

## Environmental Impact Assessment Proposed Schmidts Woods Park Site Restoration & Expansion 2000 Koelle Boulevard, Secaucus, New Jersey

As part of the Green Acres funding proposal, each applicant must collect, evaluate, and present pertinent environmental information necessary to ascertain the suitability of the site for the activities proposed. In preparing this document, the Author reviewed and considered applicable [Landscape Project and Fish and Wildlife](#) maps and reports, developed by the New Jersey Department of Environmental Protection (NJDEP) Fish and Wildlife, during the preparation of the environmental assessment. Additionally, historic aerials of the property were reviewed.

### REPORT

#### 1. DESCRIPTION OF THE PROPOSED PROJECT

- a. **Briefly describe the total development project** - The entire site currently consists of a 6,528.86 square foot (ft<sup>2</sup>) pervious natural wooded groundcover with a slide, 10 picnic tables, benches, and seats and a small playground. The planned improvements consist of clearing a rectangular shaped 3,200 square foot parcel contiguous to the existing playground, on Block 222 Lot 1, located at 2000 Koelle Boulevard in Secaucus, New Jersey. The improvements would consist of rubberized ground cover, an all-inclusive playground equipment for ages two (2) to five (5) year olds, an all-inclusive playground equipment for ages five (5) to 12-year-olds, picnic tables, and trash receptacles. The parcel has four (4) trees six (6) inch caliper that will be maintained as part of the proposed improvements.
- b. **State objectives of the project** - to restore playground capacity to Town's with over 22,000 residents with few facilities in the northeastern section of the Town. The renovation of this park facilitates on site drainage by maintaining a pervious ground cover, facilitates park participant safety, and serves the residents in the northeastern section of the Town where parklands and open space are scarce.
- c. **Fully describe multi-phase projects** -
  - Site preparation and limited clearing is expected to last two (2) to three (3) weeks including stripping of existing ground cover and replacement with seeded topsoil.
  - Maintains pervious ground cover facilitating on site drainage, excavation of offsite disposal of 10 cubic yards (CY) of soil and replacement with topsoil, duration is expected to last one (1) to two (2) weeks.
  - Installation of 3200 ft<sup>2</sup> of rubberized safety surface and 240 ft of new curb edging, duration is expected to last two (2) to three (3) weeks.
  - Installation of amenities including all-inclusive playground equipment, picnic tables and trash receptacles duration is expected to last two (2) to three (3) weeks.

#### 2. DESCRIPTION OF THE ENVIRONMENT

##### Describe existing environmental features:

- a. **Vegetation** - The Site contains an existing 6,528.68ft<sup>2</sup> footprint of unvegetated area with park amenities, 3,200.00 ft<sup>2</sup> vegetated ground over, containing a few rose bushes (*Rosa hybrida*) and sweeping cherry bushes (*Prunus serrulata*), with the remaining shrubbery protected during site renovation and the addition of four (4) shade trees.

- b. **Wildlife, including State and federal threatened and endangered species and critical habitats** - wildlife in urban Secaucus consists of cats, racoons, and groundhogs. There are no State and federal threatened and endangered species and critical habitats. The nearest critical habitat is located 1000 ft to the east on the Hackensack River which drains into the Mill Creek Marsh 1500 ft northeast of the Site. The entire site is identified as a Rank 2 - Special Concern Species Site since the following birdlife was identified:
- Canada Warbler (Breeding Sighting 2006)
  - Northern Diamond Back Terrapin (Occupied Habitat 2019)
  - Bald Eagle (Foraging 2022)

Mammals or evidence of their occurrence observed included the Common Raccoon (*Procyon lotor*) and Gray Squirrels (*Sciurus carolinensis*). Other common area mammals include the presence of eastern chipmunks (*Tamias striatus*), field mice (*Acodemus*), opossum (*Didelphis virginiana*), eastern cottontail rabbit (*Sylvilagus floridanus*), and white-footed mouse (*Peromyscus leucopus*) are expected to inhabit the areas described above. Avian species visually or auditorily observed included the Canadian Goose (*Branta canadensis*), Mallards (*Anas platyrhynchos*), the American Bittern (*Botaurus lentiginosus*), the Red-winged Blackbird (*Agelaius phoeniceus*), American Robin (*Turdus migratorius*), Tufted Titmouse (*Baeolophus bicolor*), Northern Cardinal (*Cardinalis cardinalis*), American Goldfinch (*Spinus tristis*), and the American Crow (*Corvus brachyrhynchos*). No aquatic vertebrate species such as reptiles, amphibians or fish are present except for surface water bodies removed from the Site (Hackensack River and Penhorn Creek), 1.25 miles west and  $\frac{3}{4}$  of a mile east of the Site, respectively.

- c. **Geology, Topography, and Soils** - The Site is flat located at Elevation 12.0 ft above mean sea level (amsl). The south and east portions of the Site slope down to six (6) ft amsl. According to the publicly available information provided by the United States Geological Survey (USGS), the Site is located within the Piedmont Physiographic Province. The Piedmont Physiographic Province is characterized by rolling terrain, underlain by sedimentary rocks (red shale) of relatively recent (Triassic) origin (about 200,000,000 years old); with rocky ridges and outcrops (Watchung Mountains, Sourland Mountain, Snake Hill (located 1 mile southeast of the Site), and the Palisades (located two (2) miles east of the Site). The Palisades consist of igneous origin (basalt and diabase). The bedrock geology beneath the Site is underlain by the Passaic Formation (J<sub>D</sub>) defined as the Fine grained to aphanitic dikes, medium to coarse-grained, sub ophitic<sup>1</sup> discordant stock-like intrusions of dark-greenish-gray to black diabase; and plugs of dark grey, concordant to discordant, sheet like, medium to coarse-grained, quartz rich to albite- rich granophyre<sup>2</sup>. Granophyre consists of sub-volcanic rock containing both quartz and alkali feldspar. The bedrock underlying the Site is known to be at various depths to 10.0-15.0 ft. below ground surface (bgs). Surficial geology at the Site is identified as the Rahway Till. According to the USGS and the U.S. Department of the Interior, Rahway Till is described as dark reddish brown (2.5 YR 3/4) to reddish brown (5 YR 5/4) to dark brown (7.5 YR 4/4) to yellowish brown (10 YR 5/4) sandy-to silty-to-clayey till, containing commonly 5-20% pebbles, cobbles, and boulders of gneiss, sandstone, basalt, and quartzite; in areas underlain by shale and sandstone; matrix contains abundant shale and siltstone fragments and reddish brown silt and clay; noncalcareous; chiefly compact, firm to hard consistency; gravel clasts are generally nonweathered, subangular to surrounded; gravel clasts of fine-grained sandstone commonly are striated; rounded gravel clasts are abundant locally. Deposits contain a few thin lenses of stratified gravel, sand, and silt; minor iron-manganese stain is on joint faces. Thickness 3.0-9.1 m (10-30 ft.); as much as 15.2 m (50 ft.) thick in small drumlins. Drumlins are a low oval mound or small hill, typically one of a group, consisting of compacted bolder clay molded by past glacial action of the Wisconsin Glacier 18,000 years ago. The Unified Soil Classification Society (USCS)

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<sup>1</sup> The common texture of an igneous basaltic rock in which feldspar crystals are the same size as the pyroxene and are only partially included in them. Pyroxene is a silicate mineral consisting of calcium, magnesium and iron occurring as prismatic crystals. Iron and manganese were found in ground water samples at elevated concentrations.

<sup>2</sup> Bedrock Geologic Map of Northern New Jersey, 1996

soil units described include brown (7.5 YR 4/4) to strong brown (7.5 YR 5/6) silty till, containing 5-35% pebbles, cobbles, and boulders of basalt or diabase, sandstone, gneiss, and quartzite. In areas underlain by basalt or diabase, and on sandstone and serpentinite bedrock east of the Palisades; till is, compact-to-loose, very soft-to firm consistency, locally exhibiting sub horizontal fissility. Thickness within this geological horizon is less than 1.8 m (six (6) ft.). Using the United States Department of Agriculture & Natural Resources Conservation Service Online *Web Soil Survey*, the major soil component at the Site is identified as Central Park (CenA), extremely gravelly, sandy loam with level topography. Soil Surveys<sup>3</sup> indicate the area to be underlain by soils identified as “GM-46/Is”. The *GM-46/Is* indicates glacial deposits ascribed to the Wisconsin glacier and identified as ground morainic till. Unsorted heterogeneous, including intermixed soil factions which range from clay sizes to gravel, cobbles, and boulders. Silt and sand sizes predominate but sandstone particles are the major constituents of the drift and colors are usually reddish in tone. The *Is* designation indicates that the GM-46 is underlain by dense, hard, usually coarse-grained rock, composed of dissimilar minerals.

- d. **Water Resources/Hydrology** - The Site is mapped as being underlain by the Brunswick bedrock aquifer system. The Brunswick aquifer is described by the New Jersey Geological Survey as being comprised of sandstone, siltstone and shale of the Passaic, Towaco, Feltville and Boonton formations. Within the fractured aquifer system, groundwater is typically non-saline, slightly alkaline, non-corrosive and hard due to the calcium bicarbonate-rich geology. Groundwater exhibiting subordinate calcium-sulfate within the aquifer is associated with high total dissolved solids (TDS). The aquifer system includes conglomerate facies along the northwest margin of the basin. The Diabase aquifer system is described as hard and dense due to igneous geology with fractured groundwater transportation. The aquifer contains several high-capacity pumping wells, and the groundwater is typically non-saline with varying levels of alkalinity, moderate hardness and rich in calcium-bicarbonate due to geologic contribution. The tidally influenced Hackensack River is approximately 1,200 ft east of the Site and flows southward toward its confluence with Newark Bay, approximately three (3) miles downstream. The Site ground water flows in an easterly direction to Mill Creek Marsh. The sandy/silty soils result in a ground water flow of approximately 30 feet (ft.) per year with a 1 ft. per one hundred-ft. gradients. Depth to groundwater on-site is approximately five (5) ft bgs. Of note, the tidal variation of the Hackensack River ranges from 0 to 4.5/5.0 ft. amsl, and the Mill Creek Marsh has tidal variations as well. Mill Creek Marsh wetland areas are surrounded by a significant footprint of *Phragmites australis* reeds.
- e. **Historic/Archeological Resources** - The Site is in a residential area established in the 1940's with no historic or archaeological features recorded. The nearest archeological site is the footprint of Secaucus High Tech High School, four (4) miles to the southwest, the site of the former largest pauper's grave in North America. RVE reviewed 20 historical aerial photographs for the Site area dated 1931, 1953, 1954, 1966, 1979, 1985, 1987, 1995, 2002, 2006, 2008, 2009, 2010, 2012, 2013, 2015, 2017, 2019, 2021, and 2022 acquired from [Historic Aerials: Viewer](#). Due to the small scale of the photographs, it was difficult to observe fine details related to the Site. Based on the aerials, this site was developed into the current park configuration prior to 1979, after 1966. The 1966 aerial photo shows a small structure near the northern area with some nearby clearings and paths/roads. The 1954 aerial shows the site undeveloped with some wetland/marsh areas along the park site's SE boundary, some of which are mapped historic fill. There is no indication whether the property was used for agricultural uses. No obvious indications of areas of concern AOCs were observed in the historical aerial photographs.
- f. **Transportation/Access to Site** - Access to the Site is via Millridge Road by automobile and bus service on the south side (eastbound lane) of Millridge Road, 1,000ft east of Luhman Terrace. Automobile parking is located at the northwest corner of the site off the eastbound Lane of Millridge Road.

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<sup>3</sup> Rutgers University, *Soil Engineering Survey, Report No. 4, Bergen and Hudson County, USGS, 1951*

- g. **Adjacent Land Uses/Description of the Surrounding Neighborhood** - The area is zoned Environmental Conservation (EC). Adjacent land uses include Low Density Residential (LDR) located north, west, and south of the Site 0.1 to 0.25 miles from the proposed 3,200.00 ft<sup>2</sup> park renovation expansion.

**3. ENVIRONMENTAL IMPACT ANALYSIS OF PROPOSED ACTION**

Impacts are defined as direct or indirect changes to the existing environment, whether beneficial or adverse, that are anticipated to result from the proposed action or related future actions and uses. Any off-site impacts, such as increased traffic on neighborhood roads or increased noise levels in surrounding areas, should be described. Whenever possible, environmental impacts should be quantified (i.e., number of trees to be removed, cubic yards of cut/fill, etc.).

a. **Discuss all affected resources and the significance of each impact**

1. Beneficial Long-Term impacts maintenance of existing stormwater from the Site during Peak Flow periods because of the maintaining existing permeable ground cover. Since the Town requires only 50 acres or so for recreation of suburban residents, the Town has achieved this level of amenity since it currently has 200 acres. It is not anticipated that site improvements will dramatically increase this parking requirement. Finally, at least one table shall be ADA certified, which is a long-term benefit to amenities proposed.
2. Construction Short-Term impacts include increased traffic on Koelle Boulevard and Millridge Road during a three (3) to four (4) month period (expected to be minimal), excavation of a potential 25 CY of soil for offsite disposal of excavated material to construct improvements, and off-site disposal of vegetative waste material (estimated at 50 CY).

- b. **Discuss short-term and long-term project impacts** - Short Term impacts include construction activity on Koelle Boulevard and Millridge Road for three (3) to four (4) month period. Traffic will be minimized and is not expected to raise vehicle counts on Millridge Road and Koelle Boulevard by more than five (5) percent (%) during peak construction activity. Soil load-out (25 CY) and transport offsite is expected to take one week, and it is not anticipated that a flagman will be required pending receipt of the ECode Permit from the Town Building Department. Construction vehicles (eight (8) estimated at peak) will park on park property during site restoration activity. Long Term impacts include periodic visits to the site by Town residences, pursuant to park parking requirements practiced in the past.

- c. **Discuss anticipated increase in recreation and overall use of Site over time** - Secaucus has a population of 21, 295. It is recommended that 2.5 acres be dedicated to suburban populations, which translates to 52 acres for the Town. The Town currently has 200 acres. Since the park services the residence of the northeastern section of the Town, where parks and open space are scarce. It is expected that usage of this park will increase commensurately over time. The Site has the added benefit of being located near a school, Millridge School, 200 feet to the northeast on Millridge Road.

- d. **Identify adjacent environmental features that may be affected by the proposal** - There are no significant environmental resources impacted by the proposed construction. The nearest wetland area is 1,200 ft to the east of the Site along Mill Creek Basin.

- e. **List any permits required for project and brief status (i.e., waterfront development)** -The only permits required are a Soil Conservation Service (SCS) Permit with the Hudson Essex Passaic Soil Conservation (HEPSCD) and an eCode Construction Permit with the Town of Secaucus Building Department.

- f. **Undisturbed Portions of the site**

For development that would impact an undisturbed portion of the project site, the Town will submit a **Natural Heritage Data Request Form** to the DEP's Office of Natural Lands Management. (– For the 3,200.00 ft<sup>2</sup> disturbance of property anticipated, a development that would impact an undisturbed portion of the project site, the Town will submit a Natural Heritage Data Request Form to the DEP's Office of Natural Lands Management.

- g. **Discuss if/how the project may be impacted by sea level rise and any related design considerations.** – Upland portions of the Site (north and west, including project area) are mapped as a 0.2% annual chance flood hazard area with lower elevation portions of the Site containing the current park improvements, and southern and eastern portions of the Site containing primarily woodlands is mapped as a Flood Hazard Areas. Minor upland portions of the Site are not mapped as flood hazard areas, as per **NJFloodMapper**. Upland portions of the site are mapped as a 0.2% Annual Chance Flood Hazard, with lower portions near Koelle Boulevard mapped as 1% Annual Flood Hazard Chance.

#### 4. ALTERNATIVES TO THE PROPOSED ACTION.

- a. **Identify alternate sites** – The town has 200 acres of open space and 20 parks. However, most of the parks and open areas are in the north and west portion of the Town. Secaucus is highly developed and there is no reasonable alternative to the Town planning refurbishment and improvements to the Schmidts Woods Park with a population of between eight (8) and 10,000 residents.
- b. **Discuss alternate levels and types of development** - The limited size of Block 222 Lot 1 (6,528.86 ft<sup>2</sup> + the expansion to 3,258.78ft<sup>2</sup>) restricts improvements to the amenities proposed, i.e., swings, picnic benches, and the fact that it is a Rank 2 Species Concern Site restricts amenities proposed.
- c. **Compare the environmental impacts of each alternative** - The limited size of Block 222 Lot 1 and the fact that the area is a Rank 2 Species Concern Site, restricts improvements to the amenities proposed, i.e., swings, picnic benches, etc.

#### 5. MITIGATING MEASURES

**Describe the measures that will be undertaken to mitigate adverse impacts.**

- a. All impacts are short term construction related, and Town will enforce all existing noise, dust, etc., codes and restrict working hours to weekdays 8:00 AM to 5:00 PM. The site would be observed by an Ecologist prior to construction to confirm the absence of Canada Warbler, Northern Diamond Back Terrapin, and Bald Eagle.

#### 6. AUTHOR(S) AND QUALIFICATIONS

Brian D. Gillen, PE is an environmental professional with over 50 years of experiences including restoration of Brownfield sites including, the 35-acre Secaucus High Tech High School, Site PI 568193, located on a historic fill site dating back to the 17<sup>th</sup> century and partially located on the largest pauper grave site in North America. The Licensed Site Remediation Professional (LSRP) work included concept development and implementation of alternate presumptive remedies for a 168-million-dollar school construction, including Site Investigation, Remedial Investigation, Remedial Action, Response Action Outcome, and Soil Remedial Action Permit, and obtaining a Certification of Occupancy for the school at start of sessions in September 2018. Mr. Gillen also performed a similar environmental impact assessment on other Town Parks.