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Glenn D. Hoagland

August 24, 2004

Nadine Lemmon, Town Board
Town of Gardiner
P.O. Box 1
Gardiner, NY 12525

RE: Comments on Ridge Protection in Connection with Moratorium

Dear Nadine:

Carl Zatz requested that I send to you as the point person for the Town Board information that may assist the Town in implementation of an effective limited moratorium in the ARR 200 Zone. Our comments are limited to the area for which our input was requested, that of the biological importance of the cliff talus area within the ARR 200 Zone and thus the ecological justification for protecting the cliff base areas. Please accept our comments for inclusion in the public hearing record.

We commend the Town in its consideration of establishing a line based on elevation above which no building permits would be issuable during the moratorium. Such a measure could protect the one of the most fragile parts of the entire Shawangunk Ridge – the cliff and talus area in the Town of Gardiner.

Should the Town enact a moratorium, we support efforts to implement it so as protect fragile resources, while not placing undue burdens on property owners. If a moratorium goes into effect, there is an opportunity to bring together landowners, ecologists and land use planners to refine a zoning district that defines specific areas needing greater protection, and those where limited development is feasible and has minimal impact.

In Gardiner the “break in slope” line that defines where the ridge begins varies but hovers around 500 feet in elevation above sea level. Using this delineation Gardiner could capture that area which includes the steep slopes, thin soils, and rock talus cliff base, and the cliffs, including several communities that harbor rare and endangered species or serve as potential aquifer recharge areas. Using this line would also protect some of the Chestnut Oak forest. The Shawangunks contain one of the largest examples of this forest type in New York, over 35,000 acres in area, and much of it unfragmented by vehicular roads or development. It so happens that a majority of this 500 foot line coincides with public roads in Gardiner. While a 600 foot elevation line could provide more flexibility to property owners, and still protect the most critical areas of cliff and talus, it would fail to thoroughly protect the resource. Above 600 feet, in some places development could potentially severely impact the cliff and talus.

Scientists studying the Shawangunk Ridge have extensively inventoried natural communities including rare and threatened species, and

analyzed ecological processes to determine "conservation targets" that warrant protection. In order to better manage visitation impacts, in 1994 Mohonk Preserve initiated a Cliff and Talus survey on its own lands, surveying over 12.5 miles of cliffs of 40 feet in height or greater. The findings confirm that cliffs and talus slopes create extreme microclimate environments and plant growth is limited by lack of soil, significant temperature and moisture variations, and high winds, among other environmental factors (Thompson, 1999).

Scientists have measured both the amount of biological diversity in each community type in the Shawangunks, and the extent to which rare species are associated with specific natural communities. Their findings indicate that the community type defined as "Cliff/Talus" or "Talus Slope Woodland" contains the highest number of species overall, as well as one of the highest percentages of rare or threatened species. Among them are the Peregrine Falcon and Broom Crowberry, both of which are listed as Endangered by the New York State Department of Environmental Conservation, and the Timber Rattlesnake and Mountain Spleenwort, both of which are listed as Threatened by DEC. Studies also confirmed that talus slope woodlands are among the "small patch" natural communities of the Shawangunks that are most vulnerable to irreversible impacts that can reduce viability (Batcher, 2000).

Following a 40 year absence due to near extirpation, since 1998 Peregrine Falcons have bred on the cliffs of Gardiner, one of the few places in New York where the Peregrine, a State-listed Endangered Species successfully breeds in the wild. Private landowners, Mohonk Preserve, NYS DEC, PIPC, and the Gunks Climbing Coalition have been cooperating annually in protecting and monitoring nesting sites. Also nesting are Common Ravens, a species returning to the Shawangunks, and Black Vulture, a new species in New York that was first discovered nesting on Preserve cliffs. In all, 93 plant species have been observed in cliff/talus areas on Mohonk Preserve lands. Among the most common are fragile Rock Polypody and Hayscented Fern, Wood Hairgrass, several species of rock tripes, other lichens, and Pin Cushion Moss (Thompson 1999).

Hydrogeologists studying the Shawangunks have also indicated that talus boulder fields are important potential aquifer recharge areas.(Coates, Cain, and Davis 1994)

To summarize, there is significant scientific justification for measures to protect the talus slope woodlands, immediate cliff bases, and cliffs from potentially inappropriate, irreversible and high impact development. While analyses compiled by scientists to-date need further refinement to best optimize community and landowner objectives in Gardiner for incorporation into zoning, using the 500 or 600 foot elevation for purposes of the moratorium is justified by scientific findings.

Mohonk Preserve appreciates the opportunity to provide this scientific input to assist in your decision-making.

Sincerely,



Glenn D. Hoagland
Executive Director

Cc: Carl Zatz