

Comments on Draft Supplemental Generic Environmental Impact Statement

Submitted to New York State Department of Conservation for review period ending 11 January 2012

15 December 2011

Jessie Ravage, Preservation Consultant (36 CFR certified)

34 Delaware Street, Cooperstown, New York 13326

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Professional Qualifications

I have lived in Otsego County for twenty-two years and have researched and conducted historic resource surveys and National Register of Historic Places (NR) nominations on a consultancy basis for nineteen years. In my home county, these projects include historic resource surveys in the Village of Milford and the towns of Cherry Valley, Hartwick, Otsego, Roseboom, and Springfield, as well as National Register nominations for listed historic districts in the mill hamlets of Roseboom and Fly Creek and the Main Street district in the City of Oneonta. Moreover, I prepared the Lindesay Patent (9,200 acres) NR nomination in the western portion of Cherry Valley and the Glimmerglass Historic District nomination (15,000 acres) taking in the viewshed of Otsego Lake. A third large district nomination for the 17,000-acre Waggoner Patent in Springfield is determined eligible.

In Schoharie County, I completed a reconnaissance-level historic resources survey in the Town of Sharon in 2004 and prepared HABS-HAER documentation for the former Junction Road bridge in Esperance. I have also surveyed in eastern Chenango and Madison counties, mainly in the Chenango and Unadilla valleys, and in most towns in northern Delaware County. For nearly five years, I performed architectural review in compliance with Section 106 of the National Preservation Act of 1966 and Section 14.09 of the New York State Historic Preservation Act of 1980 for proposed NYS Department of Transportation projects, mainly in Regions 3 and 9, but also in Regions 4 and 6.

This work area—encompassing much of the Allegheny Plateau east of Syracuse and parts of the Southern Tier—retains extensive tracts of historic landscape representative of its settlement and development as an agricultural region by Euro-Americans from the mid-1700s through ca.1960 (roughly the required 50-year anniversary for listing in the National and State Registers of Historic Places). The proposed allowable density of drilling sites scattered over this area's rural landscape will compromise the historic integrity—embodied in the National Register's aspects of integrity of location, design, setting, materials, workmanship, feeling, and association—of these tracts. This integrity is expressed in a consistently high degree spanning thousands of square miles throughout this region. The potential impacts of hydraulic fracturing would similarly affect historic resort development, which occurs on a smaller scale around the area's lakes and extending westward beyond Rochester.

The chapters of the revised draft Supplemental Generic Environmental Impact Statement (rdSGEIS) addressing visual and environmental impacts and the mitigation of potential impacts should address this important aspect of the region's historic community character, but it falls woefully short in providing meaningful detail. The following comments suggest ways required under federal and state law to do so.

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Comments on Chapter 2: “Visual Resources”

Chapter 2 of the rdSGEIS discusses visual resources located in the region where drilling for natural gas is proposed. The statement mentions the region’s community character, or sense of place (2.4.15), and its transportation network (2.4.14) among these resources and states that its community character may be altered by drilling and drilling-related actions. The statement fails, however, to delineate the cultural components that comprise a sense of place or to acknowledge the potential lacunae in the process by which such components are identified and determined eligible for listing in the State and National Registers of Historic Places. This results in a failure to convey the scope of potentially National Register-eligible (NRE) cultural resources that might be affected by the proposed drilling for natural gas. Neither does the statement adequately recognize the current and potential economic importance derived from that sense of place.

The potential visual impact of activities related to and including hydraulic fracturing on cultural resources that define the region’s community character is not merely aesthetic. These resources are evidence of long standing uses of this landscape by people who live and work here. Agriculture on small holdings, light industry, and tourism are all parts of this economy. These activities have developed in scale with this landscape, and the landscape accommodates their scale. These cultural resources function both as emblems and tools of the region’s economy. Development on a radically different scale will not only be visually intrusive; it will also alter for many years to come, possibly forever, the potential economic benefits of the region’s intact cultural landscapes.

Delineating community character or sense of place

Community character is often sensed in a subjective way, but it may also be delineated and evaluated objectively in landscapes where human activity is clearly evident *via* cultural geography. This study of the relationships between humans and their environments explores the cultural meanings of human-made features as responses to a natural setting. Features include a region’s spatial plan or plans, circulation features, vegetation patterns, and buildings. All may carry potential cultural meanings—the multiple embodiments generating a sense of place.

The methodology used to prepare nominations to the State and National Registers of Historic Places provides a consistent set of criteria and themes to identify and document components contributing to community character, or sense of place. The district nomination format and the multiple property documentation form (MPDF)—which identifies unifying themes of significance applicable to physically discontinuous resources to be listed individually or in districts—provide structures for developing context statements delineating the components of community character and their cultural meanings. In rural areas where vernacular agricultural activity predominates, where sense of place is best understood when individual properties are considered as components of a larger historic landscape extending over many hundreds of acres, the criteria and themes discussed in a context statement can be especially useful tools.

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In the area of the Allegheny Plateau roughly bounded by the Schoharie and Charlotte creeks, the Mohawk Valley's southern escarpment, and the Susquehanna and Chenango rivers, human-made resources are chiefly related to the settlement and the longtime development and use of this region as farmland from the 1780s through the post-Civil War era. Where the land remains open, the spatial organization established during the first eighty years of settlement and cultivation is evident in property lines marked by vegetation, stone fences, and roads. Numerous contiguous historic farm properties are bounded by these visible property divisions, which follow the earliest plats surveyed by patent holders and land speculators. As a group, these properties form a sweeping patchwork of individual farms, each with open land, fields, meadows, pastures, and woodlots.

Many individual farms retain a cluster of buildings representative of this period of significance. These clusters usually include a farmhouse, most often a vernacular example with details illustrating stylistic tastes popular in the nineteenth century, and a group of outbuildings built and reused for the various agricultural endeavors of the region's farmers throughout the period of significance. Their degree of historic significance as understood using National Register criteria is enhanced by their placements and plans over broad stretches of rural landscape at densities matching historic development.

The glaciation history of the Allegheny Plateau region provided landscapes well-watered not only for agricultural endeavor: this geology also gave rise to lakes flooding its long U-shaped valleys and small cirques. These sheets of water attracted American summer holiday makers by the mid-1800s. Resort tourism in the nation's youth was founded in great part by recently minted city dwellers, who wanted to return to rural places in the warm months. Led by prominent tastemakers and trendsetters of the pre-Civil War era, they identified the highly intact rural land surrounding the region's bodies of water as the settings of a collective agrarian past. By the late 1800s, simply agricultural locales also claimed summer clientele, and they continue to do so especially in the Catskill Mountains and southern Chenango County adjacent to the I-88 corridor. Much of the county retains the rural mien that drew people then, and far more of the region than has been assessed for its historic integrity would, if evaluated, be found to retain high levels of historic integrity representative of its settlement and agricultural development in the 1800s.

Importance of transportation network to community character

Historic circulation patterns are often overlooked as a significant cultural component integral to vernacular rural landscapes. The rdSGEIS notes that local roads, as defined by federal criteria, comprise 65% of the mileage of the area covered by the statement. These thoroughfares include early town highways, historic state roads predating private turnpike charters, turnpikes chartered in the early 1800s, and both county and New York State highways designated in the early 1900s. Designed and used as local roads for local traffic, they are also the vantage point from which most of us view our landscape. These routes continue to connect scattered historic farm properties with the hamlets and villages located chiefly along the main valley routes in much the same way as they

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did two centuries ago. Their width, grade, and surface—adjusted in the early 1900s—match the demands of a rural population traveling mainly in fairly light vehicles, trucks moving agricultural products, and relatively small-scale agricultural machinery appropriate for working small holdings. Not only do these highways and byways comprise an important part of how the region is experienced as one moves through it, but they are also the artifacts of how we designed access to our landscape. As such, they retain cultural meaning.

The region's roads illustrate at least two main patterns of historic road development. One tendency, brought from earlier settlements, conforms to the topography. In the glacially carved landscape overlying the Marcellus and Utica shales, this tendency includes two main road types. The generally older type follows the land's contours; the other type, usually later, overlies the land with comparatively little regard for topography. Both types remain mostly two-lane highways with little or no shoulder.

The earlier pattern is characterized by valley roads winding along the contours of the first benches formed above gently flowing creeks and rivers. These roads are connected across the ridges by steep, winding roads, paralleling swift watercourses cutting narrow clefts, or gulphs. The valley routes often have short sight lines with few places safe for passing. The connector roads were built using the traditional cut-and-fill method, where the roadway was cut as narrowly as possible from the side of the cleft and the fill removed was used to buttress the roadway from below. Many of these "cross" roads, especially those on the west faces of the ridges, remain unpaved and cannot be reliably maintained in winter.

The later tendency to build straight roads following the ranges of a rectilinear plat was pioneered in central New York State during the early republic. It moved west with settlement on land surveyed entirely in squares using a variety of plat plans, which were eventually distilled into the Public Land Survey System employed by the federal government west of central Ohio. These straight highways cross fairly level uplands and also climb and descend the glacial ridges, often with little regard for grade. Built to connect scattered farmsteads, many of these roads in New York State are no wider than those of the earlier tendency.

In addition to this, the entire Allegheny Plateau—described historically as a well-watered region—is criss-crossed by numerous small streams, and all of its highways have many small culverts and bridges designed for fairly light weight traffic. Their small scale adds to community character and serves to calm traffic. A majority cannot carry vehicles with gross vehicle weights calculated in hundreds of tons.

Counting NRE cultural resources contributing to community character

The rdSGEIS addresses several thousand square miles of land in New York State. The very small number of NR-listed and NRE cultural resources noted in the statement shows *not* that few places there are NRE, but that the kind of survey and evaluation required using NR criteria has been

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carried out in very few locales. Moreover, the statement is misleading because it counts NR-listed and NRE individual properties and districts encompassing numerous resources as *single* resources. In actual fact, thousands of properties are listed in Otsego County alone; thousands more are located in *identified* eligible districts. And, an even larger number would surely be identified using the NR criteria if such work were undertaken, not only in Otsego County, but throughout the state in regions overlying the Marcellus and Utica shales.

Identifying and evaluating potentially NRE rural vernacular landscapes using the NR criteria is time-consuming and can be relatively costly. In Otsego County, three large landscape NRE districts have been documented in the past two decades. These include the 9,200-acre Lindesay Patent in the Towns of Cherry Valley and Roseboom (listed 1993) encompassing more than 700 properties, and the 17,000-acre Waggoner Patent in the Town of Springfield (nomination pending) including roughly 75 historic farmsteads and additional hamlet properties in Springfield Center and East Springfield. The 15,000-acre Glimmerglass NRHD surrounding Otsego Lake incorporates the resort development on its shores as well as its larger visual setting, codified in views created in the nineteenth century. Throughout the region, several more such districts surely could be documented, determined NRE, and subsequently listed if the financial resources were available.

The majority of National Register of Historic Places nominations are sponsored by local people—individuals, preservation and historical organizations, and municipalities—as part of the community planning process. Typically and traditionally, individual properties and small districts centered on hamlets and villages are identified and listed. Otsego County, as an example, encompasses nine historic villages and many more unincorporated hamlets. Part or all of the villages of Cherry Valley, Cooperstown, Gilbertsville, Milford, Richfield Springs, and Unadilla are listed on the National Register. Similarly, the hamlets of Fly Creek, Middlefield, Roseboom, and South Worcester are at least partially listed. Parts of the villages of Milford and Morris and hamlets in Hartwick have been determined NRE.

Such centers punctuate the county's landscape, providing local services at generally regular intervals, usually at road and stream crossings, in long-lasting historic patterns. The placements and buildings of these densely settled locales can often tell us why different hamlets grew up: mill seats on streams; turnpike or railroad intersections with local highways; commerce and services like blacksmiths and wagonmakers; civil and religious centers. Many of these centers expanded throughout the nineteenth century, with small, densely packed house lots along narrow streets carved from land immediately surrounding the center. These characteristics set these communities off from the surrounding open land. At the same time, their historic scale, appearance, and functions set them visually within the larger rural vernacular landscape and illustrate their roles in the context of the larger landscape.

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The documentation methodology for such densely settled locales is established and comparatively simple to execute. Hamlet and village nominations take less time to carry out and are generally easily understood in comparison to landscape nominations encompassing sizable tracts of land within their boundaries. Architectural historians comfortably evaluate and convey the significance of historic building styles. They often find it more difficult to delineate function and establish the historic significance of the broader vernacular rural setting, even though villages and hamlets located in rural areas—where vernacular architecture and agricultural land use predominate—are most often component parts of much bigger and intact cultural landscapes. Thus, many such centers are more fully understood in this broader landscape context.

The lack of consistent survey documentation and NR listings encompassing vernacular rural landscapes does *not* indicate a lack of such cultural resources in many areas considered in the rdSGEIS. Rather, it indicates that so far, planning efforts in many communities—even where comprehensive plans identify “community character” and “sense of place” as characteristics they wish to preserve and enhance—have not yet undertaken such review. Many residents grasp intuitively that their communities retain a sense of place, but they remain unaware of the mechanisms embodied within historic preservation legislation and associated requirements and documentation structure designed to delineate and document the components of a sense of place found by many people to be ineffable.

Eligibilities may also be determined in advance of projects funded by federal or state monies and projects requiring a state or federal permit. This type of review is generally carried out under contract by non-local firms. Those firms may or may not be attuned to local patterns of vernacular cultural landscape development and might not investigate deeply into local history. In areas where there are few high-style buildings, this can lead to reviews where locally significant cultural resources are overlooked, or worse, ignored as “commonplace.” This occurs even though the eligibility of the largest number of resources determined NRE and/or listed in the State and National Registers in New York State are based on Criterion C. This criterion encompasses resources that “embody distinctive characteristics of type, period, or method of construction” and those that “represent a significant and distinguishable entity whose components may lack individual distinction.” In other words, these cultural resources are significant and NRE in the aggregate, even if not individually eligible. If reviewers fail to evaluate resources in the aggregate, their documentation in rural regions characterized by farms and small holdings will fail to see resources meeting the requirements of Criterion C. These resources, the building blocks of rural vernacular cultural landscapes, may well be overlooked even though they are protected by the dual layers of the state and federal preservation acts.

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Comments on Chapter 6: “Environmental Impacts”

Chapter 6 describes potential environmental impacts of well pad construction, drilling, hydraulic fracturing, natural gas production and distribution, and reclamation after wells cease operation. Impacts detailed that seem most pertinent to the region’s cultural resources and community character include visual (6.9), transportation (6.11), community character (6.12), and possibly seismicity (6.13).

Visual Impacts

The rdSGEIS notes that new well sites and support facilities will generate new landscape features potentially “incompatible with existing visual settings and land uses.” The development, fracking, re-fracking, and servicing of well sites will all produce features out of scale with the surrounding landscape, as illustrated photographically in the statement. The addition of numerous access roads and construction of well pads will add features that will remain throughout the life—as much as 30 years or more than a generation of human existence—of wells dug singly and in groups. Over this period, these will assume the status of permanent fixtures and will eclipse the potential for locally based economic enterprises. By the time they are finally closed and “reclaimed” under the guidelines of the rdSGEIS, locations within the cultural landscapes where wells existed will have lost continuity with their historic sense of place.

Impacts on Transportation Network, a Defining Component of Community Character

The impact of drilling-related activity will be very great on the region’s historically significant transportation system. The primary function of this network over much of the region is to connect outlying areas with small service centers. The scale of these routes matches the historic and current uses of the landscape, and they are defining cultural features.

In rural areas, the impacts will be primarily in the breaking up of swathes of landscape and punctuating them with structures out of scale with historic development. Well pads of several acres differ fundamentally in scale and appearance even from the largest scale dairy farms found in the region. Numerous new access roads will more closely mimic patterns of subdivision not generally used here.

In village and hamlet centers, the existing transportation network doubles as those centers’ main streets. Main streets are lined by densely packed historic commercial buildings and dwellings, many with limited frontages. Curbs, sidewalks, street trees, and parking areas provide the essential pedestrian scale of these historic downtowns. In these densely settled locales, a program of road widening and straightening and the replacement of historic-scale crossings to accommodate the weight of numerous large vehicles, will destroy the accommodations that make historic downtowns inviting and help them retain economic vitality. A bypass system will strangle such centers forever.

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Seismicity

While Chapter 6 does discuss seismic impacts, it fails to address the seismic impact of the literal shaking of the buildings located in the region's historic downtowns, where people most easily perceive community character. Even though this shaking may be intermittent, its impact should be accounted for when calculating the impact of truck traffic on the historic built environment. As yet, not even seismic impacts near to well sites concentrated in lightly settled areas appear to be fully understood. Might these also have an impact on cultural resources located over the broader landscape?

Comments on Chapter 7: "Mitigation Measures"

Chapter 7 proposes mitigation measures for the wide range of potential impacts of hydraulic fracturing for natural gas in the Marcellus and Utica shales, including visual and environmental resources identified in earlier sections of the rdSGEIS. It recommends screening, relocation, camouflage, low profiles for permanently sited equipment, downsizing, alternative technologies, non-reflective materials, and minimizing lighting to mitigate these impacts. Such mitigations can only partially hide the large industrial scale of the proposed drilling. The density of well pads and the addition and alteration of roads and the substantial traffic to service those well pads will overwhelm identified cultural resources, not to mention those cultural resources not yet identified and documented.

For those resources identified as NRE or already NR-listed, the permitting process should invoke Section 106 of the National Preservation Act of 1966 and Section 14.09 of the New York State Preservation Act of 1980. Both laws require such review: the DEC, the DOT, the Army Corps of Engineers, even the armed forces, are all accustomed to such review. Without review, cultural landscapes eligible for protection will be irretrievably altered or destroyed before these resources are acknowledged or understood beyond a localized ineffable sense of their significance. In other words, a sense of place developed over two or more centuries may be obliterated before its eligibility for a measure of protection under the National and New York State preservation acts is even established or documented.

Since the broad physical range of threats to as yet undocumented, but potentially NRE, cultural resources are so widespread, reconnaissance-level surveys by 36 CFR architectural historians qualified under the regulations of the National Historic Preservation Act of 1966 to review and research rural vernacular cultural landscapes should be more broadly undertaken in advance of any permitting. Existing roads should be included in this review to identify potentially contributing NRE cultural resources. This review methodology should include, but not be limited to, correlating historic mapping with the current built environment; documenting resources photographically and cartographically; and research into public and private records using an established methodology for such review. Much would be learned about resources in rural areas of

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New York State, a set of resources that are not especially well understood in a holistic sense. This would establish a true baseline rather than the false one presented in Chapter 2 of the rdSGEIS, which presents a deceptively short list of NRE resources over the Marcellus and Utica shale regions. Consistent review would clarify the degree to which proposed drilling might sever the relationships of the larger cultural landscape—its lands, structures, and buildings—and diminish its coherence as an intact and historically significant region.

The impacts of reconstructing the historically significant transportation network roads for heavy and frequent truck traffic over the course of initial development and then re-fracturing existing wells to access these sites will permanently disrupt the landscape's historic patterns of development, most especially its nineteenth-century circulation patterns. The scale—width, grade, and lack of curvature—of road, culvert, and bridge structures required to safely carry the trucks is out of keeping with that of the region's established, historic, and largely locally maintained roads.

Within farm properties, new roads would create road patterns similar to suburban cul-de-sacs. This will disrupt the internal historic integrity of individual properties, an effect multiplied across the landscape of contiguous historic properties. While wells might not be drilled within village limits or in the county's hamlets, the cultural resources providing a distinctive sense of place will surely be altered by this activity. Increased truck traffic will quite literally shake historic buildings to their foundations and force the removal of sidewalks, verge lawns, and historic trees lining streets to accommodate heavy vehicles. If bypassing these centers is considered a solution, it would be wise to consider the importance of moderately paced traffic to the economies of these local service centers. Historic circulation systems play a pivotal role in sustaining local economies, and moving traffic away from these centers imperils their survival.

Finally, the assumption that a cultural landscape developed during the nineteenth and first half of the twentieth centuries can be "reclaimed" in the mid-twenty-first century is surely naïve. The rdSGEIS describes the drilling of wells and extraction of gas as temporary—lasting up to 30 years before a well's potential *via* repeated hydrofracking is exhausted. Actions proposed in the rdSGEIS will provide short term fixes with ruinous, permanent, and long term consequences far outlasting the drilling industry's presence in the Marcellus and Utica shale regions. The technologies and demands of an earlier time directly influence the structure and appearance of the component resources of a cultural landscape developed in that era. While this might be used to argue that such resources are now obsolete, we demonstrate more and more that such resources are in actual fact more durable physically, economically, and culturally than many of more recent date. The sense of place they provide is but part of what they offer in terms of durability, energy efficiency, and economic potential. They must be reviewed, documented and afforded the protections for cultural resources in accordance with the Preservation Acts of enacted at both the federal and state levels.