July 15, 2016

Re: DEP Docket No. 02-16-04, Highlands Septic Density Standards, Proposed Amendments at NJAC 7:38-1.4 and 3.4 (b)

Dear Mr. Emerle:

Please accept the following comments on the above referenced rule amendments on the behalf of the eighty-nine member organizations of the New Jersey Highlands Coalition. In addition to our written comments, please accept the following attachments:

- Transcription of oral comments provided by individual participants at a public hearing on this matter held on July 11 at Montclair State University.
- Petition with commentary compiled from over one thousand respondents to the public comments website hosted by Jersey City Mayor Steve Fulop, protectnjhighlands.com

In NJDEP literature that discuss the Highlands Act requirement that the Department adopt a septic density standard in consideration of deep aquifer recharge (PL 2004 ch120, 13:20-32e), the Department finds little clarifying direction in the Act to the meaning. However, the Department has inferred the term to indicate in calculating septic densities for the Preservation Area, that the variables used are always the most conservative. This approach justifies the use of the drought of record for the rate of recharge and 4 persons per household as the nitrate load. The Act additionally requires the septic density standard to be “established at a level to prevent the degradation of water quality, or to require the restoration of water quality, and to protect ecological uses from individual, secondary and cumulative impacts” (emphasis added).

This provision of the Act is clear, that in proposing a septic density standard for the Highlands Preservation Area, that the additional impacts that would occur by the construction of a septic system and the anthropogenic activities and structures that septic systems support, must be considered. For instance, what are the additional and
cumulative impacts from the impervious surfaces, from stormwater, from the clear-cutting of a forest tract, road traffic, etc.; in other words, the additional impacts that would occur in association with each new septic system? The Department entirely ignores secondary and cumulative impacts in its assessment of the 1,145 additional septic systems that could be built as a result of the rule change, in violation of the Act’s specific requirement.

In addition, the proposed increase in septic density is likely to violate the Highlands Act limit for permitted impervious cover in the Preservation Area. The Highlands Act calls for rules and regulations that “shall provide for... a prohibition on impervious surfaces of greater than three percent of the land area...” (C.13:20-32, 34.h)

The current 88/25 acre septic density standard for the Preservation Area is unlikely to collide with this standard. However, three percent of one acre (43,560 sq. ft.) equals 1,307 sq. ft. For an 11-acre parcel, impervious cover would be limited to 14,377 sq. ft. Impervious cover includes a house (which could itself exceed 7000 sq. ft.), garage, sheds, stables, terraces, decks, swimming pool, tennis court, paved walkways, the driveway leading to the house, plus the new roads necessary to serve the subdivision, it is highly likely that the 3% impervious cover limit would be exceeded. There has been no evaluation in the proposed rule of the potential for violating the 3% impervious cover limit as required the Highlands Act.

There are other indications that this rule proposal has not been fully thought out and there has been little, if any, coordination with the Highlands Council. The adoption of the rule as proposed places the Department in conflict with its significant other partner in sharing State-level land use jurisdiction inside of the Highlands region. The rule proposal would cause the Highlands Council’s septic density standards for the Planning Area to be more conservative for the Protection Zone, at 23 acres minimum, than the NJDEP standard of 22 acres for the Preservation Area. The septic density standards for the Conservation and Existing Community zones would become equal for the Preservation and Planning areas, at 12 and 11 acres, respectively. In changing the septic density standards for the Preservation Area to be less conservative than, or equal to, the Planning Area, the Department ignores many of the Act’s requirements for stricter standards in the Preservation Area, including, “increased standards more protective of the environment established by the Department of Environmental Protection for development in the preservation area of the New Jersey Highlands” (C.12:20-2).

As with the recent changes to the Flood Hazard Control Act, Stormwater, Water Quality Management Planning, and now, Highlands rules, the Department is intent on pushing the envelopes, to open as much land for development. This is a perverse role for the Department of Environmental Protection and it is certainly contrary to the Department’s stated understanding of the Highlands Act, that it adopt conservative, not liberal measures, in protecting the Highlands water resources.

The Department initially promulgated protective septic density standards for the Highlands Preservation Area that are consistent with the intent of the Act. The New Jersey Legislature, in the 2004 Highlands Water Protection and Planning Act, gave the primary responsibility for implementation and for overseeing future development in the Preservation Area to the NJDEP,
whereas the Highlands Council was accorded primary responsibility for the Planning Area.

The Preservation Area was delineated by the Legislature as the most critical and environmentally sensitive half of the Highlands, a region of statewide significance. The Preservation Area and the Planning Area differ from each other in their overall land use aspects, with similar, but different goals and priorities (see c.13:20-10 Goals of regional master plan).

Comprising approximately half of the Region, the Preservation Area encompasses the majority of the New Jersey Highlands’ contiguous forests, which form the core of the nearly pristine watersheds that, according to the most recent NJGS figures, supply 70% of New Jersey’s population with drinking water, while also providing habitat for rare, threatened and endangered species. The Preservation Area contains far lesser amounts of both urban development and farmland than the Planning Area.

Nearly two-thirds (60%) of the Preservation Area is forested, vs. one third (33%) of the Planning Area. The majority of the Highlands’ urbanized areas and farmlands are located in the Planning Area. Nearly 38% of the Planning Area is urban, vs. less than half that – 16.9% – in the Preservation Area, while nearly 17% of the Planning Area is agricultural, vs. less than half that – 8.1% – in the Preservation Area.

<table>
<thead>
<tr>
<th>Location within NJ Highlands Region</th>
<th>Land Use, in percent</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Urban</td>
</tr>
<tr>
<td>Preservation Area</td>
<td>16.9</td>
</tr>
<tr>
<td>Planning Area</td>
<td>37.8</td>
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</tbody>
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(USGS Median Nitrate Concentrations in Groundwater in NJ Highlands Region Estimated Using Regression Models and Land-Surface Characteristics, 2015)

The Highlands Act is explicit in its mandate for strict regulatory protections in the Preservation Area. In its findings and declarations, the Act states:

“The Legislature further finds and declares that the protection of the New Jersey Highlands, because of its vital link to the future of the State’s drinking water supplies and other key natural resources, is an issue of State level importance...

That the State should take action to delineate within the new Jersey Highlands a preservation area of exceptional natural resource value that includes watershed protection and other environmentally sensitive lands where stringent protection policies should be implemented...

That such a new regional approach to land use planning should be complemented by increased standards more protective of the environment established by the Department of Environmental Protection for development in the preservation area of the New Jersey Highlands;

That this comprehensive approach should consist of the identification of a preservation area of the New Jersey Highlands that would be subjected to stringent water and natural resource protection standards, policies, planning, and regulation;...” (C.12:20-2, emphasis added)

It is clearly the NJDEP’s responsibility under the Highlands Act to ensure, in the Preservation Area,
implementation of the strictest standards for protection of water quality, water supply, and other natural resources.

It is abundantly clear that the Preservation Area and the Planning Area differ substantially from each other in their overall land use characteristics. It is contrary to the intent of the Act that the proposed septic density amendments are based entirely on a 2015 study that inappropriately applies an analysis of the combined Preservation and Planning areas of the Highlands, and arrives at its proposed amendments using this analysis, rather than analyzing the Preservation Area as a distinct unit for drawing conclusions that apply solely to the Preservation Area.

The current NJDEP septic density standards implement the Highlands Act directives to “prevent the degradation of water quality” and “protect ecological uses from individual, secondary and cumulative impacts”:

“...a septic system density standard established at a level to prevent the degradation of water quality, or to require the restoration of water quality, and to protect ecological uses from individual, secondary, and cumulative impacts, in consideration of deep aquifer recharge available for dilution...” C.13:20-32(e)

The current DEP septic density standards are explicitly based on natural background nitrate levels documented by NJDEP in the Highlands region. The NJDEP basis for the current ambient nitrate concentration standards are expressed as “0.21 mg/L for forest land use and 0.76 mg/L for mixed land use.” (Basis and Background of the Septic Density Standard of the Highlands Water Protection and Planning Rule at N.J.A.C. 7:38-3.4 [NJDEP]). The DEP’s current methodology relies on “pristine” groundwater nitrate concentrations from wells located in forested areas to establish background nitrate levels free from anthropogenic nitrate loadings.

The USGS study, on which the proposed DEP septic density standard is based, conflicts in both its design and its statistical analysis of the data with the Highlands Act’s legislative policies and standards. Major study flaws include:

1. The New Jersey Private Well Testing Act (NJPWTA) data were collected from residential wells of unknown depth, ignoring the legislative mandate to consider “deep aquifer recharge.” NJDEP claims to have accounted for deep aquifer recharge by using the drought of record as a surrogate. But this provides no justification for ignoring the requirement here, in the collection of well test data, where the depth to aquifer is a considerable factor.

2. The NJPWTA data, which accounts for 96% of the data analyzed, has a “spatial bias in well locations because many sampled wells are located in urban areas; thus, a bias in median nitrate concentrations was expected. Over-representation of urban and possibly agricultural areas and under-representation of forested areas in the combined NWIS-PWTA database must, therefore, result in higher median nitrate concentrations for all water samples than the actual median concentration for groundwater underlying the entire Highlands Region or any Area, Zone, or Area:Zone combination.” USGS Median Nitrate Concentrations in Groundwater in NJ Highlands Region Estimated Using Regression Models and Land-Surface Characteristics, 2015

Your Water, Your Future
The Department has not presented any clear, compelling justification to increase the septic densities in the Preservation Area. Indeed, there is no order by the Court to do so in the matter of the litigation brought by the New Jersey Farm Bureau. Any suggestion by the Department that the impacts of the up to 1,145 additional septic systems (Fact Sheet: Highlands Septic Rule Proposal, NJDEP, April, 2016) would be *de minimis* are not substantiated, and indeed would be suspect, as the Department has failed to consider secondary and cumulative impacts, as required by the Act.

The New Jersey Highlands Coalition looked at how the proposed rule might impact development in proximity to Split Rock Reservoir, in Rockaway Townships. We found that on land in private ownership and without conservation easements, *six new septic systems* could be built close to the water’s edge on lots that the existing 88 acre minimum in the (forested) Protection Zone of the Preservation Area currently protects against:

![Map showing potential impact areas around Split Rock Reservoir.](image)
Developments of this nature, placing new septic systems this close to the water resources that so much of New Jersey depend upon, are precisely what the Legislature intended to prevent when it enacted the Highlands Act. That the Department believes such risks are *de minimis*, or failed to thoroughly consider the impacts of this rule proposal, such risks are unacceptable. With our limited resources and the limited amount of time to evaluate and comment on this rule proposal, this is merely an example; one area that we investigated.

The proposed increases in Preservation Area septic densities are in conflict with several provisions of the Act, as we have pointed out. In addition, with the lack of inter-agency coordination, the implementation of these rules will stand the Highlands Act on its head. Although such a circumstance would please some interests, the Department’s primary responsibility is to implement the Acts set forth by the Legislature. It is also the responsibility of the Department to protect the natural resources the State holds in trust on behalf of its citizens. Seeing how far it can go to accommodate the needs of development interests puts the Department in conflict with the public trust. It is for these reasons that the Department should withdraw this rule proposal.

Sincerely,

Elliott Ruga, Policy Director

Wilma Frey, Policy Manager, New Jersey Conservation Foundation, assisted in writing these comments

attachments: Oral Comments Transcription (Montclair State University, July 11)
Comments submitted via Jersey City web portal