Housatonic Valley Association

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June 3, 2009

Mr. Ryan Courtien, Supervisor
Mr. Christopher Galayda, Councilman
Ms. Catherine Frame, Councilwoman
Mr. Richard Hawthorne, Councilman
Ms. Kathryn Palmer House, Councilwoman
Town of Dover
Dover Town Hall
126 East Duncan Hill Road
Dover Plains, New York 12522

RE: Draft Environmental Impact Statement Pursuant to Dover Town Law 61-4 and the State Environmental Quality Review Act (6 NYCRR 617)

Knolls of Dover Proposed Redevelopment of the Former Harlem Valley Psychiatric Center Campus Route 22 and Wheeler Road, and Former Dykeman Parcel, Pleasant Ridge Road, Wingdale, New York

Dear Mr. Courtien and Council Members:

HVA BACKGROUND

The Housatonic Valley Association (HVA), founded in 1941 is the oldest non-profit watershed conservation organization in the nation, and is dedicated to preserving and protecting the natural character and environmental health of the Housatonic River and its 1,948 mile watershed, which includes the Tem Mile River watershed in New York. Our work in surface and groundwater protection issues is extensive.

HVA reviewed the Draft Environmental Impact Statement (DEIS) prepared for this project and offers the following comments and recommendations for your consideration.

ENVIRONMENTAL ISSUES

1. We urge the Town to require the applicant to establish a permanently protected riparian buffer with a minimum width of 100' adjacent to all watercourses and wetlands. Within such buffer area no disturbance should occur, and no clearing or grubbing should be permitted.

The properties include significant acreage of Department of Environmental Conservation (DEC) designated wetlands under Part 664.2 (a) of the Environmental Conservation Law, along with the state

required “adjacent area”, those areas of land or water that are outside a wetland and within 100 feet (approximately 30 meters), measured horizontally, of the boundary of the wetland. Part 664.2 (b) allows for an adjacent area broader than 100 feet (approximately 30 meters) may be established where necessary to protect and preserve the wetland, as set forth in section 664.7.

The Town has the opportunity to ensure that the wetland protection measures set forth in state environmental laws become their guidelines for reviewing this application. Below is an excerpt from Part 663 of the Environmental Conservation Law §3-0301 and §24-1301, Part 663.4 Regulatory Procedures, Subdivision 663.4(d), procedural requirements, explaining the state’s interest in preventing the cumulative loss of wetlands through development activities:

Draining, Filling, Grading, Clear-cutting, and Dredging
Generally, draining of wetlands lowers groundwater levels, may increase down-stream peak flows, and may decrease water storage capacity and downstream base flow. It may also cause changes in vegetation and water temperature, increased stream bed scouring, and sediment deposition. Draining can totally destroy a wetland.

Filling decreases the number and size of wetlands, thereby decreasing their ability to collect runoff and prevent erosion and sediment deposition downstream. Certain fill materials may adversely affect water quality. Disposal of dredge material may result in erosion and cause turbidity and sediment deposition. Filling eliminates wetland habitat for fish and wildlife, may alter the water table and groundwater flow and adversely affect groundwater recharge, and can irreversibly destroy a wetland.

Grading a wetland or adjacent area can substantially alter surface water drainage and flow patterns, may temporarily increase erosion, and may eliminate fish and wildlife habitat. Clear-cutting removes the vegetative cover of wetlands and may reduce their ability to absorb water and serve as habitat. It may also cause soil erosion.

Dredging or excavation may increase water depth and remove wetland vegetation, thus altering the basic characteristics of, and perhaps destroying, wetlands. Fish and wildlife feeding or reproductive capacities may be altered, as may cover types, turbidity, sediment deposition, and erosion patterns.

Any of these activities can cause the permanent loss of benefits provided by wetlands, and may, in fact, destroy wetlands entirely.

The statewide minimum land-use regulations contained in subdivision 665.7(g) establish the compatibility categories to be used in conjunction with the different types of land-use activities to be conducted upon freshwater wetlands or adjacent areas. This chart states the procedural requirements to be followed in implementing those minimum land-use regulations. For activities and land-uses not shown on this chart, the Department must first make a determination that the activity is a regulated activity as defined in the Act and section 663.2 of this Part. If the activity is regulated, then an independent determination of compatibility using the three tests for compatibility contained in the standards for permit issuance in subdivision 663.5(e) must be used.

Area Categories
FWW - Freshwater Wetland
AA - Adjacent Area

Levels of Procedural Requirements
E - Exempt; no permit or letter of permission required
L - Letter of Permission required

P - Permit required
Levels of Compatibility

C-usually compatible; means that a regulated activity may be compatible with a wetland and its functions and benefits, although in some circumstances the proposed action may be incompatible.
N-usually incompatible; means that a regulated activity is usually incompatible with a wetland and its functions or benefits, although in some cases the proposed action may be insignificant enough to be compatible.
X-incompatible; means that a regulated activity is incompatible with a wetland and its functions and benefits.

ACTIVITIES			
ITEMS		Procedure & Compatibility by Area	
		FWW	AA
17	Draining and altering water levels, except as part of an agricultural activity.	P(X)	P(X)
18	Removing or breaching beaver dams.	P(N)	P(C)
19	Constructing, expanding, or substantially modifying drainage ditches, except as part of an agricultural activity.	P(X)	P(N)
20	Filling, including filling for agricultural purposes.	P(X)	P(N)
21	Installing or creating a dry well, retention basin, filter, open swale, or pond.	P(N)	P(N)
22	Clear-cutting trees.	P(N)	P(C)
23	Clear-cutting vegetation other than trees except as part of an agricultural activity.	P(X)	P(N)
24	Cutting but not elimination or destruction of vegetation, such that the functions and benefits of the wetland are not significantly adversely affected.	L	L
25	Grading, and dredging not included in item 26.	P(X)	P(N)
26	Dredging less than 400 cubic meters (approximately 523 cubic yards) to maintain present navigation channels.	P(C)	P(C)
27	Mining.	P(X)	P(X)
28	Constructing roads, except for winter truck roads as defined in subdivision 663.2(c).	P(X)	P(N)
29	Drilling a water well to serve an individual residence.	P(C)	L
30	Drilling a well, except for activities covered by item 29.		

2. We strongly urge the Town to require the applicant to submit a new Site /Subdivision Plan with no construction or associated activities located within wetlands or wetland buffers.

When dealing with on-site wetlands, avoidance should always be the preferred alternative. We are particularly concerned about how the project is laid out on the Site Plan maps. There are no buffers drawn around the wetlands and the site plan shows roads, stormwater structures, utilities and buildings located very close to the wetland boundaries. In Section VII-2 the DEIS states that the project would disturb approximately 4 acres of wetlands. It also characterizes portions of the wetlands to be disturbed as significantly degraded. However, construction of the roads, buildings and other structures on the site will involve heavy machinery in very close proximity from most of the wetlands within the project area.

We recommend that the applicant show a minimum 100' buffer around all wetlands on the site plan maps. We also strongly recommend that certain portions of the project be redesigned to site all new roads and structures at least 100 feet from the edges of all wetlands, particularly the new structures on the south side of Road A, in the central and western parts of the site. Also the new structures on Road B south of the treatment plant are also very close to the Swamp River wetland. Moving structures away from wetlands will be most important during construction while the earth moving machines will be on site.

We recommend that in the construction and phasing plans the applicant describe how the wetlands will be protected during construction if a severe storm event such as the recent nor'easter occurs. The plans should include where machinery and materials would be stored and fueling take place. The plans should show the location of fuel tanks or a containment berm, which should be capable of containing 110 percent of the capacity of any fuel tank, the location where concrete trucks will rinse their shoots and how the rinsed concrete will be contained or where construction equipment will be maintained and how any pollutants will be contained. The narrative should describe measures to prevent lubricants, oil and fuel leaking from construction equipment from contaminating the brook and wetlands.

3. The applicant should provide a comprehensive stormwater management plan, which should show where various stormwater prevention structures and techniques will be located.

Section III describes a number of standard and low impact stormwater techniques which the applicant states will be incorporated into the development but only the stormwater detention ponds and hydronamic separators are shown on the maps. The drawings do not provide the information needed to review and asses the stormwater management controls for the project. The features not present include, but are not limited to catch basins, piping, measures to capture and manage flow from the new roads and houses, level spreaders and designs for the drainage ponds. The depth of the existing water table and depth to ledge are critical factors in a pond design.

The following items should be provided in order to evaluate the design:

Test holes should be provided for each basin to determine the depth to ledge and the projected height of the water table during the dry season.

If a liner is proposed, a water budget must be provided to again insure that there will be water to the design level, especially in the dry summer months.

Unlined ponds that intercept groundwater have the potential to impact groundwater quality if dissolved pollutants are in the runoff. Typically there are dissolved pollutants from roadway systems. The applicant should address this issue.

Determination of the high and low water elevation.

The actual size of the pond wetlands should be designed based upon the desired pollutant removal efficiencies and the proposed depth of the permanent water available for wetland plantings and pollution renovation.

The standard safety benches and aquatic benches for the basins should be provided. The aquatic bench is a critical part of the basin design. Flat benches should be extended 10 feet from the water edge to the toe of slopes.

The plan should include forbays, four to six feet deep to ensure settling out of the coarse sediments and prevent resuspension of collected sediments.

The narrative should also include a program for post construction inspection and maintenance, a specific program for responding to inspection issues, a complete budget and recommendations for repairs and maintenance, if necessary. If not properly monitored and maintained, the facilities will eventually fail, leading to adverse impacts to down stream properties, wetlands and ground water quality.

4. We strongly support the applicant's commitment to employing Low Impact Development (LID) design which minimizes polluted runoff.

Storm water runoff is a major water quality threat to the Ten Mile and Housatonic Rivers. In particular, sediment and nutrient loading are major water quality issues in the Tem Mile River watershed caused by storm water runoff from construction and development. Roofs, pavement and other impervious surfaces replace natural vegetation and cause storm water to run off the surface rather than sink into the ground. Significantly higher amounts of water runoff into nearby streams can result. This causes erosion, flooding, sediment dumping and destroyed habitat and aquatic life. Along its journey, storm water also picks up a broad array of chemicals, sediments, salt, fertilizers, vehicle fluids and even bacteria which are then transported directly into streams and rivers. Traditional storm water management techniques don't address water quality issues, and actually exacerbate the problem by collecting and removing as much water as possible, as quickly as possible, from a site. LID is needed to reduce sediment and nutrient loading caused by land development and construction.

Instead of the traditional "end of the pipe" approach, channeling rainwater to sewers or holding ponds, low impact development allows it to soak naturally back into the soil, much as it would on undeveloped property. It includes landscaping and design techniques that attempt to maintain the natural, pre-developed ability of a site to manage rainfall. LID techniques capture water on site, filter it through vegetation, and let it soak into the ground where it can recharge the local water table rather than being lost as surface runoff. LID treats rainwater as a resource rather than a waste product needing disposal. Techniques include reducing imperviousness and employing the use of pervious paving, conserving natural resources and important ecosystems, maintaining natural drainage courses, reducing use of pipes, and minimizing clearing and grading.

5. The applicant should use bridges, rather than culverts to cross wetlands and streams.

The site plans show numerous wetland crossing but provide no information about what structures will be used. Many small streams support fish populations, but often these populations become fragmented and blocked due to road crossings, often culverts. Consequently, fish are unable to reach critical feeding, spawning or refuge areas necessary for their survival. The most common problems associated with impediments to fish passage are perched culverts. Over time erosion, flooding, and freeze/thaw cycles scour the stream bottom below the base of the culvert, creating a barrier for fish passage. Included with these comments is a copy of the Connecticut Department of Environmental Protection's *Stream Crossing Guidelines*, which illustrate the problems associated with culverts and recommend fish-friendly solutions.

6. We recommend that Road S and the new development associated with it be eliminated from the project.

The proposed construction of a road and nearly 50 homes to the west of the existing reservoir will fragment a large virtually unbroken forest block which extends on each side of the Connecticut/New York boundary from Quaker Hill and Sherman north to Webatuck and Gaylordsville. Attached are two air photos which show a view of the project area and a broader view of the forested area. Within this area are private conservation holdings, state owned open space and Appalachian National Scenic Trail and associated corridor lands. Rolling meadows, forested hillsides and sprawling farmland still surround and define our communities, and our streams and rivers boast some of the finest trout fishing in the country. Home to tiny migratory songbirds, bear and bobcat alike, it is a very special place. And it is under siege.

It is impossible to construct miles of roadway and hundreds of houses and not cause forest fragmentation. The adverse effects of forest fragmentation include reduced habitat area, habitat isolation and loss of species from an area, disruption of dispersal, increased edge effects and loss of core habitat, and the facilitation of alien invasive species.

Even narrow open corridors through forests, such as roads and rights-of-way, degrade the forest by creating unfavorable habitat for many species of migratory birds because of high rates of nest predation by predators such as foxes, skunks, and raccoons and nest parasitism by brown-headed cowbirds. Furthermore, the effects of such openings extend 300 feet into the forest from the edge. Interior forest, therefore, is defined as forest occurring more than 300 feet from an edge. Interior forest is required for successful breeding by species such as the black-throated blue warbler, the black-throated green warbler, the wood thrush, the ovenbird, and the scarlet tanager.

In addition to decimating interior forest habitat, roads and houses produce edge effects conducive to the spread of alien invasive plants such as multiflora rose, Japanese stiltgrass, Russian olive, Japanese barberry, tree-of-heaven, and Japanese knotweed. Once established on roadsides, these alien invaders infiltrate adjacent habitats, further degrading our forests.

In 2006, recognizing the threat of forest fragmentation, state commissioned a report, *Hudson River Estuary Wildlife and Habitat Conservation Framework, An Approach for Conserving Biodiversity in the Hudson River Estuary Corridor* prepared by Mark E. Penhollow, Paul G. Jensen, and Leslie A. Zucker of the New York Cooperative Fish & Wildlife Research Unit, Department of Natural Resources, Cornell University. The report, which includes Dover and surrounding communities, describes the importance of sound local planning to guide development so as not to lose the wonderful qualities of the Swamp River and Hudson Estuary. A section from that report, *Unfragmented Forest & Habitat Corridors*, is included with these comments. Following is an excerpt from the Executive Summary:

> **Plant and Animal Habitat in the Hudson River Estuary Region**
>
> The Hudson River begins as a small mountain lake on the side of the state's highest peak, Mt. Marcy, and ends in New York Harbor, one of the world's busiest and most populated metropolitan ports. About halfway along its course it becomes an estuary, an arm of the sea, that provides spawning and nursery grounds for commercially valuable fish, crabs, and shellfish. The River's uplands are covered with forests interspersed with working farms, residential development, and small cities. These lands support a high diversity of species of global and national significance. The Hudson Valley's varied geology creates a tapestry of habitats, such as pine barrens, grasslands, cliffs, mountain ranges, caves, streams, and wetlands, including globally rare freshwater tidal wetlands. This mix of habitats gives the region exceptional importance.

The region, comprising only 13.5% of the land area of the entire state, contains nearly 85% of the bird, mammal, reptile, and amphibian species found in New York State. It is important worldwide for its rich diversity of turtles, and nationwide for its dragonflies and damselflies. It offers opportunities found nowhere else in the state for conservation of amphibian and reptile biodiversity. A number of species use the Hudson Valley as a migration route or as breeding or nursery habitat. This includes migratory fishes such as shad, sturgeon, and striped bass, as well as insects such as the monarch butterfly. Birds as varied as the cerulean warbler, marsh wren, bald eagle, osprey, and ruby-throated hummingbird all spend part of their life cycle in the Valley and part of it in places as far away as Nova Scotia and South America.

The Hudson River Estuary ecosystem is home to a number of species that have their best or only remaining populations in the region. Such species include the northern cricket frog, sable clubtail dragonfly, Kentucky warbler, timber rattlesnake, the bog turtle, Karner blue butterfly, and Indiana bat. Approximately 150 species in the watershed are listed by the NYSDEC as threatened, endangered, or of special concern in New York State. Of the 11 turtle species found in the Hudson Valley, 6 are on state or federal lists of endangered, threatened, or special concern animals, primarily due to habitat loss.

While some species flourish in the Hudson River Valley, others are threatened and some species not now listed as endangered are on the decline. Urbanization and habitat fragmentation are a major concern. Species that require connections between habitat types to complete stages in their life cycles cannot survive if these connections are broken. For example, wood frogs, spotted salamanders, and marbled salamanders require wetlands for breeding and must have adjacent woodlands for their adult stage. Animals that rely on large unbroken tracts of forest, such as the bobcat, wood thrush, cerulean warbler, and red-shouldered hawk can become vulnerable when such forest lands are broken up. Agricultural lands also provide important habitat. Meadows and shrubby fields found on Hudson Valley farms can support species such as the bog turtle, northern harrier, bobolink, meadowlark, and golden-winged warbler. Many of these species are declining in the valley as agricultural land uses decrease.

Pollution and competition with invasive or overabundant species create problems for some species. At least 10 percent of the 3,600 miles of tributary stream habitat in the Hudson Valley are stressed from agricultural and urban runoff, erosion, dams, loss of riparian buffers, and reduced groundwater recharge. Invasive species crowd out native species that serve as food and shelter for many of the regions insects and small animals. Many of these “invasives” take hold where human practices give them an extra boost.

The region is one of the most densely populated areas in the country, and its land is changing fast. According to a report released in 2001 by the Brookings Institution, between 1992 and 1997, urbanized land use in the NYC metropolitan area grew at three times the rate of population growth, and in the Albany Capital District urban land use grew at six times the rate of population growth (Fulton et al. 2001). This rapid land conversion creates an urgent challenge to organizations and agencies faced with finding new ways to include conservation in the region’s growth strategy. Protecting habitat does not require that growth stop however, human developments will need to be sensitively placed to maintain important habitats and fit the needs of wildlife species.

Public lands are making an important contribution to biodiversity conservation in the Hudson River Valley, particularly for species that require large forested tracts. A century of open space acquisition has created large intact habitats in the Highlands, the Palisades, the Taconics, and the Catskills. However, 90% or more of the suitable habitat for the region’s birds, mammals,

amphibians, and reptiles is found on private lands. Furthermore, 23 of these species are not thought to occur at all on public land. While land acquisition will play a role in protecting some of these species, it cannot be the primary strategy. These trends highlight the need for conservation options that can be adopted by interested parties.

Local Conservation Opportunities

Key steps in conserving the richness of the Hudson's heritage can be taken by local planning boards and property owners. Local home rule gives residents the ability to create and maintain the character of their communities and provides great latitude to communities that want to conserve their natural and biological resources. In order to make informed decisions, communities will need to identify their unique conservation opportunities. **Municipalities can then identify critical areas for habitat and natural resource protection and prioritize areas suitable for development. This strategy can increase residential property values, thus providing additional revenue for municipalities. In addition, this approach improves water and air quality and provides a community with space to experience the beauty of nature. By guiding development patterns now, towns can avoid the costs of urban and suburban sprawl and preserve the sensitive wildlife habitat that nurtures the Valley's unique heritage of native plants and animals.** *bold text added

7. We ask the applicant consider donating a conservation easement, also known as a conservation restriction, or donate the fee interest of the undeveloped land adjacent to the reservoir to a qualified land conservation land trust, the New York Department of Environmental Conservation or the National Park Service.

Protected open space is the best way to provide permanent protection for the Appalachian Trail corridor and to ensure that no future development would fragment the forested lands on the easternmost portion of the property.

CONCLUSION

HVA believes that this project can provide great benefits to the community, particularly if the scope of the project is reduced by the elimination of the development adjacent to the reservoir. HVA appreciates the opportunity to comment on this project.

Sincerely,

Elaine E. LaBella
Director of Land Protection