EIS-3.15.2	Community Planning – Potential Impacts of Proposed Action			
EIS-3.15.2a	One example of the misapplication of the effect and requirement of a LWRP on local actions contemplated by state agency can be found at DGEIS Statement 3-129. The first portion of that statement is correct in that: "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." In addition, the statement that "This 'consistency' provision is a strong tool that insures government agencies' actions at all levels are guided by the local program" is also correct. However, there is absolutely no statutory or regulatory basis for the final sentence of that statement which implies that it is the state agency which conducts the consistency review for state agency actions which occur at a	1047	EIS Page 3-129	Comments appear to be legal arguments and as such, these comments will not be addressed as part of the FGEIS.

Subject Number	Subject/Comment	Comment Numbers	DGEIS/Guide Book References	Response
	local level. In fact, state agency actions which occur at the local level must also be approved by the local government. The internally contradictory statement which is present in DGEIS Statement 3-129 is also present in DGEIS Statement 4-4.			
EIS-3.15.2b	"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 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 state agency, and 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.	1071	EIS Page 3-129	Comments appear to be legal arguments and as such, these comments will not be addressed as part of the FGEIS.
EIS-3.15.2c	The Village of Pittsford adopted a new zoning code on November 21, 2019. That zoning code continued the LWO District which was present in the previous zoning code. That LWO includes all Canal lands in the Village of Pittsford which might be the subject of the NYSCC's EEIP. The LWO requires that any alterations in the LWO District require Site Plan Review, Special Use Permit and a Local Waterfront Consistency review.	1047		Comments appear to be legal arguments and as such, these comments will not be addressed as part of the FGEIS.
EIS-3.16	Community Character			
EIS-3.16a	I implore you to take the historic tradition of these towns into consideration in your planning and make beautification along the canal a TOP priority.	11	EIS Page 3-131	Comment acknowledged. Please refer to Section 3.16 – Community Character, of the GEIS for additional discussion.
EIS-3.16b	The Village of Fairport is invested in the future of the canal as demonstrated by the recently completed Bicentennial Canal Gateway Project on the southwest bank and is in progress with the current work to revitalize the northwest bank, as well as the formal creation of a gateway, pedestrian, biking friendly pathway and gathering spot on Lift Bridge Lane West. Trees, animals, and vegetation are important to canal life as is the integrity of the embankment itself. We need to have both. •	15, 508, 513, 580, 752, 973		Comment acknowledged. Please refer to Section 3.16 – Community Character, of the GEIS for additional discussion.

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EIS-3.16c	The canal draws visitors from out-of-town and from around the world flock to the beautiful, tree-lined canal. Upstate New York as a region is competing with Boston, San Francisco and other desirable locations and it needs every family asset. •	12, 25, 43, 364, 514, 555, 566, 573, 597, 668, 728, 737, 900, 958, 1067, 1098		Comment acknowledged. Please refer to Section 3.16 – Community Character, of the GEIS for additional discussion.
EIS-3.16e	The canal isn't used for commerce anymore. It's used by boaters and walkers/runners/bikers who enjoy the everything about the canal. Clearcutting the trees absolutely ruins the character of the canal and eliminates a significant charm for those who use it. •	720, 906, 943, 1059		Comment acknowledged. Please refer to Section 1.3.1 – Purpose, Need and Benefit, of the GEIS for additional discussion.
EIS-3.16g	In the last go-around in 2018, no one seemed to understand that the Bushnell's Basin area is a very different part of the canal system from the Albany and Buffalo aspects and we have a somewhat Netherlands-like situation where once the water starts to seep, there's no stopping it.	1092		Comment acknowledged.
EIS-3.16h	And also, in the part three of the environmental section, there's a little blurb where they say "other aspects of community character impacts will be further explored in the scoping and the DGIS", but what does further explored mean? Do you have a plan for these embellishments of the embankments and so forth? If so, what's the plan? Where did you write it down?	1099		Please refer to Section 3.16 – Community Character, of the GEIS for additional discussion.
EIS-3.16i	our region is blessed with regular amounts of snow and rainfall, which produces lush, bountiful vegetation. It's what provides this historic passageway such great character.	1106		Comment acknowledged.
EIS-3.16.1	Community Character – Environmental Setting			
EIS-3.16.1a	Has the transition from commercial transportation corridor to recreational and tourism corridor redefined the appropriate aesthetic envelope which is consistently composed of trees and other woody vegetation?	1045	EIS Page 3-133	Please refer to Section 3.9 – Aesthetic Resource, of the GEIS for additional discussion.
EIS-3.16.2	Community Character – Potential Impacts of Proposed Action			
EIS-3.16.2a	"As previously mentioned, EEIP activities are all accomplished within land under the jurisdiction of the NYSCC."	1045	EIS Page 3-134	Purchase of real property is outside the scope of the EEIP and would require a separate SEQR determination.

Subject Number	Subject/Comment	Comment Numbers	DGEIS/Guide Book References	Response
	Are the EEIP activities that use adjacent lands, such as impaired access of agricultural areas, "...all accomplished within land under the jurisdiction of the NYSCC."			
EIS-3.16.3	Community Character – Potential Impacts of Proposed Action			
EIS-3.16.3a	Who authored "...while under the Ad-Hoc Alternative, the maintenance would be commenced when conditions become unsafe, increasing the potential for a breach..." and who authored the "Ad-Hoc Alternative"? Did they compare notes?	1045	EIS Page 3-135	No comment necessary.
EIS-4	Unavoidable Adverse Impacts			
EIS-4a	In Unavoidable Adverse Impacts, address a canal breach and devastating flood be the worst "unavoidable adverse impact" if EEIP does not get implemented, because the public stood in the way of it.	21	EIS Page 4-1	Consistent with 6 NYCRR 617.9(b)(5)(iii)(b), all draft environmental impact statements must include those adverse environmental impacts that cannot be avoided or adequately mitigated if the proposed action is implemented.
EIS-4b	How does "...the EEIP ... ...diminish the risk of failure of the earthen embankments? Where is this described? For what percentage of linear embankments is the EEIP "...preserving the aesthetic and natural character"?	1045	EIS Page 4-2	Please refer to Appendix B of the GEIS for a discussion of risk associated with the earthen embankments.
	"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 discussed 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."	1071	EIS Page 4-4	When community thresholds are not exceeded trees will be preserved to the greatest extent possible when a 'planting berm' is present (i.e., the embankment is sufficiently wide). When community thresholds are exceeded the Canal Corporation will provide the community with a minimum of two design alternatives. Please refer to Section 8.15 of the Guide Book which discussion the process for mitigating impact to aesthetic resources when community thresholds are exceeded.

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	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?			
EIS-5	Irreversible and Irretrievable Commitment of Resources			
EIS-5a	Once cut/disturbed, trees and habitat cannot be replaced. Cutting trees is irreversible.	12, 612, 976	EIS page 5-1	Please refer to Section 4 – Unavoidable Adverse Impacts, of the GEIS for additional discussion.
EIS-5b	This plan done this way means no going back. Even with replanting it won't be the same.	827		Comment acknowledged.
EIS-5c	Clear cutting is not able to be remedied in any kind of reasonable timing… It is decades and decades of impact.	279, 335		Please refer to Section 4 – Unavoidable Adverse Impacts, of the GEIS for additional discussion.
EIS-5d	"While the EEIP would result in irreversible and irretrievable commitments of resources, the resources are not in short supply." Are these resources abundant along the canal? "Furthermore, the overall benefits outweigh these commitments." What benefits are there? How do they outweigh these commitments? What are commitments? "Initial consumption of materials and energy in clearing embankments, would allow minimal use of energy in maintaining the embankments in future years." What is the consumption of materials and energy now? What are the projected consumptions of materials for the future? Is a tree lined canal a resource that is not in short supply? "This would be a more efficient use of resources and build more sustainability into the canal system." If this program leads to more consumption in the future compared to now, isn't that less sustainability? "The EEIP would maintain the safety and reliability of the earthen embankments, which would benefit users of the canal as well as reduce the risk of embankment failure to adjacent and downstream properties." Since there is no documented failures due to vegetation, how does removing vegetation reduce risk? As demonstrated by the completed embankments in Medina, Holley etc. removing incompatible vegetation and modifying the slope of embankments does not eliminate risks associated with earthen embankments nor does it eliminate the telltales of potential issues such as seepage.	1045	EIS Page 5-1	Please refer to Section 5 – Irreversible and Irretrievable Commitment of Resources, of the GEIS for additional discussion.
EIS-6	References			

Subject Number	Subject/Comment	Comment Numbers	DGEIS/Guide Book References	Response
EIS-6a	These documents are official documents so no false statements may be present. If there are any false statements, they must be removed. Unsupported statements are unacceptable. There are a number of statements within this document that do not have a source or documentation. If the statements have sources then those sources must be cited specifically in-line. If the sources are within the reference documents, they must be directly cited and quoted otherwise they will be treated as unsupported. Any statement that is unsupported must be removed. If the authors and agency wish to present statements that are opinions, that needs to be clearly stated.	1045		No response necessary.
EIS-6b	Are there any references not included?	1045	EIS Page 6-1	Please refer to Section 6 – Technical and Historic References, of the GEIS and Section 11 – References of the Guide Book.
	Appendix B Risk Exposure Presented by Canal Embankments			
Appx Bb	DGEIS Appendix B Page B-6: According to Table B-4, probability of seepage induced failure is listed as 3.5×10^{-3} for levees, canals and dams, not 3.5×10^{-5} as described in the text. Please confirm the appropriate probability, as 3.5×10^{-3} appears to b incorrect.	1015		The probability of seepage induced failure in Table B-4 is 3.5×10^{-3} for levees, canals and dams which is correct. That is before applying the event probability. The reference to 3.5×10^{-5} in the text above is incorrect and will be changed to 3.5×10^{-3}
Appx Bc	DGEIS Appendix B Page B-8: The Town would like NYSCC to provide specific risk based inundation mapping of critical low areas along the canal embankment, in particular between Canal Mile Marker 248 and 251. This would provide helpful information to share with residents and business owners in key areas in Town (e.g. Burgundy Basin, Indian Valley Subdivision Rochester Fair Garden Subdivision, Fairport Office Park).	1015		The extent of risk-based inundation mapping would be determined by the Canal Corporation and may be a component of future embankment section level projects.
Appx Bd	Appendix B establishes an acceptable risk level, however it makes a general assumption about the danger of trees along the canal to justify the findings of the report. On page B-7, there is an assumption that the risk of failure due to seepage or poor maintenance is double that of one that has no seepage and is well maintained. However, the rationale for this is not explained which calls into question the conclusion. This should be removed, or explained using statistical evidence or supporting report documentation.	1050		The doubling factor is based on engineering estimates, and illustrates a key point that the exposure for embankment dams and canal embankments are about 2 orders of magnitude greater than for levees because of the difference in event probability.
Appx Be	The assumption on B-7 referenced above does not specify that trees add to the issue. It may be inferred, but it is also possible that poor maintenance and seepage occurs without trees. An additional assumption is inferred that trees are part of the poor maintenance for which cited reports within the EEIP do not provide evidence. Additional	1050		The text notes that tree and woody vegetation removal is a key component of managing risk by facilitating safety inspections and eliminating tree roosts as seepage hazards.

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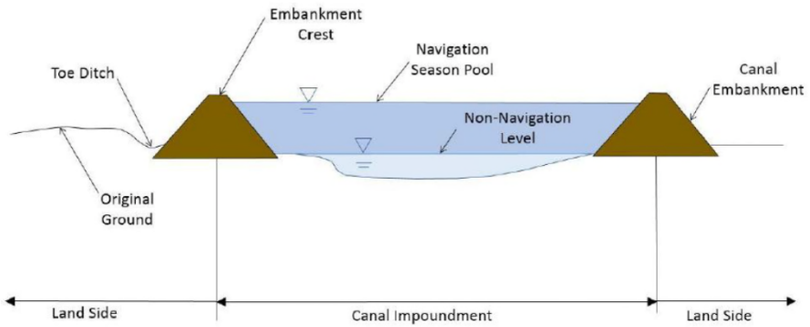
	support to show tree roots are a major cause for seepage and failure is needed to support the conclusion.			
GB-C	Guide Book - Cover			
GB-Ca	Why is Bergmann preparing New York State Canal Corporation EMBANKMENT INSPECTION & MAINTENANCE GUIDE BOOK?	1045		Bergmann was selected through a competitive bid process in accordance with New York State procurement law.
GB-Gen	Guide Book – General			
GB-Gen1	Eliminate words like dike, levee, berm and hill as the proper, correct word should be embankment.	1		One instance of dike has been removed. The word levee must remain as it describes a feature that is demonstrably different than a dam or water retaining earthen embankment. In most cases, where the word berm is used it is in reference to planting berms referred to in USACE guidance documents. Other uses of the word berm will be removed for clarity. Hill is not used as a word in the document.
GB-Gen2	Why have you used a confusing page/section/section page layout? For example 6.3 Outboard Slope Embankment Features ... ... 6-5 is on page 49. Another example, 8.15 SEQR Thresholds and decision procedure... ...8-23 is on page 87. Also, the table of contents are formatted as links to other locations within the document that do not allow return navigation.	1045		The document format, linkages and navigation will be reviewed and corrected as needed for clarity and ease of reading.
GB-Gen3	Why was Revision No. Date Description 0 03-12-2021 Initial Issue kept from public review for so long?	1045	Guide Book, page vi	Comment is acknowledged, however, it is outside the scope of the Generic EIS.
GB-Gen4	As stated, "...professional engineer with familiarity of the overall system as well as the specific conditions at the location where the maintenance..." who has familiarity?	1045	Guide Book, page vii	Comment is acknowledged, however, it is outside the scope of the Generic EIS.
GB-Gen5	What factor(s) poses the greatest risk for embankment failure as stated,"...top priority of reducing risk of embankment failure..."?	1045	Guide Book, page viii	Please refer to Section 3 – Embankment Rating System, in the Guide Book for a discussion of the embankment risk rating system.
GB-Gen6	Pg. ix - The illustration at the lower right shows an embankment with a tree. Doesn't the photograph show an embankment that has been eroded except for where there is a presence of trees?	1045	Guide Book, page ix	The image in the lower right that's being referred to is showing a tree to illustrate "root intrusion", something that is injurious to embankment integrity.

Subject Number	Subject/Comment	Comment Numbers	DGEIS/Guide Book References	Response
	The "scope of … program… and Guide Book includes … embankments but excludes individual structures." Aren't the structures excluded such as "waste weirs…vertical walls, culverts etc…" integral in evaluating the risk associated with specific embankments?			Waste weirs, vertical walls and culverts are features that also pose risks, however, the inspection, and maintenance prioritization of those features are handled as separate SEQR actions.
GB-Gen7	Pg. x - The … (BMP) sheets (Attachment 1) are intended to: Prevent conditions that impair inspections and early identification of hazardous conditions." Does this mean that lights will be installed for night inspection? Does this mean that inspectors are forbidden to consume alcohol? Has the tree removal process, completed on the West side if the Genesee, created conditions that impair inspections in any locations? Would this result be contrary to the intended purpose of the program?	1045	Guide Book, page x	Night inspections will typically not be conducted, except possibly during an emergency. Any lighting provided would be temporary. The consumption of alcohol by employees is outside the scope of the EEIP. The tree removal process on the west side of the Genesee has greatly improved the ease of inspection and reduced the risks of embankment failure.
GB-G	Glossary of Terms and Acronyms			

GB-G1	The definition of embankment is a problem: **CANAL EMBANKMENT** – A water-impounding earthen structure, usually constructed in a parallel alignment to the Canal, raising the water surface elevation of the Canal above the adjacent land surface elevation. Such embankments can be on one or more sides of the Canal. These embankments may retain water only during the canal operating season for areas where the canal is drained in the winter, or they may retain water year-round in areas where the canal is not drained or only partially drained. This definition states an embankment consists of land that contains Canal water where adjacent land is below water level. The key failure of this definition is it does not specify any distances or slopes. Images depict steep banks prone to failure:  However, the definition equally applies to broad swaths of land that have little risk of failure such as below:  	1032		The canal embankments considered in the EEIP are manmade embankments located within lands owned by the New York State Canal Corporation. There are many locations along the Erie Canal System where the canal is bounded by natural ground that extends outside Canal owned lands. Such areas of natural ground, although present in many locations, have not been inventoried as manmade water retaining earthen embankments. Locations of mapped canal embankments are available online: https://www.nyscanalintegrity.org/program-and-maps

Subject Number	Subject/Comment	Comment Numbers	DGEIS/Guide Book References	Response
GB-G2	What is the source of wording within the "GLOSSARY OF TERMS AND ACRONYMS? " Did it come from external sources, internal sources or a combination?	1045	Guide Book, page xi	The source of wording for the "GLOSSARY OF TERMS AND CONDITIONS" came from both external professional, industry sources and New York State Canal Corporation sources.
GB-G3	"ENGINEER – For the purposes of this document, refers to an individual who is a professional engineer currently licensed and registered to practice engineering under Article 145 of the Education Law of the State of New York and possesses sufficient specific education, training, and experience…" What "specific education" is required? What "training" is required? What "experience" is required?	1045	Guide Book, page xiii	While this comment is outside the scope of the EEIP, information regarding licensure requirements can be found on the web page of the New York State Education Department, Office of the Professions at http://www.op.nysed.gov/prof/.
GB-G3	Is the definition of "FOUNDATION – The natural material on which the dam or embankment structure is placed," wrong? Is the definition of "NAVIGATION SEASON – Period of the year that the water level in the Canal is elevated to allow for boat traffic, generally mid-May to mid-November each year," outdated?	1045	Guide Book, page xiv	The definition is correct as stated. The definition gives the general range of time during which the water level in the Canal is elevated. The specific dates of seasonal opening and closing of the Canal are influenced by Canal operations, flooding and drought conditions.
GB-G4	Does the Canal Corp know where the "TOE OF DAM/ EMBANKMENT – The base portion of a dam or embankment which intersects with natural ground" is located or, is an assumption made that the Toe is the intersection of the embankment with the perceived surround?	1045	Guide Book, page xvi	The New York State Canal Corporation uses record drawings, available topographic mapping and new survey to identify the existing embankment toe.
GB-G5	An explanation should be made on what exactly is an earthen dam.	1097		The earthen embankments referred to in this document are not presently regulated by New York State as earthen dams, therefore a definition is not included.
GB-1	Embankments Overview			
Gb-1.1	Overview and Manual Content			
GB-1a	"This Guide Book applies to all embankments under the jurisdiction of the NYSCC with the following exceptions: • It does not apply to dams (which are covered by the Dam Maintenance Guidebook)." Does this mean the embankments are not Dams?	1045	Guide Book Page 1-1	The water retaining earthen embankments referred to in this document are not presently regulated by New York State as dams.
GB-1.2	Canal and Canal Feeder Embankments			

Subject Number	Subject/Comment	Comment Numbers	DGEIS/Guide Book References	Response
GB-1.2a	What is the source of "...typically roughly 18 feet tall,..."? How is "For these situations, it is logical to account for this extra material when evaluating risk and maintenance needs." accounted for? How does extra material effect risk, condition, maintenance, and safety? What are the sources for Figures 1.2-1 and 1.2-2? "At some locations along the 1918 Barge Canal improvement, the original designers provided embankment sections that are wider than required for water retention." What is the source for this statement? "A typical example of an overbuilt canal embankment is shown in the figure below. In this case, additional spoil (material excavated from the canal prism) was disposed of landward of the canal embankment." What is the source of this statement? "For these situations, it is logical to account for this extra material when evaluating risk and maintenance needs." What is the source for this statement? "This is an example of an important factor that reinforces the need for a site-specific evaluation of alternatives instead of a one-size-fits-all approach." Will this "need for a site-specific evaluation of alternatives instead of a one-size-fits-all approach," be implemented prior to the generic Zone 1-5 vegetation removal process? Is this evaluation process being conducted as part of the current embankment inventory process mentioned during the recent public meetings September 20th and 21st?	1045	Guide Book Page 1-2	Discussion of the spoil berms, assumed to be the "extra material" will be added. The sources for Figures (Canal Contract Drawings) will be added.. This is indicated in the figures as "Spoil" and is earthen material excavated to enlarge and deepen the 1918 canal that placed outside the earthen embankment proper. The existence of overbuilt earthen embankments is but one of many considerations in the inspection, rating and prioritization process. The existing earthen embankments, whether or not they have been overbuilt are evaluated as a whole.
GB-1.3	Distinction Between Levees and Canal Embankments			
GB-1.3a	Levees are temporary barriers to protect for infrequent, short-term duration rises in rivers and only function with full water loading in high recurrence interval storm events. In contrast to this, the canal embankments perform for the entire navigation season (6 months of the year) year after year.... ...: 1. the frequency that the levee embankments function ... what is the source for"... so the risk of failure is correspondingly less"? "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." What does "universally mean"? Where is it listed as a "rule"?	1045	Guide Book Page 1-3	The risk of earthen embankment failure is influenced by the watered embankment condition and the duration of time during the year when the embankment is watered. The Canal earthen embankments are watered much more frequently (half the year) than the levee systems in New York State that hold a significant depth of water once every 50 years or more.

Subject Number	Subject/Comment	Comment Numbers	DGEIS/Guide Book References	Response
				The engineering profession as a whole is in agreement that woody vegetation not be permitted on earthen dams.
GB-1.4	Vegetation Management & the Experience of Other Agencies			
GB-1.4a	An excerpt from an inspection manual for the state of Gujarat, India, 2009. The excerpt begins with, "It is generally agreed that trees and shrubs more than 2 feet in height are undesirable growing on or adjacent to embankment. However, there is some debate over when and how to remove well-developed trees and root systems that are already in place in the embankment.	324, 412 (duplicate)		Comment is acknowledged.
GB-1.4b	I understand that the embankment rules developed after Hurricane Katrina by the US Army Corps of Engineers were meant to safeguard embankments. This is important. It appears however, that the regulations were enacted quickly, and have been challenged for not being well thought out. The regulations are under review and could change soon. In particular, the State of California has been doing research of its own on embankment safety, and proposing a slightly different standard http://cvfpb.ca.gov/wp-content/uploads/2017/08/ConservStrat-App-D-Vegetation-Management.pdf. If the canal corporation spends a few years on the places which are critical, and prioritizes areas that desperately need maintenance/replanting, it is likely that the Army Corps of Engineers rules will be updated, allowing trees to remain in many areas on the top, where (at least according to the studies from CA) they appear to pose little risk.	609		As part of the Guide Book development, guidance for both levees and dams from USACE, State of California, FEMA and New York State Department of Environmental Conservation was reviewed and summarized. The Earthen Embankment Integrity Program is developed in a manner consistent with the risks associated with having water retaining earthen embankments that are located in populated areas. The Guide Book is also a "living document" that will be modified based on lessons learned with implementing the program and the experiences of other agencies.
GB-1.4c	Other countries have many models for safe canal maintenance, and they've been doing it for centuries, e.g. Netherlands, England, etc. Maybe NYPA needs to open its mind and look around.	1023		NYPA has consulted with Waterways Ireland on their embankment inspection and maintenance practices. Raised, earthen embankments constructed, then modified over a 100 year period with 12 foot water depth in densely populated areas are unique to the 60 mile and 17 mile pools.
GB-1.4c	The risk reduction strategy for the embankments that likely has the most impact on the community is the management of the vegetation that currently exists on the embankment. What is meant by "the most impact"? Does it mean detrimental impact or safety impact or something else?	1045	Guide Book Page 1-3	The first sentence of Section 1.4 will be clarified

Subject Number	Subject/Comment	Comment Numbers	DGEIS/Guide Book References	Response
	The word "community" is used in the sentence "The dam safety engineering community..." What is "community" in the previous sentence?			
GB-1.4d	"Vegetation management practices for earth dams are universally accepted within the engineering community with the rule that woody vegetation s 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 <u>not</u> 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.	1071	Guide Book Page 1-3	As discussed in Section 1 of the Guide Book it is critical to understand the important differences between levees, dams, and canal embankments. As the USACE's guidelines indicate, due to the duration and frequency of water loading, canal embankments should not be maintained using guidance developed for levees.
	"Adjacent landowners and canal users view the trees and vegetated sloped 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 desire 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 in incomprehensible to the Town. Surely, NYSCC can propose a policy that gives some leeway to canal adjoining municipalities like the Town.	1071	Guide Book Page 1-3, 1-4	Section 8.15 describes the process for mitigating aesthetic impacts when community thresholds are exceeded.
GB-1.4.1	US Army Corps of Engineers			
GB-1.4.1a	What is the source of this statement "The Corps' guidance makes it clear that vegetation may remain on and around embankment and related infrastructure, provided that "the safety of the structure is not compromised, and effective surveillance, monitoring, inspection, maintenance, and flood-fighting of the facility are not adversely impacted.""?	1045	Guide Book Page 1-4	Please refer to Department of the Army Corps of Engineers document titled GUIDELINES FOR LANDSCAPE PLANTING AND VEGETATION MANAGEMENT AT LEVEES, FLOODWALLS,

Subject Number	Subject/Comment	Comment Numbers	DGEIS/Guide Book References	Response
				EMBANKMENT DAMS, AND APPURTENAT STRUCTURES - EP 1110-2-18 .
GB-1.4.1.1	Levees			
GB-1.4.1.1a	What is a reference source for information and data for "Factors such as vegetation density, size, expected root penetration depth, and location are important factors in the expected performance (i.e. risk) of the embankment."? What are specific Erie Canal examples of "adversely impacted."?	1045	Guide Book Page 1-5	Please refer to Department of the Army Corps of Engineers document titled GUIDELINES FOR LANDSCAPE PLANTING AND VEGETATION MANAGEMENT AT LEVEES, FLOODWALLS, EMBANKMENT DAMS, AND APPURTENAT STRUCTURES - EP 1110-2-18.
GB-1.4.1.3	Variances			
GB-1.4.1.3a	What are the dimensions of the "prism" related to the Erie Canal? "However, there are important differences between the California levee system and lessons learned and the NYSCC canal embankments." What lessons were learned from the NYSCC canal embankments? When were they learned? Where were they learned; what locations?	1045	Guide Book Page 1-7	Please refer to the Guide Book glossary for definition of "Canal Prism." The key lesson has to do with the time the embankments are loaded with water and for the NYS Canals it is 6 months of the year, whereas for levees it might be days in some years but in some years there could be no time(s) of wetting.
GB-1.4.2	California Urban Levee Design Criteria			
GB-1.4.2.1	Vegetation (Section 7.16)			
GB-1.4.2.1a	"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." What research is NYSCC pursuing?	1045	Guide Book Page 1-8	While the comment is outside the scope of the EEIP, the NYSSC continue to research the impact of trees and other woody vegetation is outside the scope of the EEIP Canal Corporation will update the Guide Book as new guidance and data becomes available.
GB-1.4.2.1b	"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	1071	Guide Book Page 1-8	The key has to do with the time the embankments are loaded with water and for the NYS Canals it is 6 months of the year, whereas for CA and other levees it might be

Subject Number	Subject/Comment	Comment Numbers	DGEIS/Guide Book References	Response
	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. In 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?			days in some years but in some years there could be no time(s) of wetting. The duration of time and the depth of water above the surrounding ground of the community defines the risk to the community. If the NYS Canal were to be watered to a 12-foot depth for a few days a year then an altered management approach could be considered, but this is not the reality that the Canal Corporation is facing.
GB-1.4.2.1.3	Newly Constructed Levees			
GB-1.4.2.1.3a	What dimensions represent "sufficient size and configuration to mitigate potential negative impacts to levee safety"? Is "Trees and other woody vegetation that are within 20 feet of the landside toe should be trimmed up 5 feet above the ground and thinned for visibility and access." a viable approach for the NYSCC embankments? What proportion of embankments will not meet this standard? Where did this standard come from?	1045	Guide Book Page 1-9	A reference to EP 1110-2-18 will be added. This standard was developed by California for use in maintaining their levees. In many cases NYSCC is limited in control of the property beyond the outboard toe of slope of the embankments (i.e., NYSCC does not own the property). The EEIP does not contemplate acquisition of the property.
GB-1.4.2.1.5	Levees with Existing Vegetation			
GB-1.4.2.1.5a	Where is it stated, "Standard guidance and best practices dictate that the levee criteria below are not appropriate for canal embankments."?	1045	Guide Book Page 1-10	The levee criteria are not appropriate for the watered earthen embankments of the Erie Canal system because the time these embankments are loaded with water (6 months of the year) is far greater than the time that levees are loaded with water (e.g., for days in some years but not at all in other years). The duration of time and the depth of water above the surrounding ground of the community defines the risk to the community. If

Subject Number	Subject/Comment	Comment Numbers	DGEIS/Guide Book References	Response
				the NYS Canal were to be watered to a 12 foot depth for a few days a year then an altered management approach could be considered, but this is not the reality that the Canal Corporation is facing with its earthen embankments.
GB-1.5	New York State Regulatory Recommendations For Vegetation Management			
GB-1.5a	Will be using the NYS Guidelines for vegetation on Earthen Dams as stated in Chapter 1, Embankment Overview Section 5: NYS Regulatory Recommendations?	8	Guide Book Page 1-11	The statement will be clarified.
GB-1.5a	"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.	1071	Guide Book Page 1-11	Noted above for EIS, Comment EIS-1.3n Although canal and feeder 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 used by the NYSCC as part of its inspection and maintenance program. Please refer to Section 1 of the Guide Book for additional discussion regarding the decision making process used to determine guidance which may be appropriately applied to earthen embankments.
GB-2.1	Organizational Structure of NYSCC			
GB-2.1a	Section 2 Organization of the NYS Canal Corporation Dam Safety Program… to whom, exactly how and what contact numbers can be shared to report Canal Embankment Dam Emergencies?	8	Guide Book page 2-1	Canal emergencies may be reported, similar to Canal dam safety emergencies, through the Canal Emergency # 1-833-538-1042. This is noted in Section 4.4.
GB-3	Embankment Rating System			
GB-3.2	Condition Rating			
GB-3.2a	"Key elements that are examined…" Does the presence of trees directly impact the safety of an embankment? How does a tree impact the safety of an embankment? If trees or vegetation is present, can an inspection still be completed?	1045	Guide Book Page 3-2	The safety of an embankment is influenced by many factors, the presence of trees being one of them. The effectiveness of inspections has been adversely influenced by the presence of trees and vegetation often obscuring seeps, burrows and other deficiencies.

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	What dimensions of embankment geometry indicate safe? What dimensions of embankment geometry indicate unsafe? Why are there missing geometric embankment attributes? Does riprap interfere or hinder inspection? Does the presence of nearby development or residential properties change the safety of the embankment?			Embankment geometry is only one of several factors influencing embankment safety. Field measurements are compared to record information and current topography to identify rotation, settlement or other changes indicating a deviation in geometry. Riprap on the inboard slope does not hinder inspections considerably. The presence of nearby development is separate from the condition of an embankment segment, which this section addresses.
GB-3.4	Modified Risk Urgency Rating System for Use on Canal Assets			
GB-3.4a	Will the NYSCC be using their new Embankment Rating System, outlined in Chapter 3, to determine where to place their priorities for Dam Remediation?	8	Guide Book, Section 3.4, page 3-4	Yes. Please refer to the Section 3 – Embankment Rating System, in the Guide Book.
GB-3.4b	If yes, will you also be using that rating system to prioritize creating Flood Inundation Maps for each of the MOST CRITICAL earthen dam sections?	8		The NYSCC may elect to develop inundation maps on a case by case basis.
GB-3.4c	This would insure your neighbors understand the potential flood issues in their neighborhoods and may result in some deciding to purchase Flood Insurance until their canal embankments are restored to NYS safety compliancy.	8		The NYSCC considers the communication of risk to adjacent property owners to be important. At the present time, however, such mapping cannot be adopted by FEMA and used for flood insurance ratings.
GB-3.4d	At this time is the NYSCC prepared to share the list of Embankment that have a rating of Poor, Very Poor, and Serious or any embankments that have a Moderate to High Urgency?	8		Please refer to the Earthen Embankment web page here: https://www.nyscanalintegrity.org/ The site will be updated as new information becomes available for release.
GB-3.4e	The report outlines a Preliminary Risk Urgency Rating but does not identify what sections of the Canal are in what category. Without this information, we do not know the threat level to people and property near the canal. A more dire situation may mean that something drastic has to happen now while other areas may have some more time	622		Please refer to the Earthen Embankment web page here: https://www.nyscanalintegrity.org/ The site will be updated as new information becomes available for release.

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	prior to any work being done. A map should be created here to show the conditions along the Canal.			
GB-3.4f	Two slides in the presentation at the public information sessions in September showed models of flooding from breaks in the embankment in Perinton. What hazard classification is this embankment? Does a High Hazard classification preclude trees in zones 2B and 3?	671		Please refer to the Earthen Embankment web page here: https://www.nyscanalintegrity.org/ The site will be updated as new information becomes available for release.
GB-3.4g	GB Page 3-1 through 3-2: Have any of the canal embankments sections within the Town of Perinton been inspected in the recent past? If so, has a color coded Hazard Classification (Table 3.1-1) and Condition Rating (Table 3.2-1) been assigned to any embankment sections in Perinton? Can this information be provided to the Town similar to how NYSDOT makes bridge inspection reports available via their Bridge Data Information System (BDIS)?	1015		Please refer to the Earthen Embankment web page here: https://www.nyscanalintegrity.org/ The site will be updated as new information becomes available for release.
GB-3.4h	For the embankment sections repaired to date, how many seepage locations were monitored prior to the clearing operation and how many have been identified, monitored and/or addressed after the clearing operation? Are there any known seepage locations that are being monitored in Perinton?	1015		Please refer to the Earthen Embankment web page here: https://www.nyscanalintegrity.org/ The site will be updated as new information becomes available for release.
GB-3.4i	The Guidebook section 3 discusses classifications of embankments based on how much damage may result from an embankment failure, the current condition of the embankment, and risk urgency rating. However, all of this appears to be based on recommendations for dams, and none of it is based on needs of canals. The Erie Canal is not a dam!	1032		Section 1 of the Guide Book provides a detailed discussion of the difference between dams, earthen embankments and levees.
GB-3.4j	The Guidebook calls for a uniform treatment of canal banks, states clearcutting of embankments is required, but then states a risk management strategy will prioritize where the work will be done. That leaves municipalities without clarity as to how their community will be impacted. Risk management classification strategy is not a precise science and land is subject to arbitrary reclassification at any time.	1032		Sections 9 and 10 of the Guide Book detail how and when communities will be informed of upcoming projects.
GB-3.4k	The Guidebook cites FEMA publication P-1025 Federal Guidelines for Dam Safety Risk Management as the reference for identifying land prone to imminent embankment failures. However, that document provides no objective information at all. That document states: "Methods to calculate and estimate risks are constantly evolving. This	1032		The FEMA P-1025 publication was one of many documents used in the development of the Guide Book. The Guide Book lays out a process for priority ranking, inspection, maintenance and rehabilitation

Subject Number	Subject/Comment	Comment Numbers	DGEIS/Guide Book References	Response
	document does not try to describe in detail how to analyze risks. It only describes the general practices used by those who analyze risks." It additionally states "Numerical risk estimates are based on judgments, are typically subjective, and include varying degrees of uncertainty. These estimates should not be the sole basis to inform decisions."			along with the decision making involved in determining what guidance and regulatory references were used (i.e., that earthen embankments should be maintained similarly to dams).
GB-3.4l	No one knows which Canal embankments are flagged for clearcutting, which ones are to be left alone, and risk classification used to make these decisions is inherently a capricious process subject to change. The Guidebook leaves municipalities in the dark. The following quotes from the Guidebook support this conclusion: • "Numerical risk estimates are based on judgments, are typically subjective, and include varying degrees of uncertainty. These estimates should not be the sole basis to inform decisions." • "The guidance offered and specific procedures identified in these guidelines are not mandated. Individual agencies may vary in the way they apply these guidelines as necessary to accomplish their respective missions." • "While dam safety risks cannot be eliminated, they should be reduced to a level that is as low as reasonably practicable." • "Methods to calculate and estimate risks are constantly evolving. This document does not try to describe in detail how to analyze risks. It only describes the general practices used by those who analyze risks." • "With approximately 120 miles of embankment presently identified in the Canal system, it is necessary to identify and prioritize those sections most in need of maintenance. In order to create a prioritization, a matrix was developed based on two metrics: hazard classification, and condition rating to assign a resulting risk urgency rating. The matrix prioritizes risk urgency by assigning the highest risk urgency to those segments with the highest hazard classification and lowest condition rating."	1032		The Guide Book lays out a process for priority ranking, inspection, maintenance and rehabilitation along with the decision making involved in determining what guidance and regulatory references were used (i.e., that earthen embankments should be maintained similarly to dams). Sections 9 and 10 of the Guide Book detail how and when communities will be informed of upcoming projects. Additional information regarding the EEIP, including embankment maps can be accessed online: https://www.nyscanalintegrity.org/
GB-4	Embankment Inspections			
GB-4a	There are drainage pipes and grates at the bottom of the bank that can be open to check for leaks. I do not think these have been opened in a very long time since they are rusted over.	1097		Comment is acknowledged, however, it is outside the scope of the Generic EIS.
GB-4.1.1	Bank Walk Inspections			

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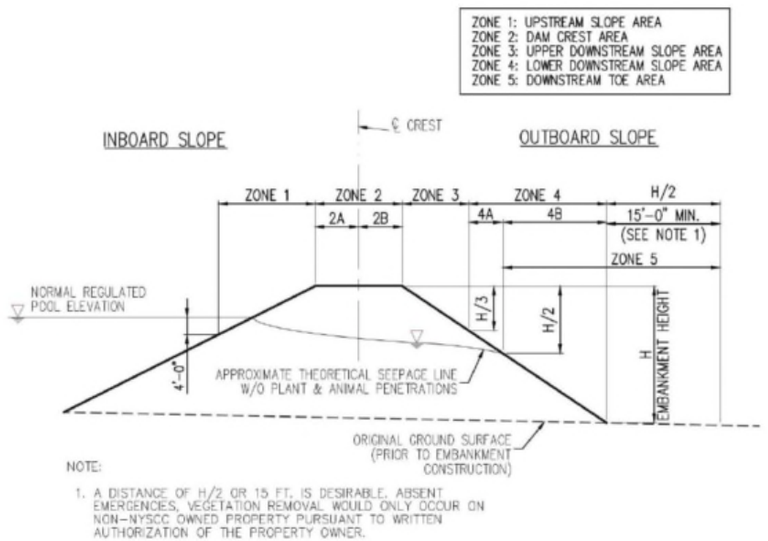
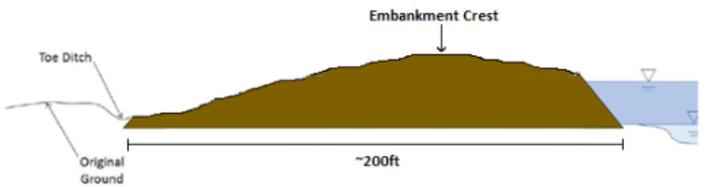
GB-4.1.1a	Section 4 on Embankment Inspections, lists 9 items to be inspected, including Toe Drain Flow. That item will require the Bank Inspector to walk along the bottom of the embankment sections. How will the Canal Corporation be sharing the Inspection Schedule with their Neighbors so that when the Bank Inspector is walking at the BOTTOM of the Earthen Dams, along neighboring properties, they will be "expected", and not a surprise at 8am in the morning?	8	Guide Book, page 4-1	Please refer to Sections 9 & 10 of the Guide Book for discussion of
GB-4.1.1b	How many work hours are dedicated to bank walk inspections? How many Bank Walk inspectors are there?	1045	Guide Book, page 4-1	Comment is acknowledged, however, it is outside the scope of the Generic EIS.
GB-4.1.1c	How often will Embankment Inspections occur? The Guidebook Section 4.1 uses a Hazard Class Rating System of A,B,C , which has no corresponding relationship with the new Canal Corporation Embankment Rating System previously identified in Chapter 3.	8	Guide Book page 4-2	Please refer to Section 4 of the Guide Book for a detailed discussion of embankment inspection requirements. Guide Book Section 4.1 ties back to Table 3.1-1.
GB-4.1.1d	Minimum Frequency: Rather than Semiannually etc. what is the frequency for the navigation season? Is there a value and necessity for inspections during the non-navigation season? Isn't there a value to inspect dewatered structures? How many "Dam Safety Engineers" are employed by NYSCC?	1045	Guide Book Page 4-2	Please refer to Section 4 of the Guide Book for a detailed discussion of embankment inspection requirements. Inspections for seepage conditions are preferable during navigation season.
GB-4.1.1e	We (the pubic) are willing to be part of the solution. We are willing to be volunteer inspectors, walking the canal, getting down into the woods and looking for wet spots. Develop a volunteer corps of canal stewards who would each be trained to recognize seepage or other issues, and assigned a particular part of the canal (possibly a 1-mile stretch) which they would inspect daily for any issues + then report to the Canal Corp.	544, 761, 917, 970, 1084		The NYSCC intends to work with partners at other federal, state and local agencies who have experience developing and administering stewardship programs to pilot a volunteer inspection program for the earthen embankments.
	It seems that the cost for clearing the embankments and maintaining them is very expensive. That money can be better spent hiring people who can walk through the trees and brush and inspect the embankments in person.	917		Comment is acknowledged, however, it is outside the scope of the Generic EIS.
GB-4.2	Identification, Review and Programming of Corrective Actions			
GB-4.2a	• 609-It seems clear to me, after reading about this [CA study – see Section GB-1.4b], that there are areas of the Great Embankment that should certainly be cleared of much of their overgrowth. In particular, the embankment along Marsh Rd where the canal crosses Irondequoit creek is dangerously overgrown. I know from experience that linear winds can come down the Irondequoit creek valley, hit the	609, 859		Comment is acknowledged. Mapped embankment locations are available online: https://www.nyscanalintegrity.org/program-and-maps

Subject Number	Subject/Comment	Comment Numbers	DGEIS/Guide Book References	Response
	canal wall and cause a destructive micro-burst, felling trees and bringing down power lines. Those trees need to be cut down. The state should also put in a path, at a reduced angle, to replace the existing path which goes straight up the embankment opposite the creek, creating a potential avenue for erosion. If the state doesn't provide a path, people will put their own in, scrambling up the canal wall, which creates a hazardous situation both for people climbing the path in winter, and for water eroding down through the embankment wall. The California studies agree that it's important to leave the lower, landward facing slopes of an embankment clear of vegetation so that seepage can be easily detected. There are areas where walkers along the towpath are looking down at rooftops, and it is particularly important in those areas to catch seepage (which is more likely to be caused by humans or animals than trees) before it becomes critical. On the other hand, there are areas where the top of the embankment is wide. Trees along the top of a wide embankment provide much needed shade to the towpath, and aren't much of a hazard to either the embankment or utility lines. Those should stay. I'd urge the Canal Corporation to proceed thoughtfully, starting with areas, like Marsh Rd, where vegetation provides a clear hazard. It is not enough to just cut trees and hope for the best. The trees on the Marsh Rd embankment have been cut back before – but without an active planting and maintenance plan they've just regrown, with fast-growing trees that are likely to topple in a storm. There has to be a plan in place that not only cuts the trees but replaces them with something that will not require a ton of re-cutting/mowing. That slope is too steep to mow. • 859-. . . based on the draft plan and GEIS, it's not clear exactly which embankments are to be targeted, and one can only hope that each area is indeed treated independently, according to local needs and preferences, and the scientific evaluation of the situation.			
GB-4.2b	The effect of trees on slope stability depends on many factors (e.g. slope, soil composition, tree species, size, orientation, and health, etc.) and therefore should be addressed on a case-by-case basis.	639		Comment is acknowledged.

Subject Number	Subject/Comment	Comment Numbers	DGEIS/Guide Book References	Response
GB-4.2c	When is the decision made as to whether re-establishment of uniform sideslope is required? At the plan preparation level, or immediately after removal of significant trees?	1015		Uniform side slopes will typically be established. Re-establishment of uniform side slopes will be performed consistent with design drawings, a SWPPP, and soil and erosion control drawings.
GB-4.2d	Can you confirm the criteria for installing rock riprap or the other hard material on an embankment sideslope? Does the NYSCC anticipate the use of a hard material on any embankment slopes in the Town of Perinton?	1015		None of the specific seepage control methods, including exposed rock blanket drains referred to in the comment, have been decided for locations in the Town of Perinton. However, in residential areas the preference would be for a buried blanket drain or buried toe drain covered with turf. The specific seepage control methods, if required, must also be capable of being constructed within Canals lands.
GB-4.2e	For embankment slopes that require modification to the toe of slope location, how is the NYSCC integrating drainage considerations at the toe of the slope to avoid redirecting surface water onto private property? Where will any collected surface water be directed?	1015		The New York State Canal Corporation will seek to maintain existing drainage patterns or reestablish the drainage patterns that existed at the time of the most recent canal expansion (in the case of Perinton that would be 1918).
GB-4.2f	Please provide more information on the logistics of heavy equipment entering and exiting the canal trail corridor during the project. Where will construction access points be located? How long will the trail be closed? With the work be conducted in phases to minimize the impact to trail users?	1015		The principles outlined in Section 8 of the Guide Book will be followed, however, location specific plans will be prepared that describes the planned work, access points and trail closures. Work will be conducted in phases.
GB-4.2g	What is the anticipated schedule and construction duration from tree removal to complete restoration for the canal embankment sections in Perinton?	1015		This will be highly dependent on the length of embankment involved, canal operations and seasonal conditions that effect tree removals.
GB-4.2h	Why is there no on-site inspection included in the recommendation of corrective actions? Why is there a delay in contacting local officials or members of the public? Could this pose a risk to public safety?	1045	Guide Book Page 4-3	Comment is acknowledged, however, it is outside the scope of the Generic EIS.
GB-4.2i	Workflow – "Does the work require skills and or equipment outside Canals ability?" What skills or equipment does Canals not have?	1045	Guide Book Page 4-5	Comment is acknowledged, however, it is outside the scope of the Generic EIS.

Subject Number	Subject/Comment	Comment Numbers	DGEIS/Guide Book References	Response
GB-4.4	Emergencies			
GB-4.4a	Chapter 4, Item 4 states that for Canal Embankment Emergencies neighbors should be calling the Thruway State Operations Center (TSOC) 1-866-691-8282. Why are we not calling NYPA or the NYSCC?	8, 1045	Guide Book, page 4-7	The Canal Corporation had an agreement with Thruway to utilize their dispatch. The agreement terminated in 2022 and the number has been replaced: Canal Emergency Dispatch at 1-833-538-1042
GB-4.4b	What is your plan if the machinery damages the wall and the integrity of the structures during removal? How will you quickly communicate to residents and businesses?	493		Sections 9 and 10 of the Guide Book describe communication to communities.
GB-5	Isolation and Dewatering of Embankment Segments			
GB-5a	GB Page 5-2: Prior to dewatering canal via sluice gates, valves in waste weirs or bottom drains, the NYSCC should coordinate/communicate this event with local governments so that we can consider downstream impacts and be prepared to respond to calls from concerned residents.	1015		The following statement is being added to Section 5.3. "When dewatering of sections of canal between identified isolation points is planned, the community and public will be provided advance notification in accordance with the provisions of Section 9 or 10."
GB-6	Embankment Features			
GB-6a	Figure 5.3-1 On the left side of the figure there is a line labeled as "Original Ground" and an arrow labeled "Toe Ditch." The embankment in dark green extends below those marked features. Where is the embankment Toe located?	1045	Guide Book, page 6-1	The figure has been edited to provide more clarity.
GB-6.1	Typical Canal Embankment Sections			
GB-6.1a	How many embankment configurations are there? How are they described? There are embankments with vertical and angled inboards. There are sections with concrete bottoms. How are these described and classified?	1045	Guide Book, page 6-1	The embankment rating system is described in Section 3 of the Guide Book. Embankment features are described in Section 6 of the Guide Book.
GB-6.1a	What are the sources for Figures 6.1-1 and 6.1-2?	1045	Guide Book, page 6-2	The reference map information has been added.
GB-6.2	Embankment Features			
GB-6.2a	What is the source of Figure 6.2-1? Why is vegetation allowed in Zone 2B? Why is vegetation allowed in Zone 3? What is the source of "3 inches"? Why is everything below 3" to be removed? Why is the border between Zone 2A and 2B at the centerline? Why is the border between Zone 4A and 4B there? What is the significance of "H/3"? What is the significance of "H/2"? What is the significance of "H"?	1045	Guide Book, page 6-4	Page 6-3 explains the embankment zones are based on FEMA 473.
GB-6.2b	GB Page 6-4 – Figure 6.2-1: Them embankment zone description for Zone 2B and Zone 3 indicates these two zones overlap. However, the graphic shows a clearly defined break	1015	Guide Book, page 6-4	The narratives describing Zone 2 and Zone 3 have been edited to match Figure 6.2-1 and remove the inconsistency.

Subject Number	Subject/Comment	Comment Numbers	DGEIS/Guide Book References	Response
	between zones – which is correct? Also, what is the purposed/benefit of Zone 4B and Zone 5 overlapping?			
GB-6.2c	<u>Embankment maintenance policy does not consider geometry</u> Below is a diagram and summary of policy for Canal Embankments:  **Figure 6.2-1: Embankment Zones** • NYSCC policy is to remove all woody vegetation growth located in Zone 1. • 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. • NYSCC policy is that woody vegetation in Zone 3 shall be removed except in very limited instances • NYSCC policy is to remove all woody vegetation growth located in Zone 4. • NYSCC policy is to remove all woody vegetation growth located in Zone 5.	1032		There are no inventoried embankments in the Village of Pittsford or specifically at Schoen Place. A map of canal embankments is available online: https://www.nyscanalintegrity.org/program-and-maps

Subject Number	Subject/Comment	Comment Numbers	DGEIS/Guide Book References	Response
	The blanket policy of tree eradication for canal embankments that does not differentiate steep embankments 20 feet wide from broad embankments 20 miles wide is irrational. Important Canal embankments in the Village of Pittsford, such as Schoen Place, look more like the diagram below with the crest a long distance from the water with shallow slopes. It is irrational to adopt blanket statements on embankment maintenance without considering their geometry.  <u>The proposed maintenance policy would severely impact Pittsford.</u> Below are images of Schoen Place in the Village of Pittsford:  *Schoen Place waterfront in the Village of Pittsford.*			

Subject Number	Subject/Comment	Comment Numbers	DGEIS/Guide Book References	Response
	 *Canal embankment at Schoen Place in the Village of Pittsford. Nearly every tree in view is to be removed by the Earthen Embankment Integrity Program as proposed by the New York State Canal Corporation.* Schoen Place meets the definition of embankment but it is short and very broad. The width of the "embankment" at Schoen Place is over 200 feet wide. A summary of proposed treatment under the Guidebook: • A walking path, planted line of trees, and portions of a road are on the inboard slope (Zone 1). Policy calls for unnecessary removal all trees, and possibly the road and/or walkway. • The crest of the "embankment" at Schoen Place contains parking lots, private yards, and buildings, and portions of a road (Zone 2A, 2B). Policy calls for removal of most or all trees. • Moving further from the Canal are buildings and parking lots (zone 4, zone 5). Policy calls for removal of all landscaping trees around the parking lots and buildings.			

Subject Number	Subject/Comment	Comment Numbers	DGEIS/Guide Book References	Response
GB-6.2d	Why isn't the freeboard height included? What other dimensions and characteristics are important to determining stability of earthen embankments? Are these dimensions and characteristics part of the embankment inventory?	1045		While this comment is out of scope it is acknowledged.
GB-6.3	Outboard Slope Embankment Features			
GB-6.3.2	Drainage Channels and Ditches			
GB-6.3.2a	Toe Ditch: A drainage swale running parallel to the embankment at the toe, where the embankment meets original ground. The ditch allows for collection and conveyance of seepage and surface drainage." Where is the Toe located?	1045	Guide Book Page 6-6	Figure 5.3-1 has been edited to clarify the toe ditch location.
GB-6.6	Structures Integrated Within Embankment			
GB-6.6a	Structural features ... adjacent to and within the embankment. The maintenance of these ... is outside of the scope of this Guide Book... Detailed inspection of these features is also outside of the scope of this Guide Book..." Do these structures provide telltales of water seepage? Since you have determined "Often, failures initiate at the interface of the embankment with other features...." isn't the exclusion of these interfaces a major blind spot in inspection? What is the source of the statement "Often, failures initiate at the interface..."?	1045	Guide Book Page 6-6	Inspections of features mentioned in the comment are also performed on a regular basis. Repairs and rehabilitation of those features are a separate SEQR action and they are not addressed as part of the Guide Book.
GB-6.6b	Where is "Figure 6.6-3: Concrete Wall along Canal" located?	1045	Guide Book Page 6-9	The wall location is in Little Falls, NY. The location has been added to the figure.
GB-7	Embankment Maintenance			
GB-7.1	Maintenance Categories			
GB-7.1a	"Many of these maintenance tasks ... in-house staff... ...Other items that require special equipment, staff or larger work force." Which items require capabilities outside the Canal Corp.?	1045	Guide Book Page 7-1	While this comment is out of scope it is acknowledged.
GB-7.1b	For mowing grass Chapter 7 states minimum 2X per year. Further in the Chapter the desired grass height maximum is stated at 12". Do you think it is practical, even possible to think that mowing only 2 times can achieve both conditions?	8	Guide Book, Table 7.1-1, page 7-2	The estimate of mowing frequency to achieve a maximum grass height of 12" is based Canals' maintenance staff experience, however, since the Guide Book is a living document and since all locations do not receive the same sunlight or rainfall, Canals Operations will adjust mowing frequency by location.
GB-7.1c	Meadow guidance is to mow every 3 years (or 1/3 each year), not 1-2 times per year. Why the high frequency which is not necessary to suppress woody growth?	822	Guide Book Page 7-2	While this comment is out of scope it is acknowledged.

Subject Number	Subject/Comment	Comment Numbers	DGEIS/Guide Book References	Response
GB-7.1d	Table 7.1-1: Frequency, Risk Priority, and Category…" How was the "Risk*" determined for each category? How was the "frequency" determined? When was the last "as needed" event for each category? For each category, is there any preemptive or preventive maintenance performed? What is historic frequency for each category for example, the last 5 years? How does "Tree and Brush Removal" become a "Medium" risk? "Japanese Knotweed" is an invasive species so why isn't invasive species a category? Why is "Concrete Joint Vegetation" and "Joint Vegetation Removal and Repointing" rated as low priority?	1045	Guide Book Page 7-2	While this comment is out of scope it is acknowledged.
GB-7.1e	Aren't treed areas less expensive to maintain than mowing grass weekly during the summer months?	302		While this comment is out of scope it is acknowledged.
GB-7.1f	Prune out the dead ash trees.	359, 615, 630		While this comment is out of scope it is acknowledged.
GB-7.1g	There are a few large limbs which hang over the path and the edge of the canal that need some attention. Reshaping these trees, by removing these large limbs will ensure the safety of those using the towpath.	360, 379, 856		While this comment is out of scope it is acknowledged.
GB-7.1h	The massive rains we've had will also be even more problematic if the trees and vegetation are cut and razed. The canal trail will be flooded, and likely resident's yards nearby.	172		While this comment is out of scope it is acknowledged.
GB-7.1i	Concern that those doing the clearing will remove whatever is easiest for them rather than the absolute minimum that needs to be removed. There should be clear standards and expectations of what is allowable. They know the difference between not enough and too much.	760, 856		While this comment is out of scope it is acknowledged.
GB-7j	As soon as a grassy area starts to grow [Spencerport to Brockport], it gets mowed! Too often and too short!!! Way too often and way too short!!! There are many grassy areas that are treated like it's someone's front yard. PLEASE let the grassy areas become meadow areas with only occasional mowing to promote wildlife, birds, pollinators, and our enjoyment of the canal.	783		Mowing practices used by Canals Operations are similar to those used by other New York State agencies that maintain earthen embankments. The EEIP includes the use of pollinators as ground cover.
GB-7k	Why are you forging ahead with turf grass when you have the much better option of pollinator support in your plan? Turf grass is terrible	822, 1080		The EEIP includes the use of pollinators as ground cover.

Subject Number	Subject/Comment	Comment Numbers	DGEIS/Guide Book References	Response
	822- Why . . . are you forging ahead with turf grass when you have the much better option of pollinator support in your plan? 1080- Restore with something other than turf grass. Grass is terrible.			
GB-7l	GB Page 7-2 – Table 7.1-1 Frequency, Risk Priority and Category for Maintenance Tasks: Please Clarify whether this table is intended to be used on canal embankment slopes that have already been cleared of woody vegetation.	1015	Guide Book Page 7-2	Table 7.1-1 applies to canal earthen embankments covered under the EEIP. Mapped embankments are available online: https://www.nyscanalintegrity.org/program-and-maps
GB-7m	During the public meeting I attended I asked what was the embankments maintenance plan in the past and why there was a need to rewrite a plan. I was told "We don't know" and then they moved to the next question. Such a response is neither acceptable nor believable. I want to reiterate the question and would like a proper, meaningful and complete answer.	1036		While this comment is out of scope it is acknowledged.
GB-7.3	Vegetative Maintenance			
GB-7.3a	"...these benefits do not outweigh the substantial risks associated with embankment failure that could be initiated by the presence of the vegetation..." What are the "substantial risks"? What is the source for this information? "In contrast, grass or "soft" vegetation is beneficial to the embankment." What is the source of the term "soft." What are the benefits of grass on an embankment? Does grass prevent erosion from rain better than woody vegetation? Does grass prevent foot erosion from foot traffic better than woody vegetation? When and where was the last Erie Canal embankment overtopping event?	1045	Guide Book Page 7-5	While this comment is out of scope it is acknowledged.
GB-7.3.1	Why It's Necessary			
GB-7.3.1a	"Non-compatible vegetation can harm the structural integrity of these impoundment structures, obscure visibility of the ground surface (necessary for inspections for other types of failures), impede access for maintenance and inspection, and encourage burrowing by rodents by providing habitat. 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.	1045	Guide Book Page 7-5	While this comment is out of scope it is acknowledged.

Subject Number	Subject/Comment	Comment Numbers	DGEIS/Guide Book References	Response
	Additionally, shade caused by woody vegetation can impede growth of more compatible grassy vegetation. 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. The presence of brush and trees can also hinder critical emergency responses to flooding or repair operations." What are the sources and evidence for each assertion within this section? Where is there an example of vegetation harming the structural integrity of the Erie Canal? Does woody vegetation prevent all inspection of embankments? Does grass impede inspection of embankments? What is the definition of "robust root systems"? What species of woody vegetation penetrates the phreatic surface? Does the penetration of the phreatic surface help reinforce embankments to reduce the potential for slides? What is the numerical risk of "piping" without and with woody vegetation? Is there any evidence of "...large trees ... ...uprooted by winds/erosion ..." that left "large holes in the embankment"? Does grass encourage groundhog or other animal burrowing activity? What does "impede access" mean? If "...catastrophic embankment failure could be expected to occur within one to two hours," what is the fastest a "critical emergency responses to flooding or repair operations," could be implemented by the Canal Corp.?			
GB-7.3.1b	"The proper maintenance of vegetation for water impounding structures is well understood and accepted by the dam safety community and the various regulatory and advisory agencies tasked with dam safety including the USACE, FERC, USBR and FEMA." Are each of the individual members of these organizations fully versed on the impacts and interactions of vegetation on earthen embankments? How many of individual members of these organizations are fully versed on the impacts and interactions of vegetation on earthen embankments? What is the source for recommendations and guidelines relating to water impoundment structures? Have any members of NYPA or NYSCC contributed to any guidelines or scientific studies of earthen embankments?	1045	Guide Book Page 7-5	While this comment is out of scope it is acknowledged.

Subject Number	Subject/Comment	Comment Numbers	DGEIS/Guide Book References	Response
GB-7.3.2	How It's Done Safely			
GB-7.3.2a	Has the "The NYSDEC Owners Guidance Manual for the Inspection and Maintenance of Dams in New York State [NYSDEC, 1987]" been updated since 1987? Are there any documents from the 1950's you would like to reference? What are the professional requirements for "NYPA Regional Manager"? What "... zones" "intersect the phreatic surface of the water within the embankment..."?	1045	Guide Book Page 7-6	While this comment is out of scope it is acknowledged.
GB-7.3.2b	What is the weight limit for equipment on the embankment crest? What is the source of this information? What is the weight limit for equipment on the embankment slopes? What is the weight limit for equipment within the canal prism? For Zone 2, why is Zone 2 "...subdivided into equal length zones - Zones 2A and 2B by the centerline of embankment."? For Zone 3 "... the seepage line and zone of saturation in this portion of an earthen embankment are typically far enough below the surface," how far below the surface are they? What is your source for information?	1045	Guide Book Page 7-7	While this comment is out of scope it is acknowledged.
GB-7.3.1c	GB Pages 7-7 & 7-8: This portion of the guidelines outline NYSCC's policy for woody vegetation in each embankment zone. As each embankment section has different characteristics and associated risk, the Town requests the NYSCC provide ***project specific*** plans for review and engage the Town and property owners prior to starting removal of embankment vegetation. Appropriate coordination language should be incorporated in this section/ This comment also applies to Attachment 1 – BMP Page 2-10, which describes "preparation of removal plans". These plans should be shared with municipalities prior to starting work.	1015	Guide Book Page 7-7, 7.8	As a result of public comment NYPA will be adding a new chapter (Chapter 10) to the Guide Book that defines a more in-depth and collaborative process for public engagement in locations where improvements under the EEIP would exceed community thresholds defined in Section 8 of the Guide Book.
	"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.**	1071	Guide Book Page 7-7, 7-8	Section 7 has been revised to clarify embankment maintenance goals when regulatory or community thresholds are not exceeded. Section 8.15 has been revised to clarify the process when community thresholds are exceeded, specifically that a minimum of two alternatives will be developed and presented to the community in the project area.

Subject Number	Subject/Comment	Comment Numbers	DGEIS/Guide Book References	Response
	Zone 3: … **Due to the relatively small dimensions of the canal embankments in relation to the size and influence of root penetration, NYSCC policy is that woody vegetation in Zone 3 shall be removed except in 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.			
GB-7.3.1d	It is stated "Due to the relatively small dimensions of the canal embankments in relationship to the size and influence of root penetration." What are the dimensions of sizes and influences for root penetrations? What are your sources? What relative dimensions represent safe and unsafe? For Zone 4: it is stated, "This zone typically contains the interceptions of both the zone of saturation and the seepage line with the downstream slope." What is the source of this statement? What does it mean?	1045	Guide Book Page 7-8	While this comment is out of scope it is acknowledged.
GB-7.3.1e	"Because the Canal property line is often located in this zone, it is essential to verify property limits prior to performing maintenance in this zone. " How often is "property line is often located in this zone" Zone 5? How often is the property line located in other zones? What impact does the location of the property line have on inspection? "13 Any exceptions to these rules require careful consideration, review by a professional engineer and approval by the Deputy Director, Engineering, Construction and Maintenance. Any such work should be monitored during construction by a professional engineer." Are the "professional engineer" or "Deputy Director" mentioned above required to have any specific training, certification or experience? What criteria will be used to evaluate exceptions?	1045	Guide Book Page 7-9	While this comment is out of scope it is acknowledged.

Subject Number	Subject/Comment	Comment Numbers	DGEIS/Guide Book References	Response
GB-8	Environmental Considerations			
GB-8.2	Rare, Threatened and Endangered Species			
GB-8.2a	As the Canal with wooded earthen embankments often provides a wildlife corridor, will adjacent or contiguous areas be evaluated to determine if activity will sever or hinder a wildlife corridor?	1045	Guide Book Page 8-1	Please refer to Section 3.7 of the GEIS for a discussion of Ecological impacts.
GB-8.2b	Canals proposed procedure is for site surveys to be required when a known occurrence of a state listed species is identified. When a survey identifies habitat for a species is present, Canals would implement measures to avoid the habitat, if the habitat can't be avoided, then Canals would engage with DEC. DEC suggests this language be modified, such that Canals should contact DEC at the time (as early in the project planning as possible) they would contemplate proceeding with an action in an area where a listed species occurs (identified through screening). In particular, Canals should reach out to the applicable DEC Regional Division of Environmental Permits office for review. DEC should be consulted at a minimum before Canals implements any surveys. This is to meet two concerns: 1) proper protocol for surveys is followed and 2) proper licenses (if required) are obtained to do the surveys).	1075		The Guide Book has been revised to clarify this procedure in accordance with the suggested language. The order of the text has been adjusted to better relate the sequence of activities to be followed.
GB-8.2c	The documents (reference as noted below) should replace "Natural Heritage" with Regional DEP office once they have a hit on either the Heritage database or the Environmental Resource Mapper (it should be the same underlying info). The only reason to consult with NHP is if Canals didn't have access to the data to know what species was present (as is the case if screening just uses the ERM). Once they know the species, all consultation should be initiated with DEC regional office where the project is located, as NHP does not have a role in review or issuance of Part 182 permits. The relevant sections where the above are discussed in the documents are identified below: • DGEIS section 3.7.2 (page 3-61) Potential Impacts – the narrative indicates when the project cannot fully avoid impacts to a listed species (potential presence identified using Natural Heritage data or other, e.g., DEC Environmental Resource Mapper or Environmental Assessment Form mapper) the Part 182 permit requirements come into play.	1075	Guide Book Page 8-4	The Guide Book and the FGEIS have been revised to clarify this procedure in accordance with the suggested language. The order of the text has been adjusted to better relate the sequence of activities to be followed.

Subject Number	Subject/Comment	Comment Numbers	DGEIS/Guide Book References	Response
	• DGEIS section 3.7.4 (page 3-69) Mitigation – when screening identifies a hit, and the species or habitat are confirmed through site visits, efforts will be made to avoid the habitat. If not feasible, Canals would initiate consultation with DEC. • Guidebook section 8.2 RTE (page 8-1) – canals states that "Prior to the commencement of any **maintenance activity that would require permit authorization** or approval by a state or federal agency, qualified personnel must evaluate the project area for the potential for RTE species and, **if necessary, consult** with US Fish and Wildlife Service (USFWS) and/or **NYSDEC Natural Heritage Program**. • Guidebook section 8.14, page 8-21, table 8.14-1 Permits, Thresholds and Requirements – the table (3rd row) has Consultation w/National Heritage Program – required for NYSDEC permits. Possibly should reference Natural Heritage Program, I would think this category falls under E/T species (and or rare) Permit (the next row in the table) and Canals should identify NYSDEC (regional office) and not Natural Heritage for consultation. Natural heritage can be useful to help identify known occurrences at the screening stage but not for consulting with regard to potential impacts and permit jurisdiction.			
GB-8.3	Surface Waters and Wetlands			
GB-8.3a	Example of a permit that could be used as a template with a list of authorized activities added – since it would not be project specific.	1075		Comment acknowledged.
GB-8.3.1	Surface Waters			
GB-8.3.1a	The guide book (page 8-5) should be changed to clarify that NYSCC is not exempt from Article 15. Rather, NYSCC is not required to obtain permits from NYSDEC but it must comply with the substantive requirements in Article 15 and regulation 6 NYCRR Part 608. These requirements may go beyond the best management practices discussed on page 8-6. Thus, it is recommended that the guide book include consultation with NYSDEC similar to what is described in the wetlands section (see page 8-7).	1075		The Guide Book has been revised to clarify the need for an Article 15 permit and provide more specifics regarding the need to consult with NYSDEC.
GB-8.3.2	Wetlands			
GB-8.3.2a	It should be noted somewhere in the guidebook that the application of pesticides within 100 feet of any state-regulated wetland requires a permit.	1075		A footnote was added is the discussion of State Wetlands.
GB-8.4	Cultural Resources			

Subject Number	Subject/Comment	Comment Numbers	DGEIS/Guide Book References	Response
GB-8.4a	Who is the current NYSCC Agency Preservation Officer (APO)? Isn't this position just a rubber stamp for NYPA policy and action?	1045	Guide Book Page 8-8	The name of the current APO is not relevant to the Guide Book. The role of the APO is explained in this section of the Guide Book.
GB-8.5	Control of Invasive Species			
GB-8.5a	I think you are missing a very important invasive tree – Ailanthus altissima or Tree-of-Heaven. It is the preferred host for the Spotted Lantern Fly, which is a significant threat to vineyards and fruit orchards in New York State. (Hilary Mosher – Finger Lakes PRISM – 315.781.4385 – understands this species very well.) One way to find known areas along the canal is to view the iMapInvasives inter-active database/map.	515	Guide Book Page 8-9	The Tree of Heaven (*Ailanthus altissima*) has been added to Table 8.5-1 of the Guide Book
GB-8.5b	• 1071-"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. • 1092- . . . Great Embankment, which is nothing but sand and alluvial material built at a very steep grade above where most residents are, and in, in retrospect, the trees that were planted in 1900 were specifically designated black locust to hold the sand, because the entire neighborhood between Pittsford and Perinton is nothing but alluvial material built up, way beyond grade . . .	1071, 1092	Guide Book Page 8-11	Section 8.5 states: "Agencies are required to prevent the introduction and spread of invasive species, as well as provide for their control, **where practicable**. Management activities should be context appropriate and consistent with landscape-scale and long-term strategic planning efforts." Each specific project will take the invasive species into consideration as they are planned and designed. This includes additional opportunities for consideration by Canal Corporation where community thresholds are exceeded. Canal Corporation does not agree with the conclusions drawn by the commenters.
GB-8.6	Hazardous Wastes/Contaminated Materials			
GB-8.6a	Were any "hazardous" or "contaminated materials" encountered during the tree removal projects on the west side in 2017 or 2018?	1045	Guide Book Page 8-11	While this comment is out of scope it is acknowledged.
GB-8.8	Scenic Management Guidelines			

Subject Number	Subject/Comment	Comment Numbers	DGEIS/Guide Book References	Response
GB-8.8a	Section 8.8 "Scenic Management Guidelines" of the Guidebook gives Guidelines for areas that are 1. public parks, or 2. of local importance, or 3. have Statewide Significance per NYSDEC policies. 8.8 and items listed in section 8.15 are local thresholds. The entire canalway trail is widely regarded as a public, linear, recreational park, as in, for example, the Canal 2025 Recreationway Plan. Can guidelines like those in section 8.8 be applied to the entire trail to support hikers and cyclists beyond the local sites? Thresholds on the distance along the trail without shade would be one I'd like.	971	Guide Book Page 8-13	See Comment EIS-3.11e regarding Section 3.11 of the DGEIS.
GB-8.8b	• 1045-3. Where EEIP activities would have a significant adverse effect 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."" The entire Erie Canal system has been identified as an "aesthetic resource of Statewide Significance" so will the procedures in Section 8.15 be followed at all times? "EEIP activities will occur in a planned manner that allows for an assessment to save a minimal quantity of trees." Is "minimal quantity" equal to zero? What numerical value is "minimal quantity"? • 1082- Please save trees as much as possible!	1045, 1082	Guide Book Page 8-13	The potential for impacts to aesthetic resources was identified in the Generic Environmental Impact Statement including mitigation measures. Section 8.15 of the Guide Book will be followed when the Community Thresholds described table 8-7 of the Guide Book are triggered.
GB-8.8c	"In all other embankment zones (Zone 1, Zone 2A, Zone 4, and Zone 5) establishing turf grass would be the primary means of … …restoring embankment surfaces" Restoring to what condition or standard? When was this condition or standard established? What evidence do you have for this condition or standard?	1045	Guide Book Page 8-13	While this comment is out of scope it is acknowledged.
GB-8.8d	Scenic Management Guidelines: If trees or other vegetation are replanted, will NYSCC provide perpetual maintenance, including watering during initial establishment period and installation of replacement plantings for plants that don't survive? Also, is there any flexibility in planting types? Best Management Practice – Attachment 1 indicates vegetative screening only consists of grasses and pollinator plantings. However, the section of embankment reconstruction recently complete in Brockport included planting of ^' to 8' tall arborvitae and dogwood shrubs in Zone 2B and crest edge of Zone 3. Will a variety of plantings be considered to embankments reconstructed in the Town of Perinton?	1015	Guide Book Page 8-14	The EEIP and Guide Book provide for perpetual maintenance of earthen embankments, which includes more than tree removal or reconstruction of embankments. Vegetation established following a reconstruction will be maintained, which includes replacement of vegetation that may fail. The planning/design of specific embankment segments will determine what plantings will work best for that location. Planning has not yet been undertaken for embankments in the Town of Perinton.
GB-8.8e	What is the difference between "just herbaceous and shrub cover," and trees? How will the NYSCC decide this difference?	1045	Guide Book Page 8-14	While this comment is out of scope it is acknowledged.

Subject Number	Subject/Comment	Comment Numbers	DGEIS/Guide Book References	Response
	"2. ...the landscape architect would determine the aesthetic suitability of the preserved tree." What are the standards for tree retention for landscape architects? "engineer would determine the feasibility of its retention with respect to its effect on embankment integrity and trail user safety." As no tree has been shown to pose a risk to embankment integrity, what standards will be used to make this determination? Beyond, integrity, what other factors will be evaluated by an engineer, to decide tree retention? "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 AASHTOs Guide for the Development of Bicycle Facilities (AASHTO, 2012)." What is the clear zone specified by AASHTO? How many bicycle tree fatalities or injuries have occurred on the Erie Canal trail system? How many bicycle tree fatalities or injuries are documented anywhere? What is the effect of speed on the size of the clear zone? Are AASHTO standards based on scientific data? Does the AASHTO organization include members that are not experts, or not specifically trained, or do not have first-hand experience in specified topic areas? "Select vegetation may be retained only on the landward side of the embankments in Zone 2B and Zone 3." Can vegetation provide a safety barrier to limit accidental falls or bicycle crashes on to riprap, into the water, or accidental drowning? What is the definition of 3. ... danger tree"? What is the source of this information? What are the dimensions for "4. In areas where there is a very wide..."? "6. Where stone lining occurs." Is stone lining an original canal condition? Is riprap installation a restoration? Is riprap a modification to the embankment? "7. In locations where regulatory or community thresholds identified above are exceeded, and seepage controls are required, NYSCC will make all possible efforts to provide seepage controls (typically located in Zones 4 and 5) that do not include			

Subject Number	Subject/Comment	Comment Numbers	DGEIS/Guide Book References	Response
	exposed gravel surfaces but buried gravel covered with new turf." Is a exposed gravel surface a standard treatment for seepage? Is it the intent to use exposed gravel surfaces in areas "...where regulatory or community thresholds identified above..." are NOT "...exceeded, and seepage controls are required"?			
GB-8.8f	"The Scenic Management Guidelines include: . . . 2. If a mix of semi- to mature trees are identified in Zones 2B and 3, a site 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 AASHTOs 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?	1071	Guide Book Page 8-14	The question in the comment does not specify the location of the photograph, nor does it provide a description of the factors involved in making such a determination. This FGEIS is of a programmatic approach that considered the impact of removing such trees within the scope of this review, and Canal Corporation has provided for mitigation through processes described in the Guide Book. Assuming this location is within an area where community thresholds are exceeded as described in the Guide Book, such as would be for work planned in the Great Embankment Park, the process is described in Section 8.15 of the Guide Book.

Subject Number	Subject/Comment	Comment Numbers	DGEIS/Guide Book References	Response
				
GB-8.8g	"The Scenic Management Guideline 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.	1071	Guide Book Page 8-14	Projects on the Great Embankment would trigger processes described under Section 8.15 in the Guide Book, due to one or more community thresholds being met. Canal Corporation would develop, at a minimum, two alternatives that will would be presented to the community taskforce. For additional detail on the process please refer to Section 8.15.
GB-8.9	Noise			
GB-8.9a	For those loud noise source and noise sensitive receiver situations where a line of sight through more than 200 feet of tall, dense vegetation is planned for removal." What is	1045	Guide Book Page 8-15	Noise analysis is based on Federal Highway Administration (FHWA) guidance which is summarized

Subject Number	Subject/Comment	Comment Numbers	DGEIS/Guide Book References	Response
	the definition or standard for tall? What is the definition or standard for dense? What is the source for these definitions or standards? What is an example location of this on the Erie Canal? "The NYSCC will conduct a screening of individual embankment projects to identify lines of sight ... ...The screening will consist of the following steps: 1. A desktop evaluation." When the word screening is used, does that mean evaluation? Has this "desktop evaluation" ever been performed before? If so, please provide documentation.			in National Cooperative Highway Research Program Report 25-34, Supplemental Guidance on the Application of FHWA's Traffic Noise Model, Appendix I – Tree Zones (NCHRP 2014). Please refer to Section 3.13.2 – Potential Impacts of Proposed Action, of the GEIS for additional discussion.
GB-8.9a	Why is a "... field visit during the growing season" rather than the non-growing season? What standards and values are used for "3. Acoustics calculations"?	1045	Guide Book Page 8-16	The methods presented in Section 8.9 of the Guide Book are derived from NYSDEC, NYSDOT and FHWA guidance as cited in the Guide Book.
GB-8.14	Permitting Requirements			
GB-8.14a	"Endangered/Threatened Species (Incidental Take) Permit... ... Where the "take" of listed species cannot be avoided" Can the "take" of listed species be avoided by not removing trees and woody vegetation?	1045	Guide Book Page 8-22	The purpose of Table 8.6: Permits, Thresholds and Requirements is to show when a permit is needed. Please refer to Section 3.7.2- Potential Impacts of Proposed Action, of the GEIS for discussion of Rare, Threatened and Endangered Species (RTES) and when an incidental take permit may be needed.
GB-8.14a	*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 laws, or is the only consistency review of EEIP work within Pittsfield done by the NYSDOS? If it is the latter, when does NYSDOS do its consistency review? At the time NYSCC adopts the EEIP for the statement 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?	1071	Guide Book Page 8-22	State agencies are informed of Local Waterfront Redevelopment Plans (LWRP) by the Department of State (DOS) upon issuance. Canal Corporation will perform EEIP work in consideration of and consistent with the LWRP(s) and in accordance with Canal Corporation's management practices for earthen embankments as described in the Guide Book.
GB-8.14a	*Comment:* Can NYSCC provide any examples of EEIP work within the Town of Pittsford which would not be consistent with work described in the Guide Book or beyond the scope or parameters of the DGEIS, such that separate, additional SEQRA review would be required?	1071	Guide Book Page 8-2	Work needed in any municipality that requires acquisition of right-of-way to perform, such as extension of an existing embankment, is outside the scope of this FGEIS and require an additional SEQR review.

Subject Number	Subject/Comment	Comment Numbers	DGEIS/Guide Book References	Response
GB-8.14b	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 concerns is: is there any flexibility to the clear-cutting rules outside of the limited discretion for trees in zones 2B and 3?	1071	Guide Book Page 8-23, 8-24	By conducting a generic review under SEQRA of a programmatic approach as described in the Guide Book for Canal Corporation's implementation of its Earthen Embankment Integrity Program, the Canal Corporation is considering the environmental impacts of projects/activities that may be performed as part of the program. An assessment of impacts from pollution, light, or noise are part of that assessment. For any projects where community thresholds are exceeded – which are described in the Guide Book, and include projects in or adjacent to parks, areas that are part of a Local Waterfront Development Program, areas where the canal is part of a municipal comprehensive plan – the impacted community(ies) will be provided two alternatives, at a minimum, which can better mitigate impacts from pollutants, light, and noise. The alternatives are described further in Section 8.15 of the Guide Book.
GB-8.14c	"Endangered/Threatened Species (Incidental Take) Permit… … Where the "take" of listed species cannot be avoided" Can the "take" of listed species be avoided by not removing trees and woody vegetation?	1045	Guide Book Page 8-23	The purpose of Table 8.14-1: Permits, Thresholds and Requirements is to show when a permit is needed. Please refer to Section 3.7.2- Potential Impacts of Proposed Action, of the GEIS for discussion of Rare, Threatened and Endangered Species (RTEs) and when an incidental take permit may be needed.
GB-8.14d	Guidebook section 8.14, page 8-21, table 8.14-1 Permits, Thresholds and Requirements – the table (3rd row) has Consultation w/National Heritage Program – required for NYSDEC permits. Possibly should reference Natural Heritage Program, I would think this category falls under E/T species (and or rare) Permit (the next row in the table) and Canals should identify NYSDEC (regional office) and not Natural Heritage for consultation. Natural heritage can be useful to help identify known occurrences at the screening stage but not for consulting with regard to potential impacts and permit jurisdiction. See Comment GB-8.2c	1075	Guide Book Page 8-21	That row has been removed based on this and discussion in previous portions of these comments.

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GB-8.15	SEQR Thresholds and Decision Procedure			
GB-8.15a	Your own document: New York State Canal Recreationway Plan refers to the Canal (page 51) as a "Linear Park". Why does the "Community Threshold" for parks not apply to the entire length of the canal?	784		In the past 10 years the Canal Corporation, on average, has experienced one earthen embankment incident per year that has resulted in closure of a section of canal or feeder and/or the reduction of navigation depths for a period of time. The Canal Corporation is presently monitoring over 300 active seeps in the 130 miles of inventoried canal embankment. The stability of engineered earthen embankments of the Erie Canal system is based on structural and seepage analyses of the earthen embankments as structures comprised of a uniform material (compacted, non-organic soil with an appropriate grain size distribution). Tree roots and other intrusions make earthen embankments more vulnerable to seepage and stability failures because root systems don't possess engineering properties consistent with because a properly compacted soil material. In the course of developing the EEIP, no published studies have been found stating beneficial or neutral effects of tree roots in water -containing embankment stability, nor have any been provided through the comment period. Appendix B includes historical analysis that show piping (seepage) through earthen embankments is the most likely cause of dam embankment failure. The EEIP therefore follows the recommendations of dam safety agencies for vegetation management of the earthen embankments.

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				NYSDEC Program Policy DEP-00-2 is a guidance document internal to the NYSDEC. However, many of the principals were incorporated in the SEQR for the EEIP and/or the Guide Book. Section 8.15 lays out objective criteria to identify potential aesthetic impacts.
GB-8.15c	GB Page 8-24: The link to community thresholds appears to be missing or incorrect.	1, 1015, 1045	Guide Book Page 8-24	Thank you for identifying this issue, it has been corrected.
GB-8.15e	"1. Remove trees and brush smaller than 3 inches in diameter at breast height (DBH) that impede inspections." What is the definition of impede? Does "impede" include use of remote sensing, satellite, areal or drones? Can inspections be performed now? Are there any locations where inspections cannot be performed? Are they critical locations and if yes, what is the definition of critical?	1045	Guide Book Page 8-24	Embankments cannot be property inspected in a vegetated state (e.g., heavy ground cover). Vegetation maintenance is necessary to accurately determine condition rating and risk.
GB-8.15f	2. Perform a tree inventory and an embankment condition survey. What is involved in a tree inventory? What attributes are to be evaluated for "...an embankment condition survey"?	1045	Guide Book Page 8-24	Please refer to section 4.1.2, 4.1.3 & 4.1.4 of the Guide Book for inspections requirements.
GB-8.15g	"3. Engage with stakeholders based on specific thresholds identified." The word "stakeholders" is used in different contexts. What is the definition for "stakeholder" for each context in this section and in this document?	1045	Guide Book Page 8-24	Stakeholders include municipalities, residents, property owners, businesses and non-governmental organizations.
GB-8.15h	"4. Evaluate the effectiveness of potential mitigation measures from the Guide Book." Have any of the "...potential mitigation measures from the Guide Book..." ever been tested for "...effectiveness"? Where have they been tested? What were the results?	1045	Guide Book Page 8-24	This comment is out of scope
GB-8.15i	"5. Perform more detailed inspections, including detection of embankment seepage and embankment stability monitoring." What are the standards for "detection of embankment seepage"? What are the standards for "embankment stability monitoring"?	1045	Guide Book Page 8-24	This comment is out of scope.
GB-8.15j	6. If the results of the detection and monitoring of embankment seepage and embankment stability suggest that the embankment is stable	1045	Guide Book Page 8-24	This does not appear to be a question or comment.
GB-8.15k	7. If the results of the ... ..., corrective engineering solutions would be implemented. Such solutions are not addressed in the Guide Book. Implementation of corrective engineering solutions would be considered a separate site-specific action under SEQR and would be reviewed accordingly." Why are such solutions not addressed by the guide book?	1045	Guide Book Page 8-24	The solutions are dependent on too many site-specific factors requiring specialized expertise as such it is not possible to accurately gauge potential impacts of such unique actions in the absence of a detailed design

Subject Number	Subject/Comment	Comment Numbers	DGEIS/Guide Book References	Response
GB-8.15l	GB Page 8-25 Figure 8.15-1 Maintenance Solutions Decision Tree: The community threshold reference to "Table 8" should be "Table 8.15-1". This figure also be revised to reorient the engagement of stakeholders prior to starting tree clearing (see DGEIS Comment EIS-1.3.4b above).	1015	Guide Book Page 8-25	The figure will be revised to clarify that the reference is to Table 8.15-1. The < 3" trees and brush need to be removed and the embankments inventoried because it is necessary to thoroughly clear underbrush and < 3" trees (which don't require stump removal) to understand what the embankment safety and integrity issues are, and to understand the trees are in Zones 2B and 3.
GB-1.15j	Regarding "Figure 8.15-1 – Maintenance Solutions Decision Tree" in the DGEIS guidebook. On site plan applications the Town [Amherst] will typically send notification to property owners within 600 ft of the proposed action/application. Who is notified of the need for a maintenance project? Is it the property owner, Town and other agencies during the SEQR review? Will there be a notices sent to other landowners within the vicinity of the proposed maintenance work?	402	Guide Book Page 8-25	Please refer to Sections 9 & 10 of the Guide Book.
GB-9	Public Relations & Community Outreach			
GB-9a	Involve all the canal side communities in developing a selective cutting plan. We need to find a compromise/middle ground to ensure the canal is safe without impacting use and enjoyment. The community wants NYSCC to be more transparent and wants to participate in this decision. The community wants to see details of contracts related to clear cutting. •	329, 362, 503, 729, 736, 747, 916, 990, 1094		Please refer to Section 10 of the Guide Book for additional detail on implementation of Community Advisory Groups when thresholds are exceeded.
GB-9c	The Power Authority and Canal Corporation should not be allowed to exercise sole jurisdiction without due consideration of local needs. The municipality has control over what happens here - not NY Power Authority. •	211, 275, 682, 688, 1105		Comment acknowledged. Please refer to Sections 9 & 10 of the Guide Book for additional information regarding community engagement.
GB-9d	I have heard of at least one case in which a home-owner whose backyard backed up onto the embankment was worried about the amount of seepage coming through, and wasn't having any luck reaching someone who could help. I hope that part of your new maintenance plan involves regular contact/polling of houses backing onto the canal embankment, so that you're notified as quickly as possibly by homeowners, who are the	609		Please refer to Section 4 of the Guide Book for information regarding the inspection of earthen embankments.

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	ones most likely to detect water coming through. Handing everyone a magnet with a number to call would be great, but a letter would do. You could even post a few signs along the embankment for the walkers – there are a lot of us, and we can all be your eyes.			
GB-9f	Appreciation for one of the public meetings and she learned of the meeting through the Town of Pittsford electronic newsletter.	750		
GB-9.1	Communications and Notifications			
GB-9.1a	1034- The opening statement in chapter 9: "Public relations and community outreach for maintenance projects will be handled on a project-by-project basis" suggests that as much as possible, community outreach will be avoided. 1035- This "chapter" is one single page with vague procedures. Starting with the statement of "case by case" approach, not clear definition is given on what "routine maintenance" and "debris" means, no definition of "when prudent", "if necessary", "when possible". This language leaves me with the impression that as brief as this chapter is, it is also a wordy way of minimizing communications and reach out. If this terms are clearly defined in other chapters, a reference to that chapter/page should be inserted here. "Routine maintenance" that would not prompt notification to the public and should be better defined. In my view "routine maintenance should be limited to mowing of grasses and removal of man made garbage, broken dead wood on the ground, removal of dead tree limbs that present a risk to people on the canal path, and maintenance of man made structures belonging to the NYSCC. Any maintenance that affects plants other than grasses, affects animals and their habitat, should not be considered "routine" and should be subject to review and approval by the NYSDEC. A mechanism should exist to address the environmental concerns in a speedy manner between agencies. Any of these maintenance activities that would no longer be considered "routine" should prompt notification to the public with a reasonable and defined advanced notice. The communication with the public should include direct email to those who register to receive such notifications, regardless of how close to the affected area they live, in addition to newsletters and social media.	1034, 1035	Guide Book Page 9-1	Please refer to Section 9 & 10 of the Guide Book for additional information regarding community engagement.

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GB-9.1b	Revise this section to indicate that "Notification to Local Municipalities" is a Best Management Practice and not "if necessary".	1015	Guide Book Page 9-1	Please refer to Section 9 & 10 of the Guide Book for additional information regarding community engagement.
GB-9.1c	All maintenance activities, except those considered routine (e.g., mowing, clearing debris) should include, where prudent:" What is the full list of routine activities? This is pertinent because the CC has shown little respect or understanding of natural vegetation. The latest example occurred near Lockport where vegetation was cut to the ground. Are there any "routine" activities that have generated public distress or ire in the past or are likely to do so in the future?	1045	Guide Book Page 9-1	Please refer to the Best Management Practices (attachment A1) included in the Guide Book.
GB-9.1d	All maintenance activities, except those considered routine (e.g., mowing, clearing debris) should include, where prudent." How many days' notice will be provided in notifications? Will notification notice be sufficient to allow review by stakeholders?	1045	Guide Book Page 9-1	Please refer to Sections 9 and 10 of the Guide book for additional information regarding community engagement.
GB-9.1e	"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:* With 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?	1071	Guide Book Page 9-1	Please refer to Section 9 & 10 of the Guide book for additional information regarding community engagement.
GB-9.2	Public Meetings			
GB-9.2a	Some maintenance projects may require public meetings. This determination and meeting coordination will be at the discretion of NYSCC PIO along with recommendation from Canal Operations Staff and any environmental permitting requirements." The "discretion" will not be tolerated. NYPA and NYSCC have failed repeatedly in this in the past and have not learned any lessons or not implemented any noticeable improvements. What changes will be made to this process? What thresholds will be formally established for meetings?	1045	Guide Book Page 9-1	Please refer to Sections 9 and 10 of the Guide book for additional information regarding community engagement.
GB-9.2b	A reality that we are recognizing in planning today are the issues of environmental justice. As the plan currently stands, clear cutting would be allowed to occur in areas that do not trigger the "decision tree." One critical piece is that local municipalities would have to include language in plans and/or regulations acknowledging the canal as critical to their community. While some municipalities have comprehensive plans, zoning	1050		While this comment is out of scope, the Canal Corporation extended the public comment period twice. First to September 5, and then again to October 15, 2021 for a total of 115 days, which is greater than required under SEQRA and its regulations. Canal

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	regulations, etc. that would incorporate this, many may not. This could be due to the area being less well-off. If this is the case, folks in these disadvantaged communities could wake up one day to discover that their trees are being cut down and that there was nothing that would have stood in the way. For the EEIP to go forward in support of environmental justice, there needs to be a more robust community engagement plan that takes this situation into account. In order for the EEIP to be fair to all communities, the Canal Corporation should have meetings and outreach in every community along the canal to ensure that they understand what the plan is and give a 5-year grace period for language to be incorporated into their plans and regulations. Until that 5 years is up, it should be assumed that every community would have language protecting the canal in their plans and regulations.			Corporation provided this additional time given the amount of public interest, recognition to better inform the public about the programmatic approach, and allow time for public review of the documentation. A hearing on a Draft EIS is optional in SEQR but the regulations regarding how and when to conduct one are addressed. These public comment sessions required by SEQR regulations are not question and answer sessions; rather, they are limited in purpose to providing a forum for public comments, which may be in the form of a question. The public hearings were conducted in accordance with 6 NYCRR 617.9(a)(4). In addition to the two public hearings conducted under 6 NYCRR 617.9(a)(4), the NYS Canal Corp voluntarily held four public information sessions for questions and answers with communities.
GB-9.2c	"Notification" should include education, with specific evidence-based reasons for particular solutions, if action is necessary. Notification should include some lead time for questions if possible, as well as a chance for residents to transplant native plants from the affected area.	1062		Please refer to Section 9 & 10 of the Guide Book for additional information regarding community engagement.
GB-9.2d	I suggest the following channels for future communications: • E-blasts that community members sign up for based on the part of the canal they are concerned about (bounded by particular mile markers, for example) • Nextdoor app • Ask local politicians to post it on their Twitter, Facebook, and Instagram feeds • Town newsletters • Town websites • A main icon on the Canal Corporation's website—I had to dig and dig for information about the information sessions • Local mainstream news outlets like the Democrat & Chronicle and WXXI	1062		Please refer to Section 9 & 10 of the Guide Book for additional information regarding community engagement.

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GB-9.2e	If you must take an action in order to maintain the integrity of the embankment, it's important that you are clear in your messaging about what exactly you will be doing and why. What equipment will you use, where exactly on the canal will the work take place, when will the work start, can residents save native plants prior to the work starting, etc. Videos as well as webcasts can help ensure wider public understanding, at least because they can be thoughtfully scripted for clarity and conciseness.	1062		Comment acknowledged.
GB-9.2f	The canal Corp should notify citizens of <u>any</u> planned removal of plants. Can the community stop plant removal or is removal a done deal in spite of community opposition?	1087		Please refer to Section 9 & 10 of the Guide Book for additional information regarding community engagement.
GB-10	References			
GB-10a	Were the texts or concepts of any of these references used within this document? If they were used, specifically which text was used? Where is this text located in this document? Were any other external unlisted references used? If they were used, specifically which text was used? Where is this text located in this document?	1045	Guide Book Page 10-2	A full reference of documents reviewed in support of the EEIP can be found in Section 6 of the GEIS and Section 12 of the Guide Book.
GB-BMP	Embankment Maintenance Best Management Practices			
GB-BMPa	What will be planted once the trees are removed?	582		The Guidebook currently includes Best Maintenance Practices for plantings that include turf, pollinators, and shrubs. The Guidebook, being a living document, can be later modified to either eliminate or add species.
GB-BMP-2	Vegetation			
GB-BMP-2a	GB BMP Section 2: This portion of the guidebook covers what plantings area permitted on embankment slopes and the subsequent maintenance is required. Vegetation screenings and pollinator plantings are permitted in Zones 2B and Zone 3, and turf grass applied to all other areas of the embankment. The guidebook states zone 2B and # are to be weeded regularly to "reduce the amount of vegetation growth, expansion of unwanted vegetation and general aesthetic value." The guidebook also states embankment sloped are to be mowed twice per year to maintain a 12-inch maximum desirable height. Given the 120 miles of embankment of the NYSCC maintains the approach described in the EIMG raised two concerns: 1" Is it realistic to assume the maintenance crews will maintain the various zones individually (i.e. Zones 2B and 3 periodically weeded and Zones 4 and 5 to be mowed bi-annually, versus mowing all	1015		Please refer to Section 7 of the Guide Book regarding embankment maintenance. Canal Corporation is committed to maintaining restored embankment sections.

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	zones twice per year)? 2) A field visit to the recently completed section of the embankment reconstruction in Brockport revealed thick vegetation cover (not turf grass) along the entire embankment from crest to toe of the slope. It is interesting to note that after only a couple years with no tree canopy. The embankment slope received ample sunlight to produce thick, weedy vegetation blanket taller than the 12 in maximum specified in the GB. Can you confirm NYSCC has the resources to maintain all newly vegetated embankment slopes in the manner outlined in the GB? Otherwise, the argument that tree canopy and understory plants currently limit the ability the properly inspect embankment sloped is ineffective. The thick vegetation cover that will thrive in the reconstructed embankment areas and associated environment may create a similar hinderance to inspection.			
GB-BMP-2b	What are the required qualifications for a Regional Canal Engineer, Dam Safety Engineer? What are the required qualifications for "PE Reviewer"? If the red paragraph is so important, why isn't it located at the beginning of the page? "...dam safety knowledge base has greatly expanded." What evidence is there for this statement? "Because of this, the conditions of the canal do not always conform to dam safety best practices in many instances." This is a false statement. The canal is not a dam. The canal was built before the current dam safety best practices. Do you understand causality? "Compromises must be made in the implementation of the Guide Book and the various BMPs, but those compromises will be made to prioritize public safety and reduce the inherent risk of the embankments." What is each compromise made? How does each "reduce the inherent risk of the embankments"? What is the inherent risk of the embankments? "The best practices and suggested details contained in this manual are general and may require modification based on specific site conditions." Have these "best practices" been tested anywhere on the Erie Canal system?	1045	GB BMP Page 1-2	A 'PE Reviewer' must be licensed in New York state as a Professional Engineer in an appropriate engineering discipline. Qualifications for a Regional Canal Engineer or Dam Safety Engineer are outside the scope of this document. Please refer to Appendix B of the GEIS for additional detail regarding risk assessment.

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	"CAUTIONS AND LIMITATIONS: ... ...licensed professional..." What are the required qualifications of "licensed professional"? What are the required qualifications of "competent licensed professional"?			
GB-BMP-2b	"These zones have been delineated based on typical seepage characteristics." What are the seepage characteristics for Zones 1 through 5? What is the source for these "typical seepage characteristics"?	1045	GB BMP Page 1-3	The diagram showing zones and seepage characteristics is a general depiction of typical seepage characteristics and is provided to help explain basic principles and to define Guidebook zones. Where seepage through the embankment is identified, soil borings will be taken and piezometers installed to define the seepage line.
GB-BMP-2c	What are the required qualifications of "competent licensed professional engineer"? "Construction ... ...Use had excavation...." Use "had" excavation? "No excavation performed within the embankment should not advance below the water table." How many people reviewed this document?	1045	GB BMP Page 1-5	Sentence changed to "Use hand excavation…" Sentence changed to "…should advance below the water table."
GB-BMP-2d	What is the designation of "Engineer of Record"? What is the purpose and extent of compaction? "Placement and is dependent on the compaction method used." What?	1045	GB BMP Page 1-6	The term Engineer of Record is commonly used in North America to define the responsible person for design and construction phases of a project.
GB-BMP-2e	With all these different heights "maximum 12 in. height "1/3 of the leaf "2-4 in. height" "when grass reaches 6" height" do you understand growth of grass? How many times was the grass cut on the completed clear cut areas in Holley etc.? Did the cutting conform to the above guidelines?	1045	GB BMP Page 1-6	Please refer to Section 7 of the Guide Book regarding embankment maintenance. Canal Corporation is committed to maintaining restored embankment sections.
GB-BMP-2f	"Growth of woody vegetation on embankments can lead to serious problems..." What "serious problems"? Is there evidence of this? "Trees and brush with DBH greater than 3" can pose a significant threat to an embankment..." What significant threat can trees and brush pose?	1045	GB BMP Page 2-9	Please refer to Section 1 of the Guide Book and Section 1.3.1 of the GEIS for additional information.

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	Are there any other vague ominous descriptions you would like to add?			
GB-BMP-2g	"A large number of holes or a cluster of repaired holes could lead to instability of the embankment." How could either of these situations lead to instability of the embankment?	1045	GB BMP Page 2-10	Please refer to Section 1 of the Guide Book.
GB-BMP-2h	"STUMP AND ROOTBALL REMOVAL PROCEDURES (P.E. SUPERVISION REQUIRED)… …Professional Engineer (P.E.) must be present during removal." Was a P.E present during the project in Medina, Holley etc.? "DISPOSAL: All wood and brush shall be disposed of and removed from NYSCC property." Doesn't this create a burden, undermine self-sufficiency and sustainability?	1045	GB BMP Page 2-11	Comment is outside the scope of this project.
GB-BMP-2i	Should "this situation is a potential embankment safety emergency" be bold or red type and moved to the top of the page? "Repairs for large sloughs or slides on an embankment should not be addressed in-house." Why?	1045	GB BMP Page 3-3	The statement that follows "The **Dam Safety Engineer** should be notified immediately to assess the situation and determine if emergency notifications should be enacted" provides the necessary guidance. The Guidebook BMPs are designed to be used by both Canal Corporation maintenance staff and by outside contractors.
GB-BMP-2j	RODENT BURROWS "These types of damages are widespread throughout the NYSCC portfolio and so maintenance and prevention is of utmost importance." Is there a catalog and data sets for these?	1045	GB BMP Page 3-7	Dam Safety and Asset Management maintain a database of embankment deficiencies identified during inspections. Deficiencies include animal burrows.
GB-BMP-2k	Locations of all noted seepage should be tracked by the Sections and reported to the Dam Safety Engineer on a master tracking sheet and/or GPS tagged file. What is the "master tracking sheet"? What information does it contain?	1045	GB BMP Page 4-4	Dam Safety and Asset Management maintain a database of embankment deficiencies identified during inspections.
GB-BMP-2k	"The blanket and toe drain can be covered with a soil berm or gravel within the Canal ROW." Are both of these standard practices?	1045	GB BMP Page 4-7	These practices are conventional practices used in the dam safety industry to safely control embankment seepage.
GB-BMP-2l	"Use had excavation."	1045	GB BMP Page 4-14	Sentence changed to "Use hand excavation…"
GB-BMP-2m	"CONCRETE JOINT VEGETATION Growth of vegetation in the cracks of concrete can exacerbate degradation and can lead to structural damage. Root systems of trees and shrubbery can create deep penetrations in the concrete, which with added freeze/thaw action, can create large cracks in the structure. The management of vegetation on concrete elements is therefore pertinent to structural integrity. Control and removal of	1045	GB BMP Page 6-5	Concrete and masonry linings that line the canal prism are included in the scope of the EEIP, however, concrete and masonry structures are not. Removal of small vegetation from the joints of concrete prevents the

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	vegetation should be done routinely as part of the embankment maintenance program." How critical is this? Elsewhere, concrete structures have been excluded from the scope of the EEIP. This seems to be a discrepancy. Are concrete structures included in the scope of the EEIP?			growth of larger vegetation and preserves the integrity and beneficial function of the joint.
GB-BMP-2n	What will be done to preserve the integrity of the soil after clearing?	1087		Canal Corporation will restore the embankment with a mix of turf grass and pollinators, in accordance with the Guide Book.
Other	Topics Not Addressed in the GEIS or Guide Book			
Other-1	Global Warming/Climate Change			Out of Scope for inclusion in GEIS
Other-1a	Natural vegetation doesn't just cool and sequester carbon. It maintains the natural water cycle which causes global cooling. Need trees for temperature control. Trees reduce carbon dioxide and provide oxygen. Trees provide a carbon sink (a check against global warming). They offset carbon emissions. We need trees to maintain a healthy balance for global warming. Trees absorb greenhouse gasses.	98, 284, 288, 293, 304, 391, 409, 459, 521, 527, 542, 565, 573, 620, 638, 671, 672, 747, 757, 761, 769, 771, 774, 780, 859, 900, 911, 957, 974, 989, 990, 1008, 1009, 1022, 1049, 1051, 1058, 1062, 1069, 1078		The Environmental Assessment prepared for the EEIP did not find that the EEIP would increase emissions of greenhouse gases. Furthermore, the Draft Scoping Document did not include Climate Change as a topic to be studied. Public review of the Scoping document did not identify Climate Change for inclusion in the Draft GEIS during review of the Draft Scoping Document.
Other-1b	Any mitigation to offset the loss of carbon sink?	492, 638, 832, 954		The Environmental Assessment prepared for the EEIP did not find that the EEIP would increase emissions of greenhouse gases. Furthermore, the Draft Scoping Document did not include Climate Change as a topic to be studied. Public review of the Scoping document did not identify Climate Change for inclusion in the Draft GEIS during review of the Draft Scoping Document.
Other-1d	The maintenance of clear-cut areas is not sustainable. Paying out wages for workers to maintain the areas. There would be use of machines/lawn mowers that would leave a huge carbon footprint.	293, 840, 1098		The Environmental Assessment prepared for the EEIP did not find that the EEIP would increase emissions of greenhouse gases. Furthermore, the Draft Scoping Document did not include Climate Change as a topic to

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				be studied. Public review of the Scoping document did not identify Climate Change for inclusion in the Draft GEIS during review of the Draft Scoping Document.
Other-1f	Cutting these trees is inconsistent with New York's Climate Act and with its stated intentions to become Climate Neutral. This plan to clear it the canal side trees should be brought up to the NY Climate Leadership Council and they should be asked to weigh in. In New York's attempt to reach zero carbon emissions by 2050, as stated under the Climate Leadership and Community Protection Act, trees and vegetation must be preserved.	450, 491, 1040		The Environmental Assessment prepared for the EEIP did not find that the EEIP would increase emissions of greenhouse gases. Furthermore, the Draft Scoping Document did not include Climate Change as a topic to be studied. Public review of the Scoping document did not identify Climate Change for inclusion in the Draft GEIS during review of the Draft Scoping Document.
Other-1h	Per the journal "Science", quoted on climate.nasa.gov, "by planting more than half a trillion trees, we could capture about 205 gigatons of carbon (1 bn metric tons) reducing atmospheric carbon by about 25%." The more we "clear cut", for any reason, the more take AWAY a powerful tool in reducing atmospheric carbon AND the more we contribute to desertification which exacerbates global warming.	795		The Environmental Assessment prepared for the EEIP did not find that the EEIP would increase emissions of greenhouse gases. Furthermore, the Draft Scoping Document did not include Climate Change as a topic to be studied. Public review of the Scoping document did not identify Climate Change for inclusion in the Draft GEIS during review of the Draft Scoping Document.
Other-1i	Given the environmental impact this will have on a myriad of levels, what data driven research has been done to minimize and reduce the impact that will surely occur? Specifically, what projections or calculations have you performed to quantify what your impact will be and how you intend to mitigate it? Let me share with you what my expectations are before any tree cutting occurs By leveraging extensive satellite remote sensing datasets, forest plot measurements, and geospatial scientific computing, researchers are now able to identify locations impacted by significant forest loss, to assess the associated carbon emissions, and, for the first time, to quantify the amount of future carbon sequestration and storage lost through deforestation. Calculations like this, clearly show that slowing the pace of forest loss is an important instrument in the fight against climate change. It is not enough to merely stop using fossil fuels. We also need to remove some of that carbon pollution, to draw it down from the air and the atmosphere. Right now, the only tool we have that works at scale and at cost to remove that carbon pollution is nature…in the form of trees!	972		While this comment is out of scope, please refer to Section 3.7.2 of the GEIS for a discussion of potential impacts and a land cover analysis. The Environmental Assessment prepared for the EEIP did not find that the EEIP would increase emissions of greenhouse gases. Furthermore, the Draft Scoping Document did not include Climate Change as a topic to be studied. Public review of the Scoping document did not identify Climate Change for inclusion in the Draft GEIS during review of the Draft Scoping Document.

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	Additionally, a mapping tool is available that shows that many of America's forests with the highest carbon stocks and high potential for future carbon sequestration also are among the most important places for diverse species to find refuge from growing climate impacts. Your proposal falls under the category of a "major disturbance" to carbon reduction goals in New York State and by eradicating these areas you are eliminating safe places for plant and animal species to live as their habitats are altered or destroyed by climate impacts. So what exactly are your specific plans to due the kind of detailed review and analysis required? In conclusion, you have an obligation to the affected communities and the planet to provide comprehensive answers to the numerous serious and significant questions I have raised. To know and communicate transparently the true impact of this plan it is your civic, moral, legal and environmental responsibility to disclosure all this information before you proceed.			
Other-1j	Trees are our best defense against the urban heat island effect. • 1008- Finally, with regard to climate resilience, the canal provides protection against erosion and the urban heat island effect . . . Trees are our best defense against the urban heat island effect. This is true anywhere there is developed land, but especially so in majority-Black neighborhoods like the 19th Ward and Lyell-Otis in the City of Rochester. The canal goes through those neighborhoods providing shade in areas where residents lack the tree cover found elsewhere in the state. • 1012-Same as 1008 (same commenter)	1008, 1012		The EEIP applies to earthen embankments on the Canal only. There are no mapped embankments bordering the communities of 19th Ward or Lyell-Otis. Embankments are located to the east beginning in Brighton and to the west in South Greece. Community character will be considered for projects where community thresholds are exceeded as described in Section 8 of the Guide Book. An interactive map with embankment locations is available online: https://www.nyscanalintegrity.org/program-and-maps Canal Corporation will consider compliance with applicable laws, regulations and policies regarding Environmental Justice and disadvantaged communities as may be applicable based on the impact of those activities on the community. Those impacts were not identified as being of such a significance during scoping to be considered within the GEIS for the EEIP.
Other-2	Privacy			

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Other-2a	Removal of trees would cause a loss of privacy to adjacent property owners and a loss of privacy for trail users.	21, 95, 107, 128, 135, 188, 207, 218, 228, 283, 288, 306, 315, 326, 369, 374, 439, 517, 556, 573, 669, 675, 706, 711, 713, 756, 774, 789, 801, 1053, 1085		Privacy is not an environmental issue under SEQR. However, please refer to Section 3.13 – Noise, Odor, and Light, of the FGEIS for a detailed discussion of impacts and mitigations.
Other-3	Comments that are not substantive			
Other-3a	Comments against the project with no actionable recommendations for the GEIS.	10, 419, 457, 460, 533, 592, 677, 699, 749, 842, 847, 874, 890, 985, 1014, 1017, 1018, 1020, 1063		Comments are acknowledged.
Other-3b	Comments that support the project with no recommendations for the GEIS.	631, 1083		Comments are acknowledged.
Other-3c	Comments that inform about or refute the opinions and motives of others.	1, 2, 6, 7, 9, 14, 16, 22, 32, 210, 346, 554, 773, 803,1073, 1074		Comments are acknowledged.
Other-3d	Questioning the motives of the NYSCC/NYPA, suggesting conspiracies, complaints about past actions/inactions. • The Power Authority has proven to be unqualified as the steward of our canal. NYPA serves itself and not the public. Requesting that the NYSCC/NYPA resign from the responsibility of managing the canal. Threaten legal action. The Canal benefits us in the same way that parkland does, and it should be managed as such. If the NYPA can't understand that, it should be transferred to the NYS Office of Parks, Recreation, and Historic Preservation or DEC. .	11, 12, 38, 60, 154, 172, 395, 404, 574, 591, 604, 621, 743, 837, 864, 875, 897-898, 901, 909, 916, 939, 940, 943, 979, 989, 1004, 1008, 1012, 1051, 1080, 1094, 1097, 1098		Comments are acknowledged. Please refer to Section 1.3 – Project Description, of the GEIS for a discussion of the need for the program.
Other-3e	Comparing the program to operations of lumber companies which do not clear cut.	157		Please refer to Section 1.3 – Project Description, of the GEIS for a discussion of the need for the program.

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Other-3f	It's too bad the Canal Corporation has viewed the public as an obstacle to forming an effective management plan for the canal's surroundings, rather than an asset worth partnering with. In three years, it has spent so much time and money fighting the public. Wasted resources. Some accountability is in order for this debacle, but if the fault lies with NYPA, then I suppose we can expect more of the same - poor transparency and poor responsiveness to public input. What a shame. If their plan goes through, fifty years from now, when natural vegetation again invades those embankments due to lack of maintenance, we'll be back in the same spot, and the whole project will have been a complete waste. At least we'll have our trees back and the stabilizing benefit of natural vegetation	349		Please refer to Section 9 & 10 of the Guide book for additional information regarding community engagement.
Other-3g	Comments regarding a different topic, such as cutting trees for power lines, a problem with erosion of banks from boats, problems with trees in non-embankment areas, concern with adding plastic that appears to be grass and the need for dredging. Also, finding or creating the correct stewardship model for the canal system.	355, 366, 605, 619, 692		Comments are acknowledged.
Other-3h	That this project could even be conceived without adequate environmental and community oversight is a disgrace.	563		Please refer to Section 8 – Environmental Considerations, of the Guide Book for a detailed discussion of how environmental compliance will be achieved. Sections 9 of the Guide Book details community outreach and Section 10, which was added based on the feedback from stakeholders, details community outreach when community thresholds are exceeded.
Other-3i	Clearcutting would make canal inspections easier. I have never seen an inspector walking or biking to look for leakage and when I reported some I was told to ignore it, everything is ok. So much for that justification for the cutting.	577, 903, 917		Comments are acknowledged.
Other-3j	Past experiences living adjacent to or on canal property.	837, 1064		Comments are acknowledged.
Other-3k	Feedback (positive and negative) on the public meetings held on September 20-21, 2021.	750, 771, 777, 1062		Comments are acknowledged.

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	• 750- Today I attended the second presentation by the Canal Corp. at the Perinton Community Center, Fairport, NY. The people there were knowledgeable, the slides were helpful, and the sound system Worked well. This educated me a lot about the NY Power Authority and the Canal Corp, and the Reasons for clearing brush and sometimes, trees, along the Erie Canal. The young woman who moderated the event was superb. Really Excellent!! She understood the Agency, the Guidebook, aspects of the engineering and work done on dams and waterways, and She was able to speak to us clearly and concisely about it, as we learned about the work and the Role of the NYPA and the CC. She reflected back each public comment, so the speaker knew their Message was heard, and she then added an answer or was able to refer the question to one of the Technical experts present. Kudos to her, and to them all. The first meeting was last night, Monday, 9-20-21, which I missed. The moderator began by Acknowledging the high tension and deep emotion present in that late meeting, too. We love our trees! The message I got was that no clear-cutting of all trees along the entire. Canal length is planned. Some areas will be cleared of brush and smaller trees, to assess for Seeps and such problems. ---Earthen embankments, which are mostly in Western New York counties, need special monitoring and care. ---Towns with Waterfront Plans will be consulted. --Agricultural and tourism uses of the canal will be considered a bit more than planned, a few years ago. Communication with town officials, people who own property along the canal, and pubic notices Of planned work for the entire local public to be aware will be improved. The Town of Pittsford puts out an electronic newsletter about every two weeks. That is where I saw the notice for this meeting, and I made a note of it on my calendar. Thanks for working with the local people to make the process better for everyone. • 771- I am taking this opportunity to provide feedback after attending 2 in person public meetings held in Perinton this past week. I was highly disappointed with the presentation and it's content. I came expecting to gain a better understanding and appreciation of **WHY** this program has been created and its need for implementation…neither of these expectations were remotely met. What I got was a dry, bare bones, generic power point with the same talking points and fears that			

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	goes back to the 4 year life span of this effort. Showing a picture of the breech in Bushnell's Basin some 50 years ago, as an example of what could happen, had nothing to do with the issue at hand….clear cutting the embankments. Because, as was repeatedly asked and answered, the FACT remains that in the 200 year history of the Erie Canal there has NEVER been a tree related breach. So my takeaway was, you want to spend millions of dollars to "fix a problem" where one does not clearly and convincingly exist! One of my other disappointments with the meetings was the lack of preparedness demonstrated by the speakers. Numerous questions were asked seeking data about the current condition of the areas in question specific to our region and the panelists were unable to answer them. We were told that some of the earthen embankments were deemed " high risk" due to there proximity to schools, business and/or homes but no one present was able to speak to the issue of **condition** of these embankments. We were told there are currently 200 seeps in the embankment section of the canal but were never told if these were in high risk areas. The use of data to manipulate the conversation and create false concern was a frequent feature of the presentation and in response to questions. In the end the NYSCC failed to make a compelling case that tree removal is an essential necessity to the welfare of the canal's safety. Your default position for your continued justification remains the guidelines/recommendations from the Army Corps & FEMA, items that have been disputed and even refuted. I heard nothing at the presentation about new or dynamic methods of monitoring seeps or areas of concern. It certainly appeared that the audience was responsible for proposing novel ideas and approaches by offering alternative solutions. The panelists came to us and presented one way of addressing the issue without apparently seeking out "best practices" or "bench marking" by other agencies, organizations, states or countries who may also be facing a similar set of circumstances and arrived at an alternative solution. • 777- I wanted to thank you and your team for meeting with the community this past week. My name is Steve Gissin from Fairport. I was sitting up front in the evening meeting on Tuesday, and fist bumped you all afterwards to show my appreciation. I know it was not an easy task to get up in front of the community like you did. I appreciate the communication and learned a great deal from your presentation.			

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	• 1062- I attended an information session in Perinton that I had only heard about because my state assembly person posted a notice about it on Twitter, and I happen to follow her. I also happen to have a flexible work schedule which is not the case for most. I suggest the following channels for future communications: o E-blasts that community members sign up for based on the part of the canal they are concerned about (bounded by particular mile markers, for example) o Nextdoor app o Ask local politicians to post it on their Twitter, Facebook, and Instagram feeds o Town newsletters o Town websites o A main icon on the Canal Corporation's website—I had to dig and dig for information about the information sessions o Local mainstream news outlets like the Democrat & Chronicle and WXXI If you must take an action in order to maintain the integrity of the embankment, it's important that you are clear in your messaging about what exactly you will be doing and why. What equipment will you use, where exactly on the canal will the work take place, when will the work start, can residents save native plants prior to the work starting, etc. Videos as well as webcasts can help ensure wider public understanding, at least because they can be thoughtfully scripted for clarity and conciseness. I've titled this section "communication" rather than "engagement" because I did not particularly feel engaged with at the information session. Although there was a chance for questions and 'answers', I won't feel like I was actually heard until I see the changes made to the plan based on these attempts to "engage" the community. The only thing the presenters seemed interested in hearing about from us was how we wanted to be notified or consulted, which could easily be interpreted as they were simply asking how we preferred to be ignored.			
Other-3l	Why are you continuing with your clear-cutting (or near clear-cutting) program when the public comment period is still open? •	821, 822		Repairs required to address urgent projects are advanced under a separate SEQR review to maintain the integrity of the embankments.
Other-3m	NYPA is the wrong custodian for Erie Canal. They clearly missed the boat on the Macedon breach, and was not prepared for an event that had nothing to do with trees.	977		While this comment is out of scope it is acknowledged.

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Other-3n	Consider your ESG responsibilities	989		While this comment is out of scope it is acknowledged.
Other-3o	Requesting the NYSCC to reject the plan of NYPA	1011		While this comment is out of scope it is acknowledged.
Other-3p	An expectation that an email response would be sent to individual email questions.	1034		While this comment is out of scope it is acknowledged.
Other-3q	The citizens of New York do not want the EEIP.	1051		While this comment is out of scope it is acknowledged.
Other-4	Security/Crime			
Other-4a	Concern for increased crime. Here's a link between shaded areas and lower crime rates. • 334- There's a link between shaded areas and lower crime rates. https://www.nrs.fs.fed.us/pubs/jrnl/2012/nrs_2012_troy_001.pdf • 454- Also, cutting down trees will bring an unwanted presence and cost. • 669- We have a beautiful little dock we built and have enjoyed planting Privet bushes and Day Lillies to help with beautification and privacy. One year they were all mowed down by a maintenance worker whose job it was to mow everything. We have since been able to mark that area so that hopefully doesn't happen again. During this period of time, our dock was very visible from the towpath and we experienced a lot of our belongings stolen. Flags, entire flag poles, a chair, a potted plant. Beer cans left on it or trash. Once the growth and privets grew in, the dock has become very private where most people walking along the towpath don't even know it's there. It's a perfect little oasis. If you were the clear cut this area it would . . . open both areas up to the possibility of more crime, • 689- Reducing/ removing the trees on the non- water edge is a danger to those houses that are nearby.... back yards or back windows are made visible to voyeurs or others who may want to commit crimes. "Out of sight/ out of mind" is possible when there is tree cover... don't give someone a temptation, and a means (an actual clearing) to behave wrongly.	334, 454, 669, 689		The Draft Scoping Document did not include crime as a topic to be studied. Public review of the Scoping document did not identify crime for inclusion in the Draft GEIS during review of the Draft Scoping Document. The Canal Corporation does issue annual grants to law enforcement to patrol canal sections.
Other-5	Air Quality			
Other-5a	Trees are known to improve urban air quality by pulling ozone, particulates, and other pollutants into their leaves and out of the air, and thus, partly protecting people from them. Trees give clean air. •	289, 354, 416, 500, 502, 778, 864, 900		Comment acknowledged.
Other-6	Impact to Tourism and Local Economies			
Other 6a	The canal and tow path support small businesses in our towns, which strengthens our local communities, makes our towns more desirable, and adds to our tax revenue. New	11, 28, 37, 57, 64, 83, 90, 146, 182, 191,		Comment acknowledged. The Canal Corporation intends to restore and maintain the embankments to

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	York recently completed the Empire State Trail. The Erie Canal is large part of this trail. While this means that we should ensure that the Canal is safe, we can't lose sight of the fact that the trail is intended to generate private investment in local towns and villages and encourage healthy lifestyles for New York residents.	200, 209, 216, 271, 279, 318, 361, 376, 383, 400, 405, 413, 430, 439, 444, 473, 509, 555, 597, 613, 622, 640, 678, 688. 728, 734, 747, 752, 756, 757, 771, 785, 836, 840, 843, 855, 866, 879, 1000, 1006, 1008, 1012, 1016, 1023, 1043, 1051, 1053, 1059, 1069		support continued use of the canal system as a recreational destination for years to come. Additional information regarding recreational activities along the canal can be found online: https://www.canals.ny.gov/index.shtml
Other-6b	Many people charter boats on it and travel from town to town, resulting in additional commerce for the small canal towns. By clear cutting the trees, people will not be as drawn to taking these charters.	929, 1000		A goal of the programmatic approach to embankment management is to balance the needs of ongoing maintenance and capital improvements with the needs of the system users. Canals Corporation is dedicated to enhancing the experience for recreational and commercial users. Additional information regarding recreational activities along the canal can be found online: https://www.canals.ny.gov/index.shtml
Other-7	Recommendations for Developing a New Plan			
Othe-7a	NYPA needs to bring scientists, plant biologists, biologists, arborists, ecologists, landscape architects, environmentalists, historians, engineers, hydrologist, experts in climate change and stakeholders to the decision-making table to craft the Guide Book. A glaring weakness in the crafting of the EEIP is it absence of experts from other disciplines. All we have is "group think" by engineers who are inclined to view problems through a very narrow and myopic point of view. This means going way beyond adding staff from other state agencies but seeking out and collaborating with professionals from the public and private sector as well as community members, to lend their academic knowledge, expertise, and historical knowledge by offering creative problem solving.	92, 98, 156, 157, 218, 263, 369, 422, 549, 736, 766, 771, 827, 1011, 1023, 1031, 1062, 1081		The Canal Corporation has developed a program for embankment restoration and maintenance. Proper maintenance of the embankments is imperative to maintain integrity of the structures: for mitigating risks of embankment failures to health and safety of people that live, work or recreate along the NYS Canal System; for mitigating the risks of damage to property and the environment; and for maintaining the integrity and operability of the NYS Canal System in a cost-effective manner.

Subject Number	Subject/Comment	Comment Numbers	DGEIS/Guide Book References	Response
	Involve the right experts and other stakeholders, to come up with a thorough, science-based plan and process that puts people, wildlife and the environment first.			
Other-7b	All parties should be working toward a plan that preserves as much of the natural environment as possible for all of the benefits indicated above, while strategically addressing any substantiated public safety concerns. NYSCC should consider adopting a more flexible and tree sensitive program that can provide for the needed maintenance and safety of preserving the canal embankments without the wholesale removal of all trees and vegetation as is contemplated by the present EEIP and Guide Book.	426, 1049, 1080		The Canal Corporation has developed a program for embankment restoration and maintenance. Proper maintenance of the embankments is imperative to maintain integrity of the structures: for mitigating risks of embankment failures to health and safety of people that live, work or recreate along the NYS Canal System; for mitigating the risks of damage to property and the environment; and for maintaining the integrity and operability of the NYS Canal System in a cost-effective manner.
Other-7c	Please try and find a middle ground where the engineers who need to do the inspection can function, without completely disregarding the enormous benefits folks get from having a beautiful environment to exercise in. Thank you for your efforts! Let's find a win-win. Factors other than the ease of repairing any theoretical, future damage to the embankment must be balanced against other factors.	333, 429-430, 464, 747		The Canal Corporation has developed a program for embankment restoration and maintenance. Proper maintenance of the embankments is imperative to maintain integrity of the structures: for mitigating risks of embankment failures to health and safety of people that live, work or recreate along the NYS Canal System; for mitigating the risks of damage to property and the environment; and for maintaining the integrity and operability of the NYS Canal System in a cost-effective manner.
Other-7d	If the embankments were not maintained according to FEMA standards, and there occurred a catastrophic collapse, injured parties would surely bring lawsuits against the Canal Authority. Let those who want trees on the embankment sign a release to relieve the Canal Authority of liability. Except that commercial canal users would still have a claim against the Canal Authority for loss of tourist traffic.	324, 412 (duplicate)		The Canal Corporation has developed a program for embankment restoration and maintenance. Proper maintenance of the embankments is imperative to maintain integrity of the structures: for mitigating risks of embankment failures to health and safety of people that live, work or recreate along the NYS Canal System; for mitigating the risks of damage to property and the environment; and for maintaining the integrity and operability of the NYS Canal System in a cost-effective manner.

Subject Number	Subject/Comment	Comment Numbers	DGEIS/Guide Book References	Response
Other-7e	A town can't take responsibility for their portion of the canal since their neglect affects all travel up and down the waterway. Do communities have the right to opt-out of the removal of the plants on the embankment	773, 1087		The Canal Corporation has developed a program for embankment restoration and maintenance. Proper maintenance of the embankments is imperative to maintain integrity of the structures: for mitigating risks of embankment failures to health and safety of people that live, work or recreate along the NYS Canal System; for mitigating the risks of damage to property and the environment; and for maintaining the integrity and operability of the NYS Canal System in a cost-effective manner.
Other-7f	Recommend keeping trees pruned for to allow visibility for inspections	57		The Canal Corporation has developed a program for embankment restoration and maintenance. Proper maintenance of the embankments is imperative to maintain integrity of the structures: for mitigating risks of embankment failures to health and safety of people that live, work or recreate along the NYS Canal System; for mitigating the risks of damage to property and the environment; and for maintaining the integrity and operability of the NYS Canal System in a cost-effective manner.
Other-7g	Make a plan to plant more trees to mitigate climate change. For every tree removed an informed caring state would replant several new trees to balance the loss of the removed tree.	157, 178, 202, 229, 638, 753, 774, 832, 1009, 1065, 1081, 1088		The Environmental Assessment prepared for the EEIP did not find that the EEIP would increase emissions of greenhouse gases. Furthermore, the Draft Scoping Document did not include Climate Change as a topic to be studied. Public review of the Scoping document did not identify Climate Change for inclusion in the Draft GEIS during review of the Draft Scoping Document. However, Sustainability initiatives within NYPA and Canals may provide opportunity for tree and pollinator plantings. Those programs would be reviewed under a separate SEQR action.
Other-7h	Suggested policy/priority changes	288, 753		While this comment is out of scope it is acknowledged.

Subject Number	Subject/Comment	Comment Numbers	DGEIS/Guide Book References	Response
	• repair of the walls, especially those stretches that are concrete and that are rapidly cracking apart [the Great Embankment is one such location]. • removing trees and the other substantial plants that are growing out of those concrete walls cracks replacing at least some of the abundant invasive species (e.g., tree-of-heaven, buckthorn, bittersweet vines) with various native trees (e.g., oaks, maples, cherries). Scenic and recreational utility should not take a back seat to engineering and maintenance convenience.			
Other-7i	Letting one objective drive the entire experience will not lead to success in the big-picture. There is an acceptable approach that can work within the goals of the Empire State Trail, that is context sensitive, and keeps people and property safe. We should not move forward until we establish that approach.	622		The Canal Corporation has developed a program for embankment restoration and maintenance. Proper maintenance of the embankments is imperative to maintain integrity of the structures: for mitigating risks of embankment failures to health and safety of people that live, work or recreate along the NYS Canal System; for mitigating the risks of damage to property and the environment; and for maintaining the integrity and operability of the NYS Canal System in a cost-effective manner.
Other-7j	The money being spent trying to remove trees could be better spent in cleaning up sections of the canal in city locations so it can be a beautiful and safe public space	629		While this comment is out of scope it is acknowledged.
Other-7k	If maintenance needs to be done then at least get consults from local conservation and garden clubs that can advise on preserving the paths natural beauty or restoring it. Add more waste receptacles as people are dumping their bags of dog poop in the brush. Maybe a few more benches (betting people would buy a bench w a plaque).	668, 848		The Canal Corporation has developed a program for embankment restoration and maintenance. Proper maintenance of the embankments is imperative to maintain integrity of the structures: for mitigating risks of embankment failures to health and safety of people that live, work or recreate along the NYS Canal System; for mitigating the risks of damage to property and the environment; and for maintaining the integrity and operability of the NYS Canal System in a cost-effective manner.
Other-7l	Keep it forever wild like the Adirondacks	741		Comment acknowledged. Please refer to Section 1 of the Guide Book and Section 1.3.1 of the GEIS for a discussion of project need.

Subject Number	Subject/Comment	Comment Numbers	DGEIS/Guide Book References	Response
Other-7m	Please convene a group of citizens, including outside engineers, to create a more versatile document than the current guidebook.	763		Please refer to Sections 9 and 10 of the Guide Book.
Other-7n	The only true course of action in the end may be to deem all homes within a certain area below the waterline as being in a hazardous flood zone. Penalize people for living below a man made and unstable river so their insurance can cover the cost to rebuild any home that may succumb to a random breach, or to pay for lawsuits for a worst case scenario- loss of life. A disclaimer should accompany any sale of these homes. People are selling already as word is out. One that backs the canal below the waterline is under contract.	773		While this comment is out of scope it is acknowledged.
Other-7o	The NYSCC team should spend some time benchmarking with other canal management entities worldwide before deciding to clear cut. Other canal cities include Shanghai, Amsterdam, and towns in the UK Researching to uncover other technologies and/or approaches over clearcutting could create a win/win.	777		The Canal Corporation has reached out to other canal management entities. All canal systems are unique in regard to the infrastructure (e.g., size of locks, design of embankments) and use and location. Canal Corporation will continue to coordinate with colleagues in other states and countries.
Other-7p	The canal's primary use in the recent past has shifted from shipping to recreation. The focus for the canal needs to be on maintenance for the purpose of recreation.	943		Please refer to Section 1 of the Guide Book and Section 1.3.1 of the GEIS for a discussion of project need.
Other-7q	Alternate approach presented by Supervisor Smith and Pittsford	987		While this comment is out of scope it is acknowledged.
Other-7r	I read and agree with the letter addressed to the *Canal Corporation* written by the town of Pittsford attorney , Robert B. Keogal dated August 26,202, "...the EEIP to reject embankment clear-cutting as it's 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 collaboration with localities as Pittsford and its residents to preserve both public safety and environmental quality."	998		Comment acknowledged. Please refer to Section 1 of the Guide Book and Section 1.3.1 of the GEIS for a discussion of project need. Refer to Sections 9 & 10 of the Guide Book regarding public notification and engagement.
Other-7s	The assumption, the default, the norm, the plan should be to KEEP the trees and vegetation unless there is some compelling reason to CUT them!	1027		Please refer to Section 1 of the Guide Book and Section 1.3.1 of the GEIS for a discussion of project need.
Other-7t	The best solution for liability is the “World Class Canal system” as described in Comment 1045. The mitigating actions for inspection hindrance include increased time inspecting and when necessary targeted brush clearing, as demonstrated in Royalton	1045		While this comment is out of scope embankments cannot be property inspected in a vegetated state (e.g., heavy ground cover). Vegetation maintenance is necessary to accurately determine condition rating and risk.

Subject Number	Subject/Comment	Comment Numbers	DGEIS/Guide Book References	Response
	The resolution of trees on the embankment is the "World Class Canal system" as described in comment 1045.			
Other-7u	An appropriate vegetation management plan is important to the long term health and vitality of the canal, but each section of the Canal deserves a local plan that is developed with the participation of local communities. A well considered and thought out plan is in the best interest of all stakeholders. The Canal remains a unique and important asset, and it is important that we preserve the elements that make it such.	1048		By taking a programmatic approach to the Earthen Embankment Integrity Program under the State Environmental Quality Review Act, the Canal Corporation is considering the environmental impacts of projects that might be implemented as part of the program. An assessment of impacts from pollution, light, or noise are part of that assessment. For any projects where community thresholds are exceeded – which includes projects in or adjacent to parks, areas that are part of a Local Waterfront Development Program, areas where the canal is part of a Comprehensive Plan, etc., the impacted community will be provided two alternatives, at a minimum, which can better mitigate impacts from pollutants, light, and noise. The alternatives are described further in Section 8.15 of the Guide Book.
Other-7v	As it currently stands, the end result of this plan as outlined and based on my understanding from the public input sessions is that no trees will be along the Erie Canal. Immediately this will not be the case, but all of the policies outlined will not accommodate new tree growth along the canal. The "decision tree" is built on the assumption that no new trees will be allowed. This is based on studies that have not shown tree roots to be a serious cause of concern. The plan should consider leaning toward a responsible forestry approach - allowing trees to grow on the canal embankments.	1050		The assumption that no trees will remain along the Erie Canal is incorrect. The EEIP applies to earthen embankments only which comprise about 12% of the overall canal system. Mapped embankments and seep information can be found online: https://www.nyscanalintegrity.org/program-and-maps
Other-7w	A local advisory board that includes engineers, biologists, ecologists, arborists, and hydrologists, should be consulted before engaging in *any* significant action that includes vegetation removal along the canal. And after a determination has been made on how to mitigate potential negative impacts, those decisions should be widely disseminated.	1062		Please refer to Sections 8.15 and 10 of the Guide Book for a discussion of how projects will be progressed when community thresholds are exceeded.
Other-7x	The Town of Pittsford asks NYSCC to revise the EEIP to reject embankment clear-cutting as its underlying rigid policy, to embrace a more thorough, robust program of	1071		Please refer to Section 1 of the Guide Book and Section 1.3.1 of the GEIS for a discussion of project need.

Subject Number	Subject/Comment	Comment Numbers	DGEIS/Guide Book References	Response
	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.			
Other-7y	Invest resources to understand the interaction of vegetation and embankments. First of all, digitize the Canal Corporation archives. Make it searchable and indexed. Initiate a scientific literature review to restore that lost knowledge base. Second, provide grants to state college - colleges to do hands-on, in the field research on vegetation and embankments, to advance and expand understanding of the interaction between the natural world and the construction- constructed structures.	1102		While this comment is out of scope it is acknowledged.
Other-7z	Selective cutting It would be less expensive to closely monitor the canal embankments than to clear miles of trees. We are not opposed to careful, selective trimming or removal of the brush or occasional problematic tree if it can be shown to be a bonafide hazard. Selective tree removal with each section examined on its own merits. Remove dead trees and brush and leave healthy trees. Hopefully there will be some selectivity involved in the species that are ultimately removed - Cotton Woods, Willows, other fast growth weed trees can go. Walnuts, Locusts, Maples, and other slower growth hardwoods should be left alone. Remove dead trees and replace them with new trees.	18, 19, 228, 289, 329, 390, 391, 407, 456, 459, 472, 497, 514, 522, 543, 559, 545, 562, 566, 568, 581, 582, 590, 597, 616, 671, 672, 756, 758, 769, 797, 827, 832, 839, 856, 859, 880, 882, 891, 967, 1007, 1048, 1066, 1070, 1086, 1095, 1097, 1101		Section 8.15 of the Guide Book discusses the process by which community stakeholders will be able to provide feedback on projects where community thresholds are exceeded. Canal Corporation will develop and present a minimum of two alternatives, including: 1) a baseline conceptual design retaining healthy, non-invasive trees in Zones 2B and 3; 2) a conceptual design with limited tree removal to facilitate necessary corrective actions to address identified seeps (healthy trees equal to 3" DBH and greater remain outside Zone 2B and 3)
Other-7z	Adapt the embankment inspections process to the natural conditions on the ground, and where necessary, trim minimal vegetation to provide on-site visual inspection. • Fix the Condition Rating System to end the practice of assuming natural vegetation is a risk factor, and integrate more scientifically supported indicators of embankment condition. • Utilize these improvements and an ecological engineering approach to develop a more environmentally-sensitive and cost-effective program of embankment stewardship. • When interventions are necessary, minimize impact to the natural vegetation by using a variety of alternative embankment maintenance strategies.	1044		Comment acknowledged.
	I would like to see the vegetation between the path and the water removed. Historically that growth was not part of the canal and it spoils the view.	528		Comment acknowledged.

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	Alternative way to monitor without cutting trees, such as by boat, helicopter, cut small openings for viewing access, access from sluice gates. 840- I have further heard that the NYSCC is now claiming that the proposed clearcutting has nothing to do with the stability of the embankments, but is now a matter of "Oh, we have to cut those trees down because our job is to monitor the canal and we can't see to do it with all those trees in the way." Which makes me ask: what about monitoring from BOATS, or a helicopter? Why can't you do what the rest of us do and monitor the canal from the towpath—from which there is a clear view of the water almost the entire length of the canal? Or if you have to look at it from the non-towpath bank, what about cutting down just small openings in the tree growth, here and there—so that officials from your agency can walk to the water's edge, where I know perfectly well from experience you can see quite a long way up and down the waterway? Can't you simply achieve access at each sluice gate—and again, I know from experience the canal does have sluice gates every so often along its length?	840		Removal of brush and trees from the embankments is necessary for the proper inspection of the earthen embankments. In areas where dense brush and tree growth has occurred access to visually inspect the critical sections of the embankments can be severely limited or not possible. The Canal Corporation has implemented advanced monitoring techniques include use of drones and special cameras, however, these technologies are also limited
	Woodlot Management 407-Trees are a renewable resource. They're also a plant. I agree clear cut is no good. Wood lot management should be in place. It costs more and is more tedious but you can make money back by logging what you can or firewood. Let other trees grow.	407		Managing earthen embankments, which are water impounding structures, as wood lots to grow and harvest timber is not compatible with best engineering practices. Please refer to Section 1 of the Guide Book for a detailed discussion regarding earthen embankments and management strategies.
Other-8	Funding			
Other-8a	Who is paying for this?	473		The EEIP will be budgeted through the Canal Corporation annual budgeting process. Canal Corporation is funded through the New York Power Authority.
Other-9	Regulate Embankments as Dams			
Other-9a	Suggesting that earthen embankments be listed as dams under NYSDEC regulations and oversight.	21		Please refer to Section 1 of the Guide Book for a discussion regarding the difference between dam, levees and earthen embankments. The Canal Corporation does not have the authority to have NYSDEC regulate earthen embankments as dams.

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Other-9a	The dam from Fairport to Pittsford has been classified C High Hazard dam and could potentially drown hundreds of people in the Fairport Jefferson Ave area.	7		Please refer to Section 3 of the Guide Book for a detailed discussion of the embankment rating system proposed under the EEIP.
Other-10	The Past Embankment Experiences			
Other-10a	Damage to local roads • 5- Overall the work to the canal bank was done well, however, what we don't appreciate is the damage that the contractor, Hohl Industries, did to a local road, Marshall Road. The damage was brought to their attention during the construction, however, they attempted to pass it off as the fault of the town or a local sub-contractor. They ignored it now to the point where the road is deteriorating and the damage is worse. This road is used by local traffic, including school busses. Also, they ran overweight and oversized trucks on the road causing ruts and the edges to crumble. Again, they denied any responsibility. Ridgeway is now in the process of suing Hohl Industries for damages.	5		This comment refers to previous work and asserts damage caused by a Canal Corporation contractor. This is outside the scope of this EEIP.
Other-10b	Bushes and trees planted are dying or too small to replace the trees removed, were not maintained. Nothing to draw wildlife. It is struggling to survive. Stumps were left in the embankment. Logs from trees disposed of at toe of embankment, blocking inspectors from identifying leaks	11, 13, 136, 250, 562, 599, 978		This comment refers to previously completed work specifically the Vegetation Management Program and Earthen Embankment Restoration projects. Observations regarding potential safety issues have been share with Canal operations staff for follow up.
Other-10f	Problem in Brockport and need for 100 feet of toe drain. • 21-please have someone from the Canal Corporation look into the problem created now at our property in Brockport…please. We desperately need 100' of Toe Drain. I put a video up online at this address: https://youtu.be/u42AR9kooLI	21		This comment has been referred to Canal Corporation operations staff who followed up with a repair.
Other-10g	In Brockport neighborhoods now have increased air, noise and light pollution from the Brockport Industrial Park. The "barrier screening did NOT address the problem… just Constructive Notice from Canal Neighbors who live along this section of East Brockport Embankment Dam.	21		By taking a programmatic approach to the Earthen Embankment Integrity Program under the State Environmental Quality Review Act, the Canal Corporation is considering the environmental impacts of projects that might be implemented as part of the program. An assessment of impacts from pollution, light, or noise are part of that assessment. For any projects where community thresholds are exceeded – which includes projects in or adjacent to parks, areas

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				that are part of a Local Waterfront Development Program, areas where the canal is part of a Comprehensive Plan, etc., the impacted community will be provided two alternatives, at a minimum, which can better mitigate impacts from pollutants, light, and noise. The alternatives are described further in Section 8.15 of the Guide Book.
Other-10i	Look at Brockport for an example of what a mistake the current program would be,	53, 252, 271, 316, 353, 362, 380, 386, 396, 400, 409, 459, 514, 542, 543, 544, 549, 671, 672, 680, 706, 743, 756, 760, 770-771, 924, 967, 970, 978, 1019, 1053		The previously enacted Vegetation Management and Embankment Restoration projects represent an ad-hoc approach to embankment maintenance. The EEIP is designed to take a more balanced approach and allow for assessment and mitigation of potential impacts during project development.
Other-10j	They left branches hanging out into the canal water and never finished cutting them off or picking up the debris…. Not safe for boaters. This is evident particularly just west of the Adams Basin bridge on the north side of the canal. I think the work was done almost 2 years ago. I have emailed the canal website twice, talked to the paid canal walkers twice who told their bosses. Very incompetent and shoddy work. And what do we have left???? WEEDS!	268		This comment is in regard to a potential safety hazard to boaters and has been passed along to Canal Corporation operations staff.
Other-10k	In other areas where the Canal Corporation has clearcut vegetation it has destabilized the bank of the canal and has resulted in damage to the Canalway trail (notably between West Henrietta Road and Kendrick Road).	283		This area is not an earthen embankment section, it is a cut section where sloughing between the trail and the Canal has resulted in undermining of the trail. A project is in Design to repair the sloughed area as well as the undermined trail section.
Other-10l	The current approach also seems to step back from the management plan as reported in the Democrat and Chronicle in March 2018. This was in response to the civil action brought against the Canal Corporation's 2017 attempt to clear vegetation from the canal embankments. At that time, the commitment was to work with an arborist for selective tree removal of only those trees that threatened the canal bank.	671, 672		Under the revised program, the Canal Corporation will engage an arborist and a landscape architect for any projects where community thresholds are exceeded – which includes projects in or adjacent to parks, areas that are part of a Local Waterfront Development Program, areas where the canal is part of a Comprehensive Plan, etc. In areas where community

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	There was also a commitment to residents for restoration after the clear-cutting of trees along the Great Embankment after the September 7, 1998, storm. I am not aware of any restoration efforts. The trees that are there simply grew from the rubble left behind. [comments are the same – both commenters have same last name]			thresholds are not exceeded (i.e., rural or remote areas), the Canal Corporation will leave healthy trees where embankment dimensions and condition allow.
Other-10m	The new embankment installed along with the new Lyndon St. Bridge in 2002 is failing. Part of it has fallen into the canal. That is a life span of less than 20 years. If the engineers who thought that wire form embankment was a good idea are the same engineer who think cutting trees and pulling up rootballs is a good idea, then we are in trouble.	876		Comment acknowledged.
Other-10n	The previous tree clearing of a couple of years ago left stumps on the wall of about two foot height which was not attractive and did not remove the roots remaining in the side wall that appears to be the reason for the proposed action. Where there has been growth back after trees have been removed, it is now a thick hedge of brush that prevents line of sight from Canal Road and now represents a safety issue for walkers on the trail in the area.	891		Comment has been shared with Canal Operations. This area will be addressed under the EEIP.
Other-10o	There are locations within the recent clear cut areas that now hinder inspection	1045		Comment acknowledged.
Other-10p	I, myself, am part of the embankment restoration project that took off 27 miles of unsafe embankments from your list and your EEIP document guidebook. Your Environmental Impact Statement doesn't mention whether the neighbors who are affected by the original program will now fall under the EEIP program. We'd like to know how we get an audience with the Canal Corporation to address issues caused by embankment clearing here.	1089		The EEIP will apply to all earthen embankments. The mapped inventory of embankments is available online (https://www.nyscanalintegrity.org/).
Other-10q	In our experience the canal is above our Irondequoit Creek, and at one point they cut and left stumps on a very steep embankment because they couldn't figure out what to do after they cut them all down. And it goes right cascading onto the road, Marsh Road, that we live on.	1092		This area was subject to storm recovery efforts and will be further addressed under the EEIP.
Other-10r	Public engagement in 2017 and 2018 and legal challenge.	671, 672, 1044, 1051, 1071, 1091, 1098		By taking a programmatic approach to the Earthen Embankment Integrity Program under the State Environmental Quality Review Act, the Canal Corporation is considering the environmental impacts of projects that might be implemented as part of the

Subject Number	Subject/Comment	Comment Numbers	DGEIS/Guide Book References	Response
				program. Please refer to Sections 9 & 10 of the Guide Book for details on how public outreach will be handled under the EEIP.
Other-10s	A hundred years ago, the professionals in charge of the canal reconstruction had expertise. They knew that culverts were a weak point. They preemptively set up communication system at the culverts during the refill and when one of those started to leak and fail, immediately stopped the process to rebuild the culvert. One hundred years later, much of that knowledge has been lost by the Canal Corporation. NYPA never had that knowledge but are now calling the shots.	1102		Canal Corporation implements a bank walk program to inspect embankments and associated infrastructure during canal water up each year.
Other-10t	During the clear cut on the west side, an unknown number of trees were removed, perhaps hundreds or thousands. As far as I can tell, no data about the root extents was collected.	1102		Root removal was based on the contract requirements specifying removal down to 1" diameter. This was verified by our construction inspection staff but no data was kept.
Other-11	Concern for Effect on winds, rain, and snow			
Other-11a	Concern for increased winds. Without trees there is no protection from the wind. Healthy trees lower wind speeds. Trees and shrubs create a needed wind and snow break. Protect canal users, such as crew racers, from wind and rain.	17, 40, 99, 156, 228, 318, 369, 571, 667, 669, 706, 737, 769, 770, 900, 969, 1026, 1097		While this comment is out of scope it is acknowledged.
Other-12	Concern for Increased Heat			
Other-12a	Concern that adjacent property will become hotter	17, 1026. 1097		While this comment is out of scope it is acknowledged.
Other-13	Energy Costs to Adjacent Properties			
Other-13a	Trees reduce energy costs to adjacent properties (shade in summer & wind break in winter)	194		While this comment is out of scope it is acknowledged.
Other-14	Property Value			
Other-14a	Trees give us/help support property value. If loss of tress, loss of property value and towns would have to raise taxes.	90, 237, 158, 573, 669, 711, 789, 967, 974, 1000, 1053, 1085, 1097		While this comment is out of scope please refer to Section 8.15 of the Guide Book which discusses the process by which community stakeholders will be able to provide feedback on projects where community thresholds are exceeded. Canal Corporation will develop and present a minimum of two alternatives,

Subject Number	Subject/Comment	Comment Numbers	DGEIS/Guide Book References	Response
				including: 1) a baseline conceptual design retaining healthy, non-invasive trees in Zones 2B and 3; 2) a conceptual design with limited tree removal to facilitate necessary corrective actions to address identified seeps (healthy trees equal to 3" DBH and greater remain outside Zone 2Band 3)
Other-15	Examples of Other Projects			
Other-15a	Please check out how they improved the Gap, beginning in Pittsburg, by joining it completely and leaving the natural beauty.	688		The project will be reviewed to determine for applicable insights into program development.
Other-15b	During the 30 September virtual session, Rebecca Hughes noted that people in Waterford have enjoyed being outside along the canal for years even though they never had trees in that section. What section of the canal is this? I thought I heard, "between locks 2 and 3." However, there is no path there. There is a small tree-less canal-side park on the north side of highway 32, by the bridge. Is that the place?	971		Waterford is host a number of activities focused on the canal including the canal fest (https://waterfordcanalfestival.com/). Information regarding visiting Flight Lock Road Park, including vehicle and pedestrian access, can be found online (https://waterfordmuseum.com/flight-of-locks-state-canal-park/).
Other-15c	The Canal du Midi in France was a beautiful place to vacation years ago. The trees were struck with a disease and had to be removed. Now it is hot and unpleasant smelling in the warm months.	995		Comment acknowledged.
Other-16	Topics covered by other NYSCC programs			
Other-16a	The Town of Perinton is concerned with the condition of dive culverts/culverts that also carry significant risk and potential for downstream flooding should they fail. Can you provide insight regarding the NYSCC approach to evaluating and maintaining this aging infrastructure?	1015		All Canal structures are evaluated based on our Structural Inspection ratings and Risk Categories and then prioritized and placed into our Capital Program for rehabilitation or replacement.
Other-16b	Does NYSCC or NYPA have a strategy at any stage of development to change the current status of the canal to add a commercial or industrial function? e.g., use the canal-way as a conduit?	1022		While this comment is outside the scope of the EEIP, the Canal Corporation is always looking to improve the useability of the canal for both recreation and commercial purposes.
Other-16c	At the Great Embankment Park we observed a great deal of invasive vegetation growing directly out of the concrete walls of the canal itself. We were told that that was not part of the EEIP, which seems, frankly, ridiculous. Hopefully, fixing the concrete lining would	1062		Spillways, waste weirs, fixed crest dams, retention dams, vertical walls, culverts and dive culverts are excluded features under the EEIP. Canal infrastructure, not covered by the EEIP, is assessed and ranked by

Subject Number	Subject/Comment	Comment Numbers	DGEIS/Guide Book References	Response
	be the first line of defense against seepage, and is remediated prior to other more drastic measures on the embankment itself.			condition and hazard as part of the ongoing asset managed program. Structure rehabilitations would be completed as part of the capital program or regular maintenance.
Other-16d	Cartersville Spillway and Creek. The Canal folks need to maintain the spillway and remove trees and growing through and over the spillway's cement floors. Near the waterfalls there is a HUGH junk tree that's decades old growing right through the cement floor. If there is an emergency and the Cartersville Gate needs to be lowered quickly the water will flow over the top of the spillway and rush down the stream. This mammoth mass of vegetation will deter this rush of water and cause the water to flow over the cement walls of the spillway flooding our properties. [Both comments are the same – same commenter]	1066, 1101		Spillways, waste weirs, fixed crest dams, retention dams, vertical walls, culverts and dive culverts are excluded features under the EEIP. Canal infrastructure, not covered by the EEIP, is assessed and ranked by condition and hazard as part of the ongoing asset managed program. Structure rehabilitations would be completed as part of the capital program or regular maintenance.
Other-16e	The Town of Minetto's River view Park and the need to maintain the shoreline.	1068		Spillways, waste weirs, fixed crest dams, retention dams, vertical walls, culverts and dive culverts are excluded features under the EEIP. Canal infrastructure, not covered by the EEIP, is assessed and ranked by condition and hazard as part of the ongoing asset managed program. Structure rehabilitations would be completed as part of the capital program or regular maintenance.
Other-16f	Planning for an apartment/townhome project in Bushnell's Basin that is considering the extension of a sewer line under the canal.	1090, 1093		This is outside the scope of the EEIP. Utility extension projects would be handled under the Canal Corporation permitting process which would include SEQR and SHPO review prior to issuance of any permits for work on canal property.
Other-16g	Years ago the Canal Corporation thought that it would be nice to open the Great Embankment Spillway floodgate, not realizing there are hundreds of homes that are below grade.	1091		Comment acknowledged.
Other-16h	• 967- So why not address the many other deficiencies first? (Such as crumbling concrete and trees growing out of the Embankment walls heading toward Pittsford? • 1087- How will clear cutting impact the crumbling walls of the great embankment section of the canal?	967, 1087		Canal infrastructure will continue to be maintained and restored through traditional maintenance and capital improvement projects.

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Other-17	Restated Questions from Public Meetings on 9/20-21/2021			
Other-17a	How many identified seeps are there? Are there any seeps on embankments where work was completed on the west side from Medina eastward?	1045		Canal maps illustrating the location of all embankments and general location of seeps are available online: https://www.nyscanalintegrity.org/program-and-maps
Other-17b	Has there been an investigation into the cause of the Macedon/Palmyra breach? What characteristics does the site have? Are any of those characteristics present in other locations along the canal?	1045		The failure was likely due to internal erosion and settlement/collapse of the embankment over time along the stone abutment/embankment interface and may have been exacerbated by settlement/movement of the abutment and supporting wooden piles. Lack of cutoff features, waterstops, loose masonry joints, seasonal freeze thaw cycling all may have played a role. This failure development was likely progressive and was unobserved in part due to the proliferation of unsuitable woody vegetation along the embankment slope that prohibited adequate inspection of the structure. Many structures with similar features exist along the Canal system.
Other-17c	What effects does watering and rewatering the canal have on earthen embankments and other structures?	1045		Raising and lowering water levels in the elevated earthen embankment Canal segments affects the elevation of the phreatic surface (water level) within the earthen embankment structure. As the water level inside the Canal increases, the pressure exerted by the water on the Canal increases causing the water to slowly flow and absorb into the embankments. Eventually the phreatic surface reaches an equilibrium pressure/elevation within the embankment cross section. This process takes longer than the time it requires to fill the Canal. When the Canal is drained, this process repeats itself in reverse with the water level in the Canal falling more rapidly than the phreatic surface elevation within the embankment. Higher Canal water levels and phreatic surface elevation increases pressure on seepage pathways and can affect the rate

Subject Number	Subject/Comment	Comment Numbers	DGEIS/Guide Book References	Response
				of seepage through the embankment and other structures.
Other-17d	Who are the authors? What sections? Who set the standards for the documents? Were there any major revisions? Who reviewed the documents? Who approved the documents?	1045, 1102		The Guide Book and GEIS were developed by the Canal Corporation and Bergmann Engineers. Internal reviewers included representatives from, Dam Safety, EH&S, Operations, Design and Construction. In addition, review and development through Bergmann relied on engineers, natural resources managers, biologists, historic preservationists, public health professionals, landscape architects, and planners.
Other-17e	Are there any sections copied from external sources? Were there any templates used for the creation of these documents?	1045		Document references are included for both the Guide Book and GEIS. Citations are provided within the documents as needed.
Other-17f	Where did the embankment diagram come from?	1045		The embankment diagram is based on construction drawings of canal embankments as well as referenced guidance documents.
Other-17g	There has been a conscience or subconscious decision that some locations do not pose a risk but there are some that are actually earthen embankments. Perhaps they are not recognized as earthen embankments. Is it possible to define and quantify those attributes so they can be used elsewhere? Can areas be excluded based on those attributes? There are a few examples such as Schoen Place in Pittsford, The Box Factory parking lot in Fairport, the embankment west of Fairport including O'Conner Rd. and the Canal Corp Maintenance facility west of Pittsford. If they are not excluded, how would the zones apply to those specific embankments?	1045		The inventory of mapped earthen embankments is available online (https://www.nyscanalintegrity.org/). Section 1 of the Guide Book provides a detailed discussion of the difference between dams, earthen embankments and levees. The EEIP would apply to earthen embankments across the canal system and decision making would be carried out in accordance with process provided in the Figure 8-1 of the Guide Book.
Other-17g	Will there be expansions of screening for privacy to fill zone 3 on the west side such as in Holley and Brockport etc.?	1045		No expansion of screening provided in alternate projects is included in the EEIP, at this time.
Other-17h	How many trees have been determined to be navigation hazards? How many tree-in-water incidences were there last year? The year before? Is there any data?	1045		Floating debris, including trees, are regularly removed from the canal as part of regular maintenance. Likewise, trees that impede on the navigation channel are removed. Data is not available.

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Other-17i	Clear zones for bike paths are mentioned. What clear zone is planned for the trials?	1045		Design of trail features is required to consider the guidelines presented in the Guide for the Development of Bicycle Facilities (AASHTO, 2012). The guide is designed to provide information on the development of facilities to promote the safe use of bicycles.
Other-17j	What weight were the embankment crests / paths designed for? What are the weight limits for earthen embankments?	1045		Placement or use of heavy equipment on an earthen embankment must be reviewed by a professional engineer. Any damage resulting from use of such equipment would be restored.
Other-17j	What is the service life of various canal structures?	1045		The service life of any structure is dependent on multiple factors, including original construction techniques, maintenance and external factors such as weather.
Other-17k	Where are drainage blanket and toe drains appropriate?	1045		As discussed in the Attachment A-1 – Embankment Maintenance Best Practices, construction of the drainage blankets and toe drains require review by a professional engineer. The engineer would review site conditions to determine whether a drainage blanket or toe drain was appropriate. Generally, these features are constructed on the outboard slope of the embankment, below the phreatic surface line.
Other-17l	What are the different configurations of the earthen embankments? Are there earthen embankments that are not water impounding structures? What effect do vertical walls have on the seepage line? Do they act as cutoff walls? What impact does a concrete lined section have on the seepage line?	1045		Representative earthen embankment cross-sections are provided in Section 1.5 of the Guide Book and further discussed in Section 6. Depending on the location, construction and condition of a vertical wall (e.g., concrete or steel sheet pile) it may serve as cutoff wall or result in lowering the phreatic surface within an embankment. Investigation would be required to determine the impact of such features at specific locations.

Subject Number	Subject/Comment	Comment Numbers	DGEIS/Guide Book References	Response
	We fully support the consistent positions taken by our Town leadership and reflected in: Town of Pittsford's Attorney Robert B Koegel's August 26, 2021 letter to consultant Bergmann (https://www.townofpittsford.org/files/publications/canal-tree-cutting-EIS-guidebk-comments-lttr-pittsford-town.pdf) [Comment 1071] Town Supervisor Bill Smith's testimony before public hearing (https://www.townofpittsford.org/files/publications/canal-tree-cutting-statement-supervisor-bill-smith-071421.pdf) [Comment 1091]	1042, 1049		Please refer to Section 1 of the Guide Book and Section 1.3.1 of the GEIS for additional information regarding the need for the program.
	The Canal Corporation should rewrite the management plan to protect the natural vegetation on the canal embankments. I look forward to hearing from the NYSCC about an improved management plan that prioritizes the preservation and restoration of trees and other natural vegetation on the Canal embankments.	24-56, 58-62, 64-82, 84-97, 99-155, 158-208, 212-215, 217, 219, 221-240, 242-247, 250-251, 253-267, 269-270, 272-281, 283-286, 289-297, 299-315, 317-323, 326-332, 334-337, 339-345, 347-357, 359, 361, 363-368, 370-378, 381-384, 386-390, 392-401, 403, 405-408, 410, 413, 415-418, 420, 422-429, 431-441, 444-456, 458, 461-501, 504-507, 509-513, 517-520, 522-526, 528-530, 532, 534-540, 545-546, 548, 550-553, 557-558, 560-561, 563, 566, 569, 571-572, 574-578, 585-		Please refer to Section 1 of the Guide Book and Section 1.3.1 of the GEIS for additional information regarding the need for the program.

Subject Number	Subject/Comment	Comment Numbers	DGEIS/Guide Book References	Response
		586, 591, 593-594, 597, 599-604, 607-608, 610, 612-614, 617-618, 622-629, 632-636, 641-667, 670, 673-675, 678-679, 681-687, 689-698, 700-731, 733-742, 744-746, 748, 751-752, 754-755, 759, 762, 764-768, 772, 776, 779-782, 785-802, 804-820, 824-826, 828-831, 833, 835-836, 838-839, 845-846, 849-850, 855		
	I am writing to ask you to protect the natural environment of the Erie Canal from the narrow-minded management of NY Power Authority. They have removed many linear miles of natural vegetation along the Canal's raised embankments and replaced it with sterile turf grass. They plan on continuing to remove natural vegetation for up to 125 miles of these embankments. I want my elected representatives to defend the values in the state's Canal Recreationway Plan (https://www.canals.ny.gov/news/crc/c5.pdf) and expressed by myself and hundreds of other concerned citizens. We need you to act now to stop NYPA's mismanagement of the Erie Canal. We need a stewardship plan that develops more environmentally sensitive and cost effective solutions.	860-873, 875-889, 892-899, 901-908, 910, 912-916, 918-936, 940-949, 951-953, 955-956, 959-966, 968-970, 976-982, 984, 993, 995, 999, 1001-1002, 1005-1006, 1008, 1010, 1013, 1016, 1019, 1021, 1024-1026, 1028-1030, 1033, 1038, 1040-1041, 1044, 1046, 1052, 1054-1055, 1057, 1060-1061		Please refer to Section 1 of the Guide Book and Section 1.3.1 of the GEIS for additional information regarding the need for the program.

Subject Number	Subject/Comment	Comment Numbers	DGEIS/Guide Book References	Response
	The trees belong on the embankments because:			
	a. The canal is unique historic treasure. Trees are part of the historic tapestry of nature along the canal. Trees are historic as the canal itself.	25-31, 33, 36-48, 53-56, 58-62, 64-65, 67-80, 82, 84-88, 90-95, 97, 99-115, 117-119. 121, 123-137, 140-144, 146-155, 158-164, 166, 168-188, 192-200, 202-205, 207-208, 212-215, 217. 223-233, 237-240, 242-244, 246, 249-251, 253-267, 269-270, 272-273, 275-281, 283-286, 289-297, 299-308, 312-315, 317-318, 320-323, 326-327, 329-332, 334-337, 339-340, 342, 344-345, 347-357, 361, 363-364, 366-368, 370-377, 381-384, 386-388, 392-401, 403, 405-406, 408, 410, 413, 415-418, 420, 422-429, 431-433, 435-441, 444, 446-449, 451-456, 458, 461, 463-469, 471, 475-477, 480-481, 484, 487-488, 491, 494-501, 504,		Please refer to Section 3 – Environmental Setting and Potential Impacts of the GEIS for a detailed discussion of the potential impacts identified for the EEIP and associated mitigation measures. Trees are not part of the historic integrity or historic significance of the canal and its embankments because the canal was not engineered to have trees as part of the structure. As an NHL property, removal of the trees would constitute a restoration of the historic engineering of the canal because the trees are harming the historic integrity of the embankments.

Subject Number	Subject/Comment	Comment Numbers	DGEIS/Guide Book References	Response
		506-507, 509-513, 517, 519-520, 522-524, 526, 528, 530, 532, 534-540, 545-546, 548, 550-553, 557, 563, 566, 569, 571-572, 575-578, 593-594, 597, 600-602, 607-608, 610, 612-614, 618, 622-629, 632-636, 641-653, 655-659, 661-667, 673-675, 678-679, 681-683. 685-686, 689-698, 700-705, 707-716, 719-724, 726-731, 733-742, 744-746, 748, 751-752, 754-755, 759, 762, 764, 766-768, 772, 776, 779-782, 785-802, 804-820, 824-826, 828-829, 831, 833, 835-836, 838, 845-846, 849-850, 855, 861-873, 875-881, 883-889, 892-899, 901-908, 910, 912-916, 918-924, 926-936, 940-949, 951-953, 956, 959-966, 968-970, 976-982, 984,		

Subject Number	Subject/Comment	Comment Numbers	DGEIS/Guide Book References	Response
		993, 995, 999, 1001-1002, 1005-1006, 1008, 1010, 1013, 1016, 1019, 1021, 1024-1026, 1028-1030, 1033, 1038, 1040-1041, 1046, 1052, 1054-1055, 1057, 1060-1061		
	b. The natural vegetation enhances the ambiance of the canal port towns. Trees contribute to the attractiveness of the canal as a local amenity.	25-31, 33, 35-53, 55-56, 58-62, 64-79, 81-82, 84-93, 95-97, 99-107, 115, 117-131, 133-138, 140-156, 158-189, 192-205, 208, 212-215, 217, 219, 221-225, 227-239, 242-247, 249-251, 253-256, 258-267, 269-270, 272-281, 283-286, 289-297, 299-315, 317-323, 326-332, 334-337, 339-342, 344-345, 347-357, 361, 363-368, 370-378, 381-384, 386-388, 390, 392-401, 403, 405-408, 410, 413, 415-416, 418, 420, 422-424, 429, 431-434, 436-440, 444-456, 461-472, 475-		Please refer to Section 3 – Environmental Setting and Potential Impacts of the GEIS for a detailed discussion of the potential impacts identified for the EEIP and associated mitigation measures.

Subject Number	Subject/Comment	Comment Numbers	DGEIS/Guide Book References	Response
		484, 487-488, 494-501, 504-507, 509, 511-512, 517-520, 522-526, 528-529, 532, 534-540, 545-546, 548, 550-553, 557-558, 560-561, 563, 566, 569, 571-572, 574-576, 578, 585-586, 591, 593-594, 597, 599-600, 602-604, 607, 610, 612-614, 617, 622-625, 629, 636, 641-660, 662-667, 673, 675, 678-679, 681-686, 689-698, 700, 702-729, 731, 733-742, 744-746, 748, 751-752, 754-755, 759, 762, 764-768, 772, 776, 779-782, 785-793, 795-802, 804-807, 809-820, 824-825, 828-831, 833, 835-836, 838-839, 845-846, 849-850, 855, 860-867, 869-873, 875-886, 888, 892-899, 901-908, 910, 912-916, 918-936, 940-945, 947-949, 951-953,		

Subject Number	Subject/Comment	Comment Numbers	DGEIS/Guide Book References	Response
		955-956, 959-966, 968-970, 976-982, 984, 993, 995, 999, 1001-1002, 1005-1006, 1008, 1010, 1013, 1016, 1019, 1021, 1024-1026, 1028-1030, 1033, 1038, 1041, 1044, 1046, 1052, 1054-1055, 1057, 1060-1061		
	c. Natural vegetation and trees provide safety for recreational activities including walking, biking, boating, photography and fishing,	25-31, 33-56, 58-62, 64-75, 81-82, 84-93, 97, 99, 102-104, 106-128, 130-155, 156, 158-166, 168-208, 215, 217, 219, 221-240, 242-247, 249-251, 253-256, 258-267, 270, 272-279, 281, 283-286, 289-297, 299-311, 314-315, 317-323, 326-332, 334-335, 339-345, 348-357, 359, 361, 363-365. 367-368, 370-377, 381-384, 386-388, 390, 392-401, 403, 405-408, 410, 413, 415-416, 418, 420, 422-426, 429, 431-441,		Please refer to Section 3 – Environmental Setting and Potential Impacts of the GEIS for a detailed discussion of the potential impacts identified for the EEIP and associated mitigation measures.

Subject Number	Subject/Comment	Comment Numbers	DGEIS/Guide Book References	Response
		444-455, 458, 461-487, 493-501, 504-507, 509-513, 517-520, 522-523, 526, 528-529, 532, 535-540, 545-546, 548, 550-553, 557-558, 560-561, 563, 566, 569, 571, 574-578, 586, 591, 593-594, 597, 599-600, 602-604, 607, 610, 612-614, 617, 622-624, 626-629, 632-636, 641-645, 649-653, 655-659, 661-665, 667, 673-675, 678, 681-683, 685-687, 689-698, 700-703, 705-718, 720-729, 731, 733-734, 736-742, 744-746, 748, 751-752, 754-755, 762, 764-768, 772, 776, 779-782, 785-793, 795-799, 801-802, 804-806, 808-820, 824-826, 828-831, 833, 835-836, 838-839, 845-846, 849-850, 860-873, 875-882, 887-889, 892-899, 901-908,		

Subject Number	Subject/Comment	Comment Numbers	DGEIS/Guide Book References	Response
		910, 912-916, 918-936, 940-945, 947-949, 951-953, 955-956, 959-966, 968-970, 976-982, 984, 993, 995, 999, 1001-1002, 1005-1006, 1008, 1013, 1019, 1021, 1024-1026, 1028-1030, 1033, 1040-1041, 1044, 1046, 1052, 1054-1055, 1057, 1060-1061		
	d. Natural vegetation provides plants for supporting wildlife, monarch butterflies, etc. including pollinators on flowers. Cutting trees interrupts the natural cycle of life supported by the canal.	25-56, 58-59, 62-64, 66-82, 84-97, 99-149, 155, 158-208, 212-215, 217, 219, 221-239, 242-247, 249-251, 253-267, 269-270, 272-279, 281, 283-286, 289-295, 297, 299-315, 317-323, 326-332, 334-337, 339-342, 344-345, 347-357, 359, 361, 363-368, 370-373, 375-377, 381-384, 386-390, 392-401, 403, 405-408, 410, 413, 415-418, 420, 422-429, 431-434, 436-441, 444-		Please refer to Section 3 – Environmental Setting and Potential Impacts of the GEIS for a detailed discussion of the potential impacts identified for the EEIP and associated mitigation measures.

Subject Number	Subject/Comment	Comment Numbers	DGEIS/Guide Book References	Response
		452, 455-456, 458, 461-472, 475-484, 487, 489, 494-501, 504-507, 509-513, 517-520, 522-526, 529-530, 532, 535-537, 539, 545-546, 548, 550-553, 557-558, 561, 563, 566, 569, 571-572, 574-578, 585-586, 591, 593-594, 597, 599-600, 602-604, 607-608, 610, 612-614, 617, 623-629, 632-636, 641-667, 670, 673-675, 678-679, 681-687, 689-698, 700, 702-710, 712-718, 720-731, 733-742, 744-746, 748, 751-752, 754-755, 759, 762, 764-768, 772, 776, 779-782, 785-802, 804-806, 808-812, 814-820, 824-826, 828-831, 833, 835, 838-839, 845-846, 849-850, 855, 860-867, 869-873, 875-889, 892-899, 901-908, 910, 912-916, 918, 920-		

Subject Number	Subject/Comment	Comment Numbers	DGEIS/Guide Book References	Response
		936, 940-945, 947-949, 951-953, 955-956, 959-966, 968-970, 976-982, 984, 993, 995, 999, 1001-1002, 1005-1006 , 1008, 1010, 1013, 1016, 1019, 1021, 1024-1026, 1028-1030, 1033, 1038, 1040-1041, 1044, 1046, 1052, 1054-1055, 1057, 1060-1061		
	e. Natural vegetation helps to fight global warming. Trees provide oxygen.	25, 27-29, 31, 33-35, 38-53, 55-56, 58-66, 69-82, 84-90, 92-97, 99-135, 138, 140-155, 157-164, 166-208, 212-215, 217, 219, 221-234, 236-240, 242-247, 249-251, 253-256, 258-267, 269-270, 272-279, 281-286, 289-295, 297, 299-311, 313-315, 317, 320-323, 326-332, 334-337, 339-340, 342, 344-345, 347-349, 351-357, 359, 361, 363-364, 368, 370-378, 381-384, 386-390,		Please refer to Section 3 – Environmental Setting and Potential Impacts of the GEIS for a detailed discussion of the potential impacts identified for the EEIP and associated mitigation measures.

Subject Number	Subject/Comment	Comment Numbers	DGEIS/Guide Book References	Response
		392-401, 403, 405-408, 410, 413, 415-418, 420, 422-429, 431-433, 436-441, 444-452, 455-456, 461-472, 475-478, 483, 490, 492, 494-507, 509-513, 517-520, 524-526, 529-530, 532, 535-536, 538-539, 545-546, 548, 550-553, 557-558, 560-561, 563, 566, 569, 571-572, 574-578, 585-586, 591, 593, 597, 599-600, 602-604, 607-608, 612, 614, 617, 623-629, 632-636, 641, 645-664, 667, 670, 673-675, 678-679, 681-686, 689-692, 694-698, 700, 702-705, 709-710, 712-718, 720-725, 727-731, 733, 735-742, 744-746, 748, 751-752, 754-755, 759, 762, 764-767, 772, 776, 779-782, 785-789, 791-801, 804-805, 812, 814-820, 824, 828-829,		

Subject Number	Subject/Comment	Comment Numbers	DGEIS/Guide Book References	Response
		831, 833, 835-836, 838, 845-846, 849-850, 855, 860-867, 869-873, 875-889, 892-899, 901-902, 904-908, 910, 912-916, 918, 920-936, 940-945, 947-948, 951-953, 956, 959-966, 968-970, 976-982, 984, 993, 995, 999, 1001-1002, 1005-1006, 1008, 1010, 1013, 1016, 1019, 1021, 1024-1026, 1028-1030, 1033, 1040-1041, 1044, 1046, 1052, 1054-1055, 1057, 1060-1061		