

# Township of Sparta

## ENVIRONMENTAL COMMISSION



TO: Sparta Township Planning Board

CC: Dorrie Fox, Planning Board Secretary

FROM: Sparta Township Environmental Commission

DATE: August 14, 2023

SUBJECT: Planning Board Application #707, North Village at Sparta-Building J  
Location: 1 North Village Blvd, Block 16008, Lot 7

The Environmental Commission has reviewed the above-referenced application and offers the following comments for the Board's review:

### **Impervious Coverage**

The Commission recognized that the current impervious coverage in the proposed plan is within zoning guidelines of 60%. But would share that this area does contain some significant environmental priority indicators. These are outlined below:

- **Subwatersheds** – This area is in the HUC14 subwatershed area Sparta Junction tributaries, a watershed of HIGH value. Watershed values are reported at the subwatershed level (HUC14). These are by indicators such as percent developed lands, habitat quality, percent total forest, percent core forest and proportion of total forest and are provided as “Low”, Moderate, and “High”.

A watershed is an area of land that drains downslope to the lowest point. Water moves through a network of drainage pathways, both underground and on the surface, and these pathways converge into streams and rivers, which become progressively larger (i.e. higher value) as the water moves downstream the size of the contributing drainage area increases. Because water moves downstream, any activity that affects the water quality, quantity, or rate of movement at one location can affect location downstream.

Source: NJ Highland Council Interactive map

- **Wellhead Protection Area** - A total of 1.2 acres, or 100%, of this property is located within a Wellhead Protection Area. A Wellhead Protection Area is defined as the surface and subsurface area surrounding a water well or wellfield, supplying a public water system, through which contaminants are reasonably likely to move toward and reach such water well or wellfield. Many Sparta Township residents use well water as a drinking water source. In addition, the NJ Highlands is the source of water for 6 million additional residents in the rest of NJ. Finally, Sparta Township is shown to have some local deficits in

this Interactive Map maintained by the NJ Highland Council Interactive map [available at: [NJ Highlands Council Interactive Map](#)]. Accordingly, there is a responsibility to do what we can to protect the water both during construction and upon completion of development.

- **Prime Groundwater Recharge Area** - A total of 1.2 acres, or 100.0%, of the selected area is located within a Prime Groundwater Recharge Area. Groundwater recharge is the process by which surface water, from lakes, streams or rainwater runoff, flows or seeps downward beneath ground surface, saturating soil or rock. A Groundwater Recharge Area is a place where water is able to seep into the ground and refill an aquifer because no confining layer is present.

#### **Additional important notes regarding site:**

- **Land Use Capability Zones** - A total of 1.2 acres (99.0%) of selected area is in the Protection Zone. The Highlands Council developed Land Use Capability Zone mapping, pursuant to the requirements of the Highlands Act. As a comprehensive statement of policies for planning and managing the development and use of land. The Land Use Capability Zone map divides the Highlands Region into three distinct zones. The Protection Zone consists of high resource value lands that are important to maintain water quality, water quantity and sensitive ecological resources and processes.
- **Critical Wildlife Habitat** - A total of 1.2 acres, or 98.0%, of the selected area contains Critical Wildlife Habitat. Endangered, threatened and special concern species documented in this habitat include: Eastern Meadowlark (*Sturnella magna*) and Savannah Sparrow (*Passerculus sandwichensis*). Of the Highlands Region's approximately 860,000 acres, there are approximately 522,000 acres (or 61% of the Region) that function as habitat for rare, threatened or endangered species.
- **Important Farmland Soils** - A total of 1.3 acres, or 100.0% of the selected area contains Important Farmland Soils. The Highlands Regional Master Plan considers four soil types of Prime, Statewide Importance, Unique and Locally important soils as Important Farmland Soils which are critical agricultural resources of the Highlands Region.

**Impact of Invasive/Non-Native Species** - The Commission would highly recommend replacing some of the currently proposed non-native plants in the plan with native to NJ Highlands native plants. Some suggested replacements might be for boxwood an American Holly or Inkberry, for Japanese Lilac a native dogwood or Redbud tree.

#### **Light Pollution**

The Commission would recommend any new lighting only be directed downward toward the ground and, if LED, would recommend light temperatures at 3000k or lower. Including a timer to turn lights off at some point after evening business hours, but before dawn would be preferable. Light pollution can be disruptive to bird migrations and other wildlife and in addition, it has not been found to discourage crime and can save electricity.

Thank you for your consideration.

## References:

1. Deficit of water in NJ Highland: The NJ State Water Supply Plan (2017) [Available at: [NJDEP-Division of Water Supply & Geoscience \(state.nj.us\)](https://www.nj.gov/dep/water-supply-geoscience/)] provides some high-level data showing that the Musconetcong Watershed does not have additional water availability (Figures 3.10).
2. Impact of Native Plants <https://www.nwf.org/Educational-Resources/Wildlife-Guide/Threats-to-Wildlife/Invasive-Species>
3. Light Pollution impacts on wildlife: LED lights are around 4000K, a “cooler” temperature much closer to daylight. There is scientific evidence that this is bad for pollinators, for example, <https://www.science.org/doi/10.1126/sciadv.abi8322>, which in turn will be bad for native plants. Although the direct impact of these cooler color temperatures on nearby plant life is under-researched, evidence suggests that there are adverse effects from street lights on plants, which need darkness to anticipate the seasons, for example, to anticipate that fall and winter are coming and that it is time to lose their leaves and cooler lights, which are closer to “daylight” temperatures are more likely to impact this process.
4. Light Pollution impacts on humans: The American Medical Association also notes the disruption cooler temperature LEDs have on human health: [https://policysearch.ama-assn.org/councilreports/downloadreport?uri=/councilreports/a16\\_csaph2.pdf](https://policysearch.ama-assn.org/councilreports/downloadreport?uri=/councilreports/a16_csaph2.pdf).