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December 30, 2016

Pamela G. Monroe, Administrator
New Hampshire Site Evaluation Committee
21 South Fruit Street, Suite 10
Concord, NH 03301

RE: New Hampshire Site Evaluation Committee Docket No. 2015-06
Joint Application of Northern Pass Transmission, LLC and Public Service Company of New Hampshire d/b/a Eversource Energy for a Certificate of Site and Facility for Construction of a New High Voltage Transmission Line in New Hampshire

Dear Pam:

Enclosed for filing in the above matter is the Joint Prefiled Direct Testimony of Dr. Kenneth Kimball and Larry Garland on behalf of the Appalachian Mountain Club.

Very truly yours,

William L. Plouffe, Esq.

Enclosure

cc: Susan Arnold
Kenneth Kimball
Larry Garland
Melissa Birchard, Esq.
Distribution List *(as of December 27, 2016)*

STATE OF NEW HAMPSHIRE

SITE EVALUATION COMMITTEE

DOCKET NO. 2015-06

JOINT APPLICATION OF NORTHERN PASS TRANSMISSION, LLC AND
PUBLIC SERVICE COMPANY OF NEW HAMPSHIRE D/B/A EVERSOURCE
ENERGY FOR A CERTIFICATE OF SITE AND FACILITY

JOINT PREFILED DIRECT TESTIMONY OF

DR. KENNETH KIMBALL
And
LARRY GARLAND

ON BEHALF OF
APPALACHIAN MOUNTAIN CLUB
December 30, 2016

Background of Dr. Kenneth Kimball

Q. Please state your name, title and business address.

A. My name is Kenneth Kimball. I am the director of research for the Appalachian Mountain Club (AMC). My office is located at 361 Route 16, Gorham (Pinkham Notch), NH.

Q. Please briefly summarize your educational background and relevant work experience.

A. I received a Bachelor of Science from Cornell University, a Master of Science from the University of Massachusetts Amherst, and a PhD from the University of New Hampshire in ecosystem sciences. Prior to becoming AMC' research director, my job experiences included serving in the Peace Corps Smithsonian Institution Environmental Program (Iran), as a research assistant at the Ecosystems Research Center at Cornell University, and as an environmental consultant with Biospheric Consultants International. At the latter position I evaluated alternative routes for the proposed US ACOE Dickey-Lincoln Hydroelectric Project Transmission Line through Maine and New Hampshire. I currently serve as the chairperson of New Hampshire's Rivers Management Advisory Committee (RMAC) as established by the State's River Management and Protection Program (RMPP) and I represent recreational interests. I serve on the board of directors of the national Low Impact Hydro Institute (LIHI)[1] that certifies "green" hydro in US markets and co-authored some of the criteria. As AMC's research director, relevant research projects of my staff include visitor use expectations at Acadia National Park and Baxter State Park. I was directly involved with hikers' rating of air pollutant (haze) visual degradation in the White Mountain National Forest, wind power siting guidelines, and evaluating and ranking priority conservation lands in the Northern Forest of NY, VT, NH and ME. I have authored and co-authored numerous peer-reviewed scientific journal publications, as well as served as a reviewer of manuscripts submitted.

Q. What are your qualifications for evaluating aesthetic impacts of the NPT project?

A. I have experience in both reviewing and co-developing evaluation models, their criteria, and matrices to rank or score natural and recreational resources and their impacts. I have visited major portions of the proposed route. I have over 30 years of experience interacting with user groups pursuing outdoor experiences, including hiking, biking, fishing, camping, cross country skiing, and boating in the state of New Hampshire, including both AMC members and the visiting public. I also serve on the board of directors of the Jackson Ski Touring Foundation in Jackson, NH, the largest and one of the oldest cross-country ski areas in New England. Based on these experiences, I have an understanding of the recreational user expectations that these user groups seek in New Hampshire. I am also familiar with the

[1] http://lowimpacthydro.org/

SEC rules and participated with AMC colleagues during the public process to revise these rules, including on aesthetics, which were adopted in 2015.

Q. Have you previously participated before the Site Evaluation Committee?

A. Yes, in the Granite Reliable Power, LLC (SEC Docket No. 2008-04) and Antrim Wind Energy LLC (SEC Docket 2012-01) projects. Along with Susan Arnold and Dr. David Publicover of AMC, I also participated in the recent SEC rulemaking process resulting in the rules under which this project is being reviewed.

Background of Larry Garland

Q. Please state your name, title and business address.

A. My name is Larry Garland. I am the staff Cartographer for the AMC. My office is located at 361 Route 16, Gorham (Pinkham Notch), NH.

Q. Please briefly summarize your educational background and relevant work experience.

A. I have a graduate degree in Computer Information Systems from Bentley College (MA) and an undergraduate degree from Pacific University (OR). Prior to my employment at AMC, I worked for 9.5 years as a Manager of Systems and Planning for a private consulting firm in Boston, MA. My work with the AMC began in 1994 when I georeferenced, mosaicked, and classified Landsat MSS satellite imagery as part of a comprehensive study of the 18 million-acre Northern Forest region. In 1996, I became AMC's Cartographer, initiating the Club's in-house computer-based digital cartography function to produce maps for AMC guidebooks. This work includes the use of industrial-grade GPS receivers for data collection in backcountry terrain utilizing attribute dictionaries and differential correction; assimilating and reconciling digital data from a multitude of various sources; and porting GIS data into graphics software for the rendering of maps. In addition to my cartographic work for AMC publications, I also provide GIS support for AMC's Research and Conservation Policy Departments, including viewshed analyses and assessments of recreational trail use and management.

Q. What are your qualifications for evaluating aesthetic impacts of the NPT project?

A. Several factors in my background inform my study of the Northern Pass Transmission (NPT) project.

- Both my academic training and job experience have been based in systems analysis: defining project parameters, establishing criteria for evaluation, and developing methodologies that inform results. This training is helpful in determining how methods and procedures fit or support stated objectives.
- I have traveled the entire proposed route of the NPT in both summer and winter conditions.

- I have been a long-time active outdoor recreationist, spending a considerable amount of time in the backcountry. In the local New England region, I have hiked all the trails described in AMC's White Mountain Guide (plus many more that are not in this publication), and summited every peak in New Hampshire over 3000 feet in elevation. These endeavors required gaining access to remote areas and becoming familiar with local environs beyond "just driving through". Frequently, I hike with friends and colleagues who share their thoughts and impressions of our outdoors experiences.
- I served for 12 years on the Board of the Upper Saco Valley Land Trust, a regional land trust serving Maine and New Hampshire, and am familiar with conservation values, resource assessment, and priority focus areas with respect to a land trust's mission. One of my responsibilities while on the Board was to chair the committee charged with developing a GIS-based Resource Inventory, ranking resource values, and identifying focus areas.
- My work with GIS has enabled me to "see" and relate to the NPT project in a very tangible way. As a GIS practitioner, understanding the project's relation to highways, trails, rivers, landforms, and communities provides a holistic context for studying the character and attributes of the NPT.
- In June 2016, I participated in an "Enjoy the View" workshop co-sponsored by the National Park Service's Appalachian National Scenic Trail unit, a two-pronged visual inventory project to inventory scenic viewpoint quality and importance. As a direct result of my participation, I have been invited to speak on a panel at the upcoming George Wright Society Conference concerning visual resource management in the NPS.

Q. Have you previously participated before the Site Evaluation Committee?

A. No, I have not.

Purpose of AMC's joint testimony

The purpose of this AMC joint testimony is to provide further analysis of the visual assessment (aesthetics) conducted by Northern Pass. It supplements visual (aesthetic) impacts testimony filed by Harry Dodson on behalf of the AMC and the Society for the Protection of New Hampshire Forests (SPNHF), and that filed by Chris Thayer of AMC. AMC is concerned about energy infrastructure's sprawl impinging on New Hampshire's diminishing open spaces and is a strong advocate of requiring best practical measures to minimize project impacts. AMC has been involved in the Northern Pass project since 2010, and has also engaged extensively in the Department of Energy's EIS process to date. AMC staff have visited the entire proposed route.

AMC is the nation's oldest conservation organization (1876) and has had a long-term role in encouraging people to wisely use and enjoy New Hampshire's landscapes for recreational and aesthetic

reasons. AMC is a well-known and longtime steward working to preserve the ecological and cultural landscapes that draw many people to New Hampshire. In collaboration with the Society for the Protection of New Hampshire's Forest and others, AMC advocated successfully for enactment of the Weeks Act in the early 1900s that created the eastern National Forest System and subsequently the White Mountain National Forest. In the late 1970s and early 1980s, AMC, SPNHF, the NH Department of Transportation, the Department of Resources and Economic Development, and the Governor of New Hampshire entered into two Memoranda of Agreement (MOA) (November 18,1977 and October 14,1983), further amended on March 17, 1993 and September 9, 2010, which collectively governed the design and construction of what is today known as the Franconia Notch Parkway and its adjacent state park facilities. These MOAs are the foundation for any future reconstruction of the Parkway. In the 1990s, AMC played a leading role in advocating for the US Forest Service's Northern Forest Lands Study of New England and New York (1990), and co-founded the Northern Forest Alliance (1990), a coalition of regional environmental organizations that inventoried and championed the protection of the Northern Forest's ecological and cultural landscape, which inspired further the protection and branding of New Hampshire's Great North Woods tourism region. Since 1990 over 275,000 acres in the Great North Woods of New Hampshire have been protected through conservation easements and fee purchases. We believe the Northern Pass Transmission project as proposed, using outdated overhead transmission technology, would severely degrade the cultural landscape in New Hampshire that AMC has worked for over a century to help steward and preserve.

Q. Please first summarize the conclusions of AMC's joint testimony.

A. AMC finds that the analysis performed by the Applicant's visual resources consultant, Terrance J. DeWan & Associates (TJD), contains errors and uses criteria contrary to those intended by the SEC rules. Furthermore, the consultants' Visual Impact Assessment (VIA) and prefiled testimony are devoid of objective evidence to support their conclusions about visitor and residents' perceptions and expectations relative to the Project's negative aesthetic impacts. While the VIA is obviously the product of a great deal of field work and analysis and is well presented, its ultimate conclusions are based upon a systematic under-inclusion of significant scenic resources and the injection of unarticulated, subjective valuations of scenic resources. Both of these factors render the VIA flawed and insufficient to satisfy the Applicant's burden to demonstrate that NPT will not have an unreasonable adverse effect on aesthetics.[2] A visual

[2] Site 202.19 *Burden and Standard of Proof.*
(a) The party asserting a proposition shall bear the burden of proving the proposition by a preponderance of the evidence.
(b) An applicant for a certificate of site and facility shall bear the burden of proving facts sufficient for the committee or subcommittee, as applicable, to make the findings required by RSA 162-H:16.

impact assessment that meets the requirements of the SEC rules by including all of the specified scenic resources that should be included under the SEC's rules and that appropriately considers viewer expectations as required by the SEC's rules would instead support a conclusion that the Project as proposed will have an unreasonable adverse effect on aesthetics and the cultural landscape of New Hampshire.

Q. Does TJD give adequate consideration and proper rating to all defined scenic resources within the Area of Potential Effects (APE) as required in the SEC rules?

A. No, TJD used reductive rating processes to eliminate numerous qualified scenic resources for further consideration and to underrate many others.

Elimination of Scenic Resources: Of those resources that had potential visibility of the Project based on TJD viewshed maps, AMC identified 82 scenic resources[3] (as categorized in Site 102.45) within 3 miles of the Project that were not evaluated for scenic significance (Appendix 2). For example, TJD eliminated many conservation lands as not having scenic quality if their conservation purpose classification was other than "open space" in the National Conservation Easement Database (NCED)[4]. Within this database the conservation purpose is based on an IRS Code, which is not intended to determine if a parcel has "scenic quality" as defined by SEC rules[5]. An agricultural conservation easement with scenic qualities that is publicly accessible for hunting, snowmobiling, or other recreation and enjoyment, would not have qualified under criteria applied by TJD. There are 19 conservation lands within 3 miles of the Project that have both public access and scenic qualities with visibility of the Project that were not analyzed in the VIA.

Underrated Cultural Values: TJD's 'Low Cultural Value' rating of local scenic resources both removed many from adequate visual analysis and then diluted the remaining cultural scores. Underrating strongly influenced TJD's conclusions regarding unreasonable adverse aesthetic effects. In the VIA methodology, TJD did not assign visual impact ratings for 130 sites because "they have low cultural value" (VIA p. M-2). TJD primarily based its rating decisions on cultural values for scenic resources by reviewing publicly available printed (electronic/ink) reports. Typically, if these reports indicated that cultural value was assigned by a municipality or town, it got a low score; if its value was assigned by the

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(c) In a hearing held to determine whether a certificate, license, permit or other approval that has already been issued should be suspended, revoked or not renewed, the committee or subcommittee, as applicable, shall make its decision based on a preponderance of the evidence in the record.

[3] Some "scenic resources" may qualify to be listed in more than one SEC scenic resource category, e.g. a lake may also reside within a State Park, a bike trail may also be part of a designated scenic road, etc..

[4] http://conservationeasement.us/

[5] Site 102.44 "Scenic quality" means a reasonable person's perception of the intrinsic beauty of landforms, water features, or vegetation in the landscape, as well as any visible human additions or alterations to the landscape.

State, it got a medium score; and if its value was nationally recognized it got a high score. Mr. DeWan agreed during the Technical Sessions that he was not a cultural resource expert and that he failed to seek a fuller understanding of the importance of these cultural resources.

TJD's 'Cultural Value" ratings scale is also inconsistent with other similar and more appropriate resource rating systems used in New Hampshire, such as the NH Fish and Game's Wildlife Action Plan (WAP). The WAP assesses the ecological condition of habitats based on their condition, importance, distribution and commonality relative to the State of New Hampshire, not the nation[6]. In contrast, for a cultural value to rank "High" by TJD's definition, it had to be, with few exceptions, of national significance, i.e. a National Forest, National Scenic Byway, National Scenic Trail, or the like. This approach is arbitrary and does not adequately reflect the importance of various resources to New Hampshire's cultural landscape. Were NH's WAP based principally on a national rating standard, many of the habitats identified as important would not have been so designated. As the SEC energy facility certification process is about New Hampshire and impacts to New Hampshire's scenic resources, the VIA's conclusions should not be diluted by using criteria skewed to a national scale. For example, Mount Monadnock would have received a medium rating under Mr. DeWan's scheme but is clearly a scenic resource of high value and sensitivity within New Hampshire.

TDJ's cultural rating system also fails to acknowledge or under ranks many "scenic resources" that the State, towns, organizations, and its citizens have invested considerable financial and human resources into their protection, e.g. the state Rivers Management Protection Program, scenic road designations, conservation lands or easements purchased through the State's Land Conservation Investment Program (LCIP) and Land and Community Heritage Investment Program (LCHIP) or by land trusts, etc. These investments underscore the importance of these scenic resources and citizens' commitment to preserve their cultural and ecological values. Examples include the 13-Mile Woods corridor along the Androscoggin River, White Park in Concord, four town-designated scenic roads in Deerfield, etc.

Q. Did the TJD Visual Impact Assessment apply a consistent methodology in determining Overall Visual Impact ratings for scenic resources?

A. No. The Overall Visual Impact ratings as presented in the VIA suggest they are the product of an objective and mathematically driven formula, however in reality they represent the subjectivity dominated by a single individual. The scoring of scenic resources for Overall Visual Impact (scoresheets obtained

[6] NH State Wildlife Action Plan rankings are based on the Endangered and Threatened Species Lists and Heritage Rankings of species and habitats of concern based on their state rankings, with some consideration given to the New England region. Habitat maps define where the wildlife habitat is in the best relative condition in New Hampshire. The next lower level is the best ranked habitat within a defined biological region within New Hampshire. The final level is "supporting landscapes".

through Discovery Request HIS 07: NPT_DIS 010758) in conjunction with the Overall Visual Impact Rating form (VIA p. M-15) clearly indicate that the determination of Overall Visual Impact was inconsistent and lacking in objective rigor. For example, similar combinations of High, Medium, and Low scores do not always result in the same rating. Additionally, ratings provided by the three consultants (Terry DeWan, Jessica Kimball, and David Truesdell) were not methodically combined, and not all three visited all sites they rated. Furthermore, Mr. DeWan stated during the Technical Sessions that his judgment prevailed, yet he provided no evidence for preferring his opinion vis-à-vis his colleagues, of outside expertise input, or of the general public's input. As a result of these methodological inconsistencies, the overall ratings presented in the Subarea Summary Tables are less than reliable, lack objectivity, and fail to adequately support the conclusions reached regarding the visual impacts on scenic resources, individually or collectively.

Q. Are TJD's ratings of viewer expectation supported by documented evidence or have any basis in public opinion?

A. No. TJD did not conduct any form of public outreach to measure what expectations and reactions the public – residents, second home owners, tourists, and recreationists – would have for their experiences if they encountered this proposed Project on New Hampshire's landscape. Nor did TJD conduct so-called "intercept surveys" (in the field structured interviews of visual resource "consumers"), which are a common element of professional visual impact assessments. Nor did they talk with any municipal officials. Such reality checks with actual viewers are recommended by Mr. DeWan as good professional practice in his *Handbook on Scenic Assessments* (2008) prepared for the Maine State Planning Office (at page 48 "**Surveys**. *Visual preference surveys conducted at public meetings during the course of scenic inventories can be a reliable way to identify the most significant landscapes within a given region.*"). The Bureau of Land Management (BLM) Manual H-8410-1 *Visual Resource Inventory* states that as a step in the sensitivity analysis: "3. *Public Interest. The visual quality of an area may be of concern to local, State, or National groups. Indicators of this concern are usually expressed in public meetings, letters, newspaper or magazine articles, newsletters, land-use plans, etc. Public controversy created in response to proposed activities that would change the landscape character should also be considered.*" The US Forest Service Agricultural Handbook 701 *Landscape Aesthetics - A Handbook for Scenery Management* states "*Content- some of the most useful information for scenery management concerns 1) how constituents use an area and 2) what visitors and other constituents feel, value, desire, prefer, and expect to encounter in terms of landscape character and scenic integrity* (at page 3-4)…...*Combining a constituent assessment for scenery management with other resource inventories should be done whenever possible* (page 3-7)".

SEC rules at Site 301.5 prescribe that the characterization of the potential visual impact of the proposed facility on scenic resources as High, Medium or Low must be based in part on "the expectations of the typical viewer." The SEC has made those expectations a critical element in judging the visual impacts of the project. Despite this clear directive, TJD made no effort to gather evidence directly related to the expectations of viewers of the proposed project. Instead of asking those who live in or come to New Hampshire, or reviewing the public testimony in this proceeding as to what their expectations are regarding the state's landscape and this project's potential impacts on the landscape, Mr. DeWan simply inserts his opinion of those expectations instead.. He asserts that his opinion is based on his field observations (but without any direct contact with potentially impacted individuals), and his experience working on behalf of wind power developers in Maine, as well as several government publications, the relevance of which is never explained in the VIA. TJD's assessment of the public's expectations was not "prepared in a manner consistent with generally accepted professional standards" as required by SEC rules, and Mr. DeWan admitted in a technical session that he has limited actual experience with visitors' visual expectations in New Hampshire.

Q. How Extensive is the Public Record on Their Expectations and Concerns Relative to this Project's Potential Visual Impact on Aesthetics?

A. Public and town officials' testimony in this proceeding and the parallel US DOE EIS process document overwhelming dissatisfaction with the proposed Project. Visual degradation of scenic resources and the related landscape is expressed as a primary concern. The Department of Energy had been soliciting public comments on the Northern Pass Project DEIS since February 11, 2011 and by the Scoping Period had received 7,560 comments from over 6,400 individuals, businesses, municipalities, government agencies, and other organizations[7]. Throughout the DOE comment filing period, interventions, and public hearings an overwhelming number expressed opposition to the Project as proposed, and direct and indirect concerns related to a visually degraded visual landscape were dominant factors.

Based on the 1,102 SEC filed public comments, hearing testimony, and intervention petitions submitted to date[8], there were filings by 742 non-repeating persons, towns or municipalities, or organizations. Of these 742 non-repeating filings, 78% expressed opposition to the project as proposed. Of those 742 filings, 53% specifically articulated their opposition was based, in part or whole, on

[7] Draft Northern Pass Transmission Line Project Environmental Impact Statement (DOE/EIS-0463) at page 1-8.
[8] SEC Public Info Session Written Comment Cards and Other Submitted Testimony = 105; website comments = 443; Public Hearing Transcripts = 384; and Intervention Petitions = 170.

potential aesthetics (visual) impacts. Of those not specifically articulating their reason for opposition, it is quite possible that concern for visual impacts was a common factor for many.

Based on the extensive public participation and records in both the DOE and SEC processes to date, the affected public clearly and overwhelmingly opposes this project, and concern for aesthetic impacts is a dominant factor. TJD completely ignores this extensive record in their VIA, contrary to Mr. DeWan's own authored recommendations as well as those of the BLM and USFS visual analysis manuals.

Further, AMC has also submitted the pre-filed testimony of Christopher Thayer which addresses the expectations of the typical viewer of New Hampshire's landscape. Mr. Thayer has more than 20 years of experience interacting with residents, tourists, and recreationists who value the State's scenic resources. He has also served on commissions and business groups whose focus is tourism. The breadth and depth of Mr. Thayer's experience and knowledge on the topic of viewer expectations is unique in the record of these proceedings. Mr. Thayer concludes in his prefile testimony that despite what is suggested by the Applicant's visual experts, his direct experience with visitors to northern New Hampshire, coupled with his work on tourism initiatives and regional planning, leads him to the conclusion that visitor aesthetic expectations will be unduly adversely impacted by this industrial scale, predominantly above ground, high voltage transmission project if it is constructed as proposed.

Q. Is the criterion used by TJD as to what would constitute "an unreasonable adverse effect" an appropriate and meaningful standard?

A. No. The criterion used by TJD to ascertain what would constitute "an unreasonable adverse effect" is such an incredibly low standard as to be almost meaningless. In their prefiled testimony, TJD concludes at pages 24-25,: " *There is no basis to conclude that people will not continue to drive the scenic byways, visit the parks, swim the beaches, canoe and kayak the rivers, fish in the lakes, and hike the trails – in a manner that they have for decades – due to the presence of the project. Human development, including large-scale buildings and other structures, is a fact of life in our organized society. People come to New Hampshire to enjoy its intrinsic scenic qualities, and* ***there is nothing that will be atypical about the type of visual impact the project will have****. Consequently, based on the totality of our analysis, it is our opinion that Northern pass will not have an unreasonable adverse effect on aesthetics*". (emphasis added)

The standard proffered by TJD as to what constitutes an "unreasonable adverse effect on aesthetics" essentially requires the effects of the project on aesthetics to be so severe that people who enjoyed a scenic resource's view before the project was built will not return to the view after the project is built. Such a standard would mean, for example, that the loss of New Hampshire's iconic image, the Old Man of the Mountains, had no unreasonable adverse aesthetic effect, because visitors still come to Franconia

Notch. The question for the SEC is what level of *diminished* aesthetic experience leads to an "unreasonable adverse effect", not whether or not people will return despite this diminishment.

Further, TJD's conclusion that "*Human development, including large-scale buildings and other structures, is a fact of life*" implies that any such additional visual impacts should be accepted as *de facto* normal and not an "unreasonable adverse effect" on aesthetics. This rationale fails to differentiate between discordant versus harmonious human structures within the State's cultural landscape. It perpetuates the logic that if one detrimental discordant visual intrusion exists then additional ones are acceptable because they have no meaningful additive effect. Such a conclusion ignores the fact that economically feasible burial technologies exist and have been permitted by Northern Pass's competitors for the same New England market. If adopted, TDJ's shallow standard for "an unreasonable adverse effect on aesthetics" would render the SEC's task of analyzing aesthetic impacts virtually meaningless.

Other Errors and Contradictions in TJD's Visual Impact Assessment that Bias its Conclusions that the Project Would not Have an Unreasonable Adverse Effect on Aesthetics

Q. Did the Visual Assessment Assign Appropriate Heights to Land Cover Types in Building the Digital Surface Model?

A. No. The Digital Surface Model (DSM) – from which the visibility maps are derived – makes unrealistic and inappropriate assumptions about the screening effects of vegetation and developed landscapes. As a result, significant acreages within the Project APE are improperly eliminated from viewshed analysis.

The VIA methodology (VIA p. A-3) assigns a "mean height" to various landcover types that is deduced from secondary sources, were not ground-truthed nor reviewed by a knowledgeable ecologist. There are 8 non-forested landcover types that are assigned "mean heights" that effectively remove these land classes from analysis. This contradicts how other professionals assign a "mean height" to these variables in this Project's study area, e.g. James F. Palmer in which he states: "*The most common (i.e., mode) height for all land cover types <u>except forest</u> is zero*"[9] as visual screening is more likely to be filtered, sporadic, or negligible.

Filtered views are common between buildings and from orchards, people look out of windows of buildings, and row crops are typically below eye level (including cornfields whose heights are below eye level for much of the year). The eight misclassified non-forested landcover classes (Table 2) comprise

[9] https://www.researchgate.net/profile/James_Palmer7/publication/303837641_Assigning_a_Fixed_Height_to_Land_Cover_Screen_for_Use_in_Visibility_Analysis/links/5756f18d08ae5c65490414df.pdf

8.7% of the area within the terrain model (bare ground viewshed) that is very likely to afford views of the Project and should be included in the analysis.

Table 2. Area excluded from visual impact assessment due to TDJ's inappropriate Landcover Average Heights. Acres derived from TDJ's bare-ground visibility map (Viewshed DTM) and NH Land Cover Assessment (2001).

		Acres			
	Landcover type	**0 to 3 mi**	**3 to 10 mi**		**TOTAL**
110	Developed	6,932	2,127		9,060
211	Row Crops	2,161	710		2872
212	Hay/Pasture	17,593	10,879		28,472
221	Orchards	186	235		421
440	Alpine (Krummholz)	0	243		243
620	Non-forested wetlands	10,028	3,667		13,695
720	Bedrock/vegetated	77	26		103
800	Tundra-above treeline	0	21		21
	TOTAL ACRES	**36,978**	**17,910**		**54,887**

An example of a 'scenic resource' eliminated by TDJ due to this mis-application of vegetative screening is North Percy Peak, a popular hiking destination in the Nash Stream State Forest, 2.8 miles from the transmission corridor. This peak is predominantly bare ledge with some low scrub, noted for its exceptional panoramic views. It has a clear, open view of the transmission corridor. The NH Land Cover Assessment (2001) clearly shows this peak within a patch classified as "bedrock/vegetated". TJD did not recognize this landcover type in their Table, thus it was treated as fully screened by vegetation. This leads to the false conclusion that visitors to the summit of North Percy Peak have no view of the surrounding landscape or the proposed Project. TJD incorrectly excluded this important viewpoint for consideration in their VIA based on their inappropriate "mean height" assigned in their Digital Surface Model (DSM).

Q. What is the purpose of a "bare ground conditions" analysis, and is it required under SEC rules?

A. **Yes**. A bare ground visibility model is required by SEC rules at 301.05(b)(1)[10]. Bare ground mapping analyzes those locations that would view the Project without building or vegetation screening. Though it depicts a worst case scenario, it is a useful tool for understanding the potential impacts of changes in land use, canopy height, etc. that could alter current conditions during the life of the proposed project. For example, New Hampshire was almost entirely forested in the 1600s; by the early 1900s it was reduced to ca. 20% forest cover due to agricultural and grazing activities. When these activities declined in New Hampshire as the 1900s progressed, forest coverage again peaked at 87% in 1960, though now has started to decline again (<84% in 1997)[11]. Insect outbreaks, land use changes, major catastrophic events like the hurricanes of 1938, 1954 (two), and 1991, and the ice storm of 1998, can dramatically and quickly change vegetative screening over time, and scenic resources now currently screened could potentially be impacted by the Project as screening conditions change.

Q. Did the Applicant provide a bare ground conditions map, or provide any analysis based on bare ground conditions?

A. No. The Applicant did not provide a bare ground conditions map in the original Application as required by SEC rules. It was not produced until requested during Discovery (TS 4-4; NPT_DIS 166703 to NPT_DIS 166792).

The total acreage of the visible area in the bare ground viewshed map is 631,000 acres, or 30.7% of the total area within the 10-mile APE, and 386,988 acres, or 71% of the area within 3 miles of the Project. This compares to 26,800 acres (just 1.3% of the APE) in the "Final Proposed-Existing Viewshed" data provided by the Applicant, e.g., the Project viewshed based on topographic and vegetative/development screening. TJD incorrectly based their assessment and conclusions solely on current conditions screened by vegetation and development (which had methodological errors as noted herein), and as though these conditions are static with minimal consideration of any future potential change.

[10] SEC Site 301.05 Effects on Aesthetics.
(a) Each application shall include a visual impact assessment of the proposed energy facility, prepared in a manner consistent with generally accepted professional standards by a professional trained or having experience in visual impact assessment procedures, regarding the effects of, and plans for avoiding, minimizing, or mitigating potential adverse effects of, the proposed facility on aesthetics.
(b) The visual impact assessment shall contain the following components:
(1) A description and map depicting the locations of the proposed facility and all associated buildings, structures, roads, and other ancillary components, and all areas to be cleared and graded, that would be visible from any scenic resources, **based on both bare ground conditions using topographic screening only and with consideration of screening by vegetation or other factors;**

[11] https://www.nhdfl.org/forest-industries-and-business/forest-statistics.aspx

Q. Are the locations of Photo-simulations typical and representative of the project?

A. No. There were no simulations provided in the October 2015 application that were within the 300-foot distance zone, and only one simulation within this zone (McKenna's Purchase) for the March 2016 supplement (see Table 3). This is a gross under-representation of how the Project will be experienced by someone traveling through the landscape. According to Patricia O'Donnell's prefiled testimony[12], immediate foreground impacts would include forty-one (41) national, state, and local scenic road crossings; 294 road crossings; eight (8) designated river crossings; and 133 river and stream crossings. TJD dismisses or chooses to ignore these provocative encounters that would occur on a regular and recurring basis.

Table 3. Number and percent of TDJ photosimulations by visual distance zone

Photo Simulations by Zone	***Oct 2015*** ***# of simulations/(%)***	***Supplement Mar 2016*** ***# of simulations/(%)***
0 – 300 ft.	0 (0 %)	1 (4%)
300 ft. – 0.5 mi	11 (37%)	13 (46%)
0.5 mi – 3 mi	18 (60%)	11 (39%)
3 mi – 10 mi	1 (3%)	3 (11%)
TOTALS	30	28

Q. Does the Visual Impact Assessment properly assess the frequency, duration and expectations of the viewers' aesthetic experience?

A. No. To score "High" under the VIA criteria for "duration of view" requires the viewer to be engaged at a defined "scenic resource" in "Activities where the general public may be expected to spend the equivalent of at least a morning or afternoon > 4 hours" pursuing an outdoor activity: e.g. fishing, camping, hiking, nature study." A Medium score requires 30 minutes to 4 hours of associated viewing activity. Based on this metric, many highly valued scenic experiences (such as stopping at a designated scenic viewpoint or visiting a mountain summit) would at best score "Medium" or "Low'. Such criteria are inconsistent with visitor behavior for many activities, e.g. A visit to the summit of Mount Washington may be the premier scenic experience in the State but most visitors spend less than four hours on the summit.

TJD discounts that driving past a large roadside transmission tower, although brief in time, can be a stark and visceral experience, leaving an indelible and lasting impression. Furthermore, Project

[12] Northern Pass Transmission Line SEC Docket No. 2015-06, Nov. 15, 2016, Pre-filed Direct Testimony of Patricia O'Donnell On Behalf of Counsel for the Public on the potential effects to aboveground historic sites and cultural landscapes from the Northern Pass Transmission Project, at page 2.

interactions at many scenic resources impact bicyclists, boaters, etc. traveling at more leisurely speeds and whose experience is for longer durations. The Applicant's logic would justify construction of a MacDonald's Golden Arches in the middle of Franconia Notch as not having an "unreasonable aesthetic effect" because people could drive by it within seconds.

The VIA criteria for "nature of activity" rates viewer expectations lower if the public is "focused" on other activities (e.g. fishing, swimming, etc.), and attention to their surrounding landscape is considered "secondary", despite the fact that people often choose to recreate in areas that are pleasant and aesthetically pleasing to view.

Furthermore, local residents or second home residents, visitors staying at a campsite, local hotel or bed and breakfast and the like could experience visual encounters with the Project multiple times in a day or on a trip. These frequent or repetitive experiences are not accounted for in the determination of viewer effect or overall visual impact by TJD.

Q. Do the Delta visibility maps showing "Increased Areas with Structure Visibility" (VIA Appendix A) adequately account for the difference between Existing and Proposed Structure Visibility?

A. No. The "Delta" maps illustrate new locations where proposed structures would be visible (purple), but fail to account for how many new towers would be visible at locations presently impacted (orange). These maps fail to illustrate the "*intensity*" of visual impacts by masking the increased number of structures that would be visible at any location.

The "Delta" maps also fail to account for the additional height or size of towers exposed to view. The proposed towers are consistently taller than existing structures, yet the increased exposure to taller structures is not accounted for in the Delta maps.

Furthermore, the scale of the maps is inadequate to depict or illustrate the spatial extent of visual impact. For the region within 5 miles of the transmission line, the viewshed map data has a pixel resolution (cell size) of 16.4 feet. At the published tabloid map scale of 1:63,360, a pixel in this range would have a dimension of 0.003 inches. For the region 5-10 miles from the transmission line, the viewshed map data has a pixel resolution (cell size) of 93.5 feet. At the published tabloid map scale of 1:63,360, a pixel in the 5 to 10 mile range would have a dimension of 0.018 inches. Clearly, a pixel representing a visual impact is not going to be noticeable in these published maps especially given the multi-hued and shaded background. Unless these "delta" pixels are tightly clumped or clustered (indicating increased visibility across a broader area), they will not be apparent in the visibility maps submitted in the Application (VIA Appendix A Viewshed Mapping, pp. A-6 to A-59).

Q. Have all major structures been properly evaluated in the VIA?

A. No. Transition stations prominently located next to Federal highways (e.g. US Route 302, a designated scenic highway in Bethlehem, and US Route 3 in Bridgewater) have not been simulated or adequately described. The transition stations are comprised of multiple components, including towers that are 100+ feet tall and within 100-200 feet of the highway. These towers have a horizontal crossbar that is believed to be ~60 feet across situated above typical tree height. Ground-level vegetation and fences will not hide structures of this size.

Q. Does Mr. DeWan recognize transmission towers as discordant on the landscape?

A. Yes. In his "*Scenic Assessment Handbook - State Planning Office Maine Coastal Program*" (2008), Mr. DeWan describes and illustrates 'Utility Corridors' as a "*Discordant Land Use* (p.37)" and 'Transmission towers' as a "*Discordant Roadside Characteristic* (p. 38)". Yet in this analysis for the Northern Pass Transmission project he concludes that although these HVDC and 345 kV transmission towers would be the most numerous and some of the largest transmission towers to ever be constructed in the State, they would be "*a fact of life in our organized society*[13]". Considering the extensive visibility of this project, the widespread opposition to this project based on aesthetic impacts, and that burial options are now permitted elsewhere in New York and New England[14], there is insufficient evidence to support his conclusion that this proposed project's "discordant land use" and long-term scar on the landscape should be accepted "*as a fact of life in our organized society*".

Q. Did Northern Pass ask TJD to recommend rerouting options or changes to tower configurations to decrease visual impacts?

A. No. Essentially, TJD was given the route and tower specification and did not have authority to suggest re-routing or burial of all or part of the Project. TJD was informed of the burial through the WMNF, but they had no role in that decision except to acknowledge it as positive. The only mitigation measures TJD offered were very limited, e.g. vegetative screening, mounding, and other low-tech, inexpensive methods.
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[13] Northern Pass Transmission Line SEC Docket No. 2015-06, Pre-filed Direct Testimony of Terrence DeWan and Jessica Kimball for Joint Application of Northern Pass and PSNH. Oct. 16, 2015 at page 26.
[14] http://www.necplink.com/ and http://www.chpexpress.com/

Requirement for a Preponderance of Evidence that an Unreasonable Adverse Effect on Aesthetics Will Not Occur

Q. What is the SEC's criteria for what constitutes an unreasonable adverse effect on aesthetics and has the Applicant provided proof by a preponderance of the evidence that their determination is more probable than not?[15].

A. Site 301.14 Criteria Relative to Findings of Unreasonable Adverse Effects states (in italics):

"(a) In determining whether a proposed energy facility will have an unreasonable adverse effect on aesthetics, the committee shall consider:

(1) The existing character of the area of potential visual impact;

Suffice it to say that the high scenic quality of New Hampshire's landscape and its cultural character and significance are well documented and heralded in countless tourism brochures created by both the State government and the many players in our large tourism industry (see AMC's Chris Thayer's' prefiled testimony). The significance of the State's scenic resources and the existing character of its landscape are paramount to its citizens and to its tourism economy.

(2)The significance of affected scenic resources and their distance from the proposed facility;

Within the 10-mile APE, there are 240 "scenic resources" (Appendix 1 - see breakout by distance) with potential Project visibility based on the Applicant's viewshed map. These scenic resources and their associated landscape are the fabric of the state's cultural landscape and are a major draw for both residents and visitors to the state. The significance of these "scenic resources" is exhibited by the public and private resources invested in protecting them, the tourist industry's advertising them, and the number of comments filed in this and the US DOE permitting processes opposing this Project's visual intrusion on and degradation of them.

(3) The extent, nature, and duration of public uses of affected scenic resources;

Many of the identified affected scenic resources are used or viewed daily by numerous residents and tourists alike. Considering all of the scenic resources impacted, the interactions would likely be experienced by thousands of people daily along the full length of the full corridor,. The duration of the visual impact of this Project on the public would last for decades to centuries.

(4) The scope and scale of the change in the landscape visible from affected scenic resources;

[15] Site 102.37 *"Proof by a preponderance of the evidence" means that what is sought to be proved is determined to be more probable than not*".

The scale of this energy project is unprecedented in New Hampshire. As proposed it covers 192 miles from the Canadian border to near the Massachusetts border (overhead conductors will traverse 132 linear miles of which 32 miles require a newly cleared corridor; 60.2 miles are buried). The Project introduces 1,829 new or enlarged monopole and lattice towers[16] up to 160 feet tall. Existing towers (average height of 65 feet) will be replaced with transmission towers above tree height (average height 88 feet), along with the removal of some screening vegetation. Within the existing corridor, there will be 320 new 345kV towers with an average height of 103 feet. The project also includes six large and visible transition stations. Based on the TJD viewshed maps, 26,800 acres are potentially visible. Because of flaws in the vegetative screening methodology used by TJD, this acreage is actually much larger. Based on bare ground DTM maps, up to 631,009 acres are potentially visible within the Project's 10-mile APE.

(5) The evaluation of the overall daytime and nighttime visual impacts of the facility as described in the visual impact assessment submitted by the applicant and other relevant evidence submitted pursuant to Site 202.24;

Many components of TJD's Visual Impact Analysis are inaccurate and/or incomplete, as we and others have described, thereby negating the conclusions derived from TJD's evaluation of visual impacts. Within the most sensitive 3 miles of the APE for the overhead portion of this project, 82 defined SEC scenic resources that would have the reasonable possibility of seeing this Project (Appendix 2) were not fully evaluated by TJD. Many scenic resources were not analyzed or were under-rated because of TJD's mischaracterization of their cultural value. TDJ's analysis fails to incorporate real people's assessments of the Project's aesthetic impact which are available in the record, and which contradict his conclusions. The permitting process for this Project has been so lengthy (going into the 8th year) because it is so strongly opposed by the public concerned about its visual impacts.

(6) The extent to which the proposed facility would be a dominant and prominent feature within a natural or cultural landscape of high scenic quality or as viewed from scenic resources of high value or sensitivity; and

Based on the number and importance of scenic resources impacted, the breadth and acreage of the state impacted, the high scenic quality of the cultural landscape impacted, and the number and size of the proposed structures, no other energy project proposed or built to date would be such a dominant and prominent discordant feature on New Hampshire's landscape.

[16] 1,195 new transmission towers ranging in height from 48 to 160 feet, with cleared corridors of up to 315' in width and 634 relocated towers with new heights greatly exceeding tree height.

(7) The effectiveness of the measures proposed by the applicant to avoid, minimize, or mitigate unreasonable adverse effects on aesthetics, and the extent to which such measures represent best practical measures."

The proposed mitigation by NPT does not meet the SEC's "best practical measures" criteria. At Site 102.12 ***Best practical measures*** *"means available, effective, and economically feasible on-site or off-site methods or technologies used during siting, design, construction, and operation of an energy facility that effectively avoid, minimize, or mitigate relevant impacts*." Though the Applicant is proposing the burial of 60.2 miles and to change some transmission towers from a lattice to monopole configuration to mitigate aesthetic impacts, 132 miles of New Hampshire's landscape including 32 miles of new corridor remain seriously impacted. The minimal and limited vegetative screening proposed will have questionable effectiveness to minimize the impact of 1,829 new or enlarged transmission towers.

Due to the size of the monopoles proposed, they may be slightly more appealing than lattice transmission towers in certain circumstances, but at their proposed scale and height (significantly exceeding adjacent tree height) they would still be visually discordant with and overpowering on the landscape. The proposed buried segments in the Great North Woods are not designed to minimize aesthetic impacts, but rather to circumvent landowners who refused to accept this project on their properties. The resulting "porpoising" from above to below ground multiple times results in the need for four additional tall transition structures that are aesthetically discordant with the landscape. Two or fewer transition structures would be necessary if the project were fully buried. Furthermore the placement of a Project of this scale in existing but already congested transmission corridors results in both increased tower congestion and greatly heightened transmission towers. The Applicant has never made, and in fact have resisted, a serious effort over the long duration of this application to select a route conducive to reasonable burial cost and logistics. This represents a failure to even attempt "best practical measures". Full burial is not fantasy; similar full burial projects have been permitted in the northeast, e.g. the 1,000 MW New England Clean Power Link[17] in Vermont that was expediently permitted at both the federal and state level because of minimal aesthetic or other objections. Full burial can be done reasonably if approached properly from the onset. And finally, the elements in the Applicant's Forward New Hampshire Plan lack direct mitigation nexus with the major visual impact on aesthetics. The Applicant fails to provide "*proof by a preponderance of the evidence*" that this Project and its proposed mitigation would not result in an unreasonable adverse effect on aesthetics.

Summary Conclusions

[17] http://www.necplink.com/

Q. *"The legislature recognizes that the selection of sites for energy facilities may have significant impacts on and benefits to the following: the welfare of the population, private property, the location and growth of industry, the overall economic growth of the state, the environment of the state, historic sites, aesthetics, air and water quality, the use of natural resources, and public health and safety. Accordingly, the legislature finds that it is <u>in the public interest to maintain a balance</u> among those potential significant impacts and benefits in decisions about the siting, construction, and operation of energy facilities in New Hampshire;…"*[18]. If this project is built as proposed, is such a balance achieved?

A. No. In our professional opinion based on the evidence provided, such balance would not be achieved. The aesthetics of the state's landscape and scenic resources would suffer an unreasonable adverse effect if the Project is constructed as proposed. For context, New Hampshire is a net exporter of power[19]. The New England –Independent Systems Operator (NE-ISO) has not determined that Northern Pass is a needed Reliability Project. Understanding that New Hampshire is not an isolated energy island in the ISO-NE power grid, this proposed project is far from the only option available for meeting the regional need for power (e.g. see competing bids in the recent 3-state Clean Power RFP bidding[20]). This proposed Project submitted but did not emerge as a winning bid in this recent 3-State Clean Power RFP[21]. Competing transmission projects using 100% burial technology that could potentially carry this same Hydro-Quebec hydroelectric power are already permitted at both the federal and state levels[22]. There has been no convincing evidence provided in this proceeding that Hydro-Quebec would not use those alternative transmission options to get their power into the ISO-NE system if actually needed should Northern Pass as proposed not be certified by the SEC or permitted by the US DOE. What would be permanent if this project were certified would be an unnecessary and unreasonable adverse effect to New Hampshire's aesthetics and landscape from the Canadian border in Pittsburgh to Deerfield.

The Applicant failed to provide a preponderance of evidence of "no unreasonable adverse effect on aesthetics". Rather they provided a flawed and incomplete methodology whose conclusions are unsupportable. The standards applied by TJD for an "unreasonable adverse effect on aesthetics" would never be met by any project except in the most extreme circumstances.

Q. Does this conclude your testimony?

A. Yes.

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[18] TITLE XII PUBLIC SAFETY AND WELFARE, CHAPTER 162-H, ENERGY FACILITY EVALUATION, SITING, CONSTRUCTION AND OPERATION, Section 162-H:1

[19] http://www.energytrends.org/new-hampshire/

[20] https://cleanenergyrfp.com/

[21] https://cleanenergyrfp.com/2016/10/25/bidders-selected-for-contract-negotiation/

[22] http://www.necplink.com/

Appendix 1

SEC Defined Scenic Resources Identified by AMC In TJD's Viewshed Maps

Identified scenic resources required areal features to be > 1 acre, linear features > 0.02 mile, and a minimum number of towers visible by distance zones

Site 102.45 Categories	Number of Features	Number of Corridor Crossings by Feature	Total Units Impaced	Immeditate Foreground - 0 to 300' (Net Impact >= 1)	Foreground - 300' to 0.5 miles (Net Impact >= 2)	Midground - 0.5 to 3.0 miles (Net Impact >= 6)	Background - 3.0 to 10 miles (Net Impact >= 11)
Section a) - Designated pursuant to applicable statutory by national, state, or municipal authorities for their scenic quality							
					Units = Miles		
State Designated Rivers[1 2 6]	5	7	15	1	12	2	0.1
National and State Designaged Scenic ByWays Summary[1] (contains duplicate road segments)	6	6	11	1	3	4	3
National and State Designated Scenic ByWays - Roads Summary[1] (does not contain duplicate road segments)	6	6	8	1	2	3	2
Local Designated Scenic Roads[1 2]	14	4	3	0.3	0.3	1.6	0.7
National Register of Historic Places					**Units = Acres**		
- areas[3 4]	7	0	63	0	27	29	7
					Units = Points		
- points[5]	0	0	0	0	0	0	0
					Units = Miles		
Appalachian Scenic Trail[5]	0	0	0	0	0	0	0
Section b) Conservation lands or easements areas that possess a scenic quality							
					Units = Acres		
Agricultrual Preservation Restrictions[3 4]	4	1	81	7	68	6	1
Conservation Easement[3 4]	43	9	557	64	172	238	82
Federal Lands[1]	3	3	405	112	141	117	35
State Parks[1 4]	4	1	67	17	11	38	0
State Forest[3 4]	4	4	182	91	51	41	0
State Other Lands[3 4]	5	0	178	0	49	127	2
County/Town Parks[1 4]	1	0	1	0	0	1	0
County/Town Forest[1 4]	3	2	27	9	18	0	0
County/Town Other Lands[3 4]	9	1	115	33	4	72	6
Private Lands[3 4]	7	4	111	50	47	8	6
SubTotal	83	25	1723	382	561	647	132
Section c) Lakes, ponds, rivers, parks, scenic drives and rides, and other tourism destinations that possess a scenic quality							
					Units = Acres		
Designated Lakes[3 4] (>=10 acres or has public access)	21	1	1547	14	592	942	0
					Units = Miles		
Canoe River Trails[2 3 6]	12	11	19	2	15	2	0.1
Other NP Identified Rivers[1 2]	9	5	2	0.4	1	0.3	0.1
NH Scenic Drives[1 6]	1	0	0.1	0	0	0.1	0
Scenic Train Rides[3]	0	0	0	0	0	0	0
					Units = Points		
Town Parks (not listed in Section b)[3]	0	0	0	0	0	0	0
Scenic Sites[3]	3	0	3	1	1	1	0
Section d) Recreational trails, parks, or areas established, protected or maintained in whole or in part with public funds							
					Units = Miles		
Rails to Trails[1]	2	1	0.4	0.1	0.05	0.2	0.1
Bike Routes[3 6] (NH DOT Recommended Routes)	2	29	20	3	6	7	4

Hiking Trails[2 3 6] (some hiking trails are on roads)	7	7	2	0.5	0.2	0.2	1
Snowmobile/OHRV/Skiing/Multi-Use Trails[3]	5	15	7	2	3	1	1
					Units = Points		
NH Boating and Fishing Access Points[1]	6	0	6	0	2	4	0
Campgrounds, recreation areas, sports fields, cover bridges and other tourist destinations[3]	3	0	3	0	0	1	2
Section e) Historic sites that possess a scenic quality							
Historic and Cultural sites[3] (Section 106 identified sites)	54	0	54	4	33	17	0
Section f) Town and village centers that possess a scenic quality							
Town Commons (Refer to Section a) National Register of Historic Places)							
Total	240	111					

[1]All scenic resources have been identified and included in Northern Pass's town resources tables.
[2]Linear features (trails, roads, and rivers) were screened to include features greater than or equal to 0.02 miles or 106 feet.
[3]Not all scenic resources have been identified and included in Northern Pass's town resources tables.
[4]Area features (lakes, conservation lands, and national register areas) were screened to include features greater than or equal to 1 acre.
[5]No Impact
[6]Contains duplicate segments with another category - i.e. designated rivers are also listed in canoe river trails

Appendix 2

Category and Number of Scenic Resources within 3 Miles Not Evaluated by TJD

Site 102.45 Categories	Number of Features	Number of Corridor Crossings by Feature
Section a) - Designated pursuant to applicable statutory by national, state, or municipal authorities for their scenic quality		
National Register of Historic Places	1	0
Section b) Conservation lands or easements areas that possess a scenic quality	19	6
Section c) Lakes, ponds, rivers, parks, scenic drives and rides, and other tourism destinations that possess a scenic quality	4	1
Section d) Recreational trails, parks, or areas established, protected or maintained in whole or in part with public funds	7	42
Section 106 Identified Resources (Ranking)	51	0
GRAND TOTAL	**82**	**49**