**Orangetown Environmental Committee**

**Recommendations for the Orangetown Comprehensive Plan**

**21st January, 2022**

**Overview**

Orangetown offers its residents a high quality of life in a suburban context. This is achieved in no small part by establishing robust environmental protections and keeping a balance between development and natural areas. Our system of hamlets and villages defines unique and valuable neighborhoods that should be protected from overdevelopment and suburban sprawl.

Orangetown Town Board adopted the last Comprehensive Plan in 2003 and is now in the process of updating the plan. The environmental concerns outlined in that plan remain and still need to be addressed. With themes of Sustainability and Resiliency expected to be vital components of a new version of the plan, the Orangetown Environmental Committee offers the content of this document to be considered for inclusion in the updated plan.

Incorporation of mandatory elements of sustainability in the updated comprehensive plan would allow Orangetown to gain valuable points towards certification in the NYS Climate Smart Communities program and NYS Clean Energy Communities program which provide access to new grant funding. Goals, strategies, and implementation actions for each sustainability element allow the Town to lay the groundwork for a sustainable future.

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**Climate Change**

Earth’s climate is changing and economic, social and environmental effects are already apparent everywhere including Orangetown. Extreme weather events including heat waves and storms will become more frequent and more intense. In the last decade, Orangetown has suffered the effects of hurricanes and tropical storms including Irene, Sandy, Isaias, Henri, and Ida, each causing town-wide damage. Efforts to combat these and other impacts fall into two categories which may be addressed locally:

* Reduction of Greenhouse Gas Emissions, or *Sustainability* and
* Mitigation of the harmful effects on our communities and environment, or *Resiliency*.

Orangetown can make important contributions in both areas.

Orangetown Climate Action Plan

The Town should also work on a Climate Action Plan that lays a road map for environmental stewardship and sustainability; for limiting community greenhouse gas emissions; for reducing our vulnerability to climate impacts; for defining climate mitigation, resilience and energy targets; for switching to clean, reliable modes of transport; for enhancing quality of life and livability of neighborhoods; for improving public health and equity for all community members; and for boosting opportunities for climate-smart businesses and job creation. With development of an Orangetown Climate Action Plan, the Town will join numerous other municipalities across the region already using this important planning tool.

Efforts to mitigate climate change are included in the 2011 Rockland County Comprehensive Plan.

**Open Space**

Benefits and Needs

Part of the draw of our area is the beauty of the remaining natural and historically significant areas. Once gone, we have lost something that cannot be recovered. Open space serves numerous important benefits including:

* Framing the landscape that is home to our hamlets and villages.
* Preservation of areas of particular scenic beauty, cultural value and historic significance.
* Protection of viewsheds, public access and ecotourism potential.
* Mitigation of natural hazards, such as flooding, and protection of water supplies.
* Critical preservation of wildlife habitat and biodiversity.
* Watershed protection.
* Cleaner air, carbon storage.
* Enhanced quality of life for residents, and recreation opportunities.
* Sustained property values.

Orangetown is now essentially fully developed and open areas previously considered too remote or too sensitive may now become targeted for new development. Rather than spread development to these open areas, future development should be limited more to infill our already developed areas. This would effectively implement a large-scale clustering in which hamlets and villages are separated by open space instead of being connected by suburban sprawl.

Open space is not limited to natural areas though these are the most environmentally valuable; open space may also include sports fields, parks, golf courses, cemeteries, and agricultural areas. Developed open spaces should still support trees, respect stormwater drainage requirements, conform to light pollution limits, and other environmental considerations.

Open Space Acquisition

The Town should prioritize an Open Space program to preserve these spaces and the benefits they provide. A mechanism to fund a long-term open space acquisition plan should be established. The benefits of open space are most realistically realized with a targeted approach to acquisition. The 2003 Orangetown Comprehensive Plan recommended implementation of the Ad Hoc Open Space Committee map which focused acquisition of open space in two areas: 1) The Hackensack River corridor including parts of the Rockland Psychiatric Center (RPC), and 2) the Clausland Mountain corridor including parts of the Sparkill Creek watershed and open areas in Southeast Orangetown. Protection of these two corridors provides significant value although other smaller areas may also be considered for protection.

Special attention should be given to unique parcels for acquisition. Examples include:

* The town-owned property at the former Rockland Psychiatric Center. RPC continues to represent the best opportunity for significant open space protection that also allows passive recreation and other community uses. It is a key feature in the Hackensack corridor portion of the open space plan. It is easily accessible from any point in Orangetown including existing recreation facilities and senior housing.
* The “Dinosaur Property” between the north end of Route 303 and North Greenbush Rd. This site is recognized by County and State experts as a site of high scientific value.
* The HNA property (formerly the IBM Conference Center) in Palisades that covers 106 acres of mostly undeveloped land and is a prominent part of the Clausland open space corridor.
* With the addition of South Nyack to the Town, the acquisition plan should be reviewed to include opportunities for shoreline open space protection. In addition to the two small parks on the Hudson River (Gesner Avenue park, a small tiered seating area, and Towt park, a former sewage pumping station) the riverside Olson Center property should be considered for open space protection or park development.

Zoning and Other Protections

Environmentally-sensitive areas outside the open space corridors may be protected without acquisition through the selective use of cluster zoning. This concept and other land use protections are described in the 2003 Comprehensive Plan recommendations. Conservations easements are another useful tool to protect sensitive areas, as has been done in South Nyack. The zoning changes recommended in the Orangetown 2003 Comprehensive Plan remain valid though most have not been implemented. They should be included in the updated Comprehensive Plan.

Viewsheds

Viewshed protection is an important aspect of open space. The Town is soon to gain direct jurisdiction over more than one mile of prime Hudson River riparian private and public property. Protecting the shorelines and ridgelines of Orangetown is key to the appreciation of the dominant natural feature in our area - the Hudson River. The Town Zoning code should be reviewed to ensure that sight line corridors to the river through private property are maintained. Ridge-line development should be avoided to ensure more natural views from lower reaches. A viewshed overlay district should be established to ensure views are preserved for future generations.

Viewsheds in and around South Nyack, currently in the process of joining unincorporated Orangetown, are of particular importance and are uniquely valuable. South Nyack does not currently employ Floor Area Ratio (FAR) zoning requirements like those in the Orangetown code. FAR approaches could provide protections to viewsheds and related protection of property values. The Comprehensive Plan should establish goals of viewshed protection, especially in South Nyack during the period required to harmonize zoning law.

A concern related to viewsheds is the use of small open space areas or “buffers” to screen unsightly areas. Buffer areas, especially those used to separate industrial zones from residential areas, can be designed to include trees and other native species. Tree planting in appropriately sized buffer areas provides not only acoustic and visual screening but supports the additional benefit of expansion of wildlife habitat and water management.

Space between buildings, especially in industrial and commercial zones, needs review. The 2003 Comprehensive Plan provides specific recommendations on revising Floor Area Ratio requirements to more adequately represent the needs of a suburban community like Orangetown. In general, the 2003 Comprehensive Plan found that Floor Area Ratios are too high and allow too much lot coverage for several use zones including Commercial and Industrial Zones. In updating the Comprehensive Plan, those recommendations should be adopted and effective implementation strategies should be proposed.

Parks

In addition to the many obvious benefits offered by parks, they provide good environmental education opportunities for Orangetown residents to appreciate the value of our woodlands, wetlands, shorelines, and other open spaces. Special attention should be given to the prohibition of motorized vehicles and the elimination of litter in parks, and to the damage caused by bicycles on some park trails.

The use of artificial turf on playing fields in parks should be reviewed. Its use is associated with a large increase in athletic injuries. Rather than the cooling provided by natural grass, artificial turf increases field temperatures. Artificial turf produces inhalable particles that contain undesirable compounds including per-fluorinated chemicals (PFAS, PFOA). The use of artificial turf should be limited.

Parks may be used for additional purposes including establishment of beneficial habitats such as natural fields and meadows and natural vegetated buffers. Meadows provide habitat for wildlife including pollinators such as bees and butterflies, food for animals and birds, better water infiltration to recharge aquifers, improved drought tolerance of the ground, and carbon sequestration. Meadows also offer useful educational opportunities. There may be locations within Orangetown where native meadow plantings could be done.

Other enhancements to parks include a community garden and a nature center. Orangetown could consider provision of a community allotment garden to allow residents a convenient location to grow their own food. Existing gardens in Nyack and in Piermont could serve as models. Establishing a nature center could provide a foundational understanding of Orangetown environmental resources, wildlife, flora, and other ecological assets. Nature Centers are strong attractions for school groups and families. Orangetown could consider establishing a nature center perhaps in partnership with schools and non-profit groups that could advise on best educational practices. School grounds also offer attractive opportunities for natural vegetated buffers along their property borders, on the edge of playing fields, and so on, with obvious educational tie-in.

Open Space protection and acquisition is addressed extensively in the 2003 Comprehensive Plan. Although a few recommendations are now outdated, most are still valid and just as important today as in 2003 so they should be included in the new Plan. Open Space protection and acquisition is also supported in the current Rockland County Comprehensive Plan.

**Watershed Protection**

Parts of the watersheds for Sparkill Creek, Hackensack River (including the Nauraushaun Brook tributary) and Pascack Brook lie within Orangetown. Of these, the Sparkill Creek watershed is mostly within the Town municipal boundary: the headwaters rise on Clausland Mountain and the outlet is at Piermont Marsh on the Hudson River. With the dissolution of the Village of South Nyack, the Town also gains direct jurisdictional control over a mile of the western bank of the Hudson River and of a small stream rising near Brookside Avenue that feeds into the Hudson.

Watershed Management

Watershed assessment and management are critical to understanding and improving the quality of the watersheds. Management must include goals for enhancing water quality, biodiversity, ecological habitats, flood control, bank protection, recreational access, etc. Management of the Hackensack and Pascack watersheds is best accomplished as part of a wider effort that includes other municipalities and Rockland County. Orangetown is the sole responsible municipality within NY state for management of the Sparkill watershed. A watershed management plan would address the specific recommendations emphasized below, among others. Recommendations generated by the Town for Sparkill Creek could apply to the other watersheds, too.

Water Quality

Sparkill Creek is designated as an “Impaired Waterbody” by NYS Department of Environmental Conservation. High levels of Enterococcus bacteria, possibly from sewage or septic systems, and other water quality issues are cited as the causes of this impairment. Run-off and stormwater in developed areas contribute to pollutants entering and degrading our waterways, groundwater, and ecosystems. Stormwater is untreated and is carried to water bodies and rivers in our area including Sparkill Creek, the Hudson River and other sensitive ecosystems. Stormwater is often contaminated with chemicals and debris including oil from road surfaces, chemicals from landscaping, microplastics, and trash dropped in the street.

Current stormwater systems in Orangetown become overwhelmed during particularly heavy storms, with untreated sewage discharged in Nyack, Piermont, Sparkill, Orangeburg, and to the Hackensack River which flows into the Suez reservoir drinking water supply. As more frequent, more intense storms become more common, this public health problem and damage to infrastructure will worsen. The Town should continue to prioritize efforts to eliminate illegal connections to the sanitary sewer system that exacerbate this problem.

Flooding and Water Volume

In addition to water quality, the amount of stormwater needs to be controlled. Excessive stormwater volume and velocity are common in suburban streams and cause flooding and damage to the stream beds banks and habitat in the floodplain. The streams in Orangetown, especially Sparkill Creek, have flooded repeatedly for decades. A recent draft report done for Resilient NY and submitted to the Comprehensive Plan Committee verifies the existing critical flooding issues and the expectation that, due to climate change, the impacts of flooding will increase in the future.

Destructive stormwater volume and velocity are the legacy of development in an era when little consideration was made for watershed protection. Application of modern NY State stormwater controls will not solve our inherited widespread stormwater problems because they would apply to only newly-developed, relatively small parcels. Rather, a concerted effort should be made to return stormwater to groundwater and aquifers rather than piping all runoff to our streams. This will require use of so-called “green infrastructure” such as permeable pavement in parking lots, bioswales in sub-divisions, water gardens, and green roofs that are designed. Green infrastructure reduces the impact of run-off and stormwater by allowing the water to percolate to the ground substrate where it is filtered naturally by soil microbes before recharging ground water or entering our waterways.

The current Comprehensive Plan should set goals for correcting the deficiencies in the water quality of streams. It should be the policy and practice in Orangetown to provide more protection from destructive stormwater than currently exists. In some critical areas this may mean requiring development standards above and beyond the minimums found in the NY state guidelines. For instance, under state law building applications proposing less than one acre of disturbance do not have to comply with modern stormwater control measures. In Orangetown it is not unusual for a developer to propose a project land disturbance area of a little under one acre and thus build drainage infrastructure with the same outdated technology that is responsible for our current stormwater problems. Lowering this acreage level in certain sensitive areas would provide some protection.

The Town should build upon previous successful infrastructure projects designed to correct storm water quality and quantity issues. These include the Cherry Brook flood water detention area and the Homes for Heroes green infrastructure project in the Sparkill watershed.

Critical Environmental Areas need particular attention because recent high-intensity storms have resulted in increased flooding on the steep slopes within our Critical Environmental Areas. A review the effectiveness of our current zoning code should be completed.

Stream Protection

* Development of some areas should require zero net stormwater runoff.
* Wetlands, streams and other waterbodies should be designated as Critical Environmental Areas and registered with NY State as such. This should also include identified aquifer recharge zones.
* A riparian overlay zone with special protections should be considered for some sensitive areas including Sparkill Creek to guide development and re-development.
* With rare exception, development within the 100-year floodplain of any stream should be prohibited.
* Appropriate buffers to development near streams should be required wherever possible. A typical requirement would be a 100-foot buffer.
* Developments and some re-developments should employ best available and practical “green” infrastructure practices appropriate to the size of the project. At a minimum these practices should conform to the Green Infrastructure Practices found in the NY State Stormwater Design Manual.
* Addition of impervious surfaces should be discouraged and their elimination should be encouraged.

Additional measures

* Promote alternatives to the wide use of landscaping chemicals across Orangetown.
* Establish more green infrastructure educational projects like the demonstration project at Tappan Zee High School. Educate residents and landscapers about the detrimental impacts of the over-use of lawn and garden chemicals.
* Call on the Palisades Interstate Parkway and NY State Thruway Authority to minimize the use of road salt on these highways.

Water Conservation and Source Protection

Potable water is our most precious resource yet the County faces a potential shortage. Peak summer usage is a particular driver of demand.  Curbing peak summer usage can go a long way toward avoiding the need for expensive new supply sources such as desalination or wastewater reuse.

The Water Conservation Plan adopted by Rockland County in 2020 depends upon municipalities for implementation through Home Rule actions. The conservation initiatives in that plan should be woven into the updated Orangetown Comprehensive Plan. They include:

* Establish water conservation and efficiency as a goal in Planning Board decisions and in new construction by the Town itself. Establish water efficiency standards for all new construction.
* Request that the County Department of Health tracks projected water demand of new developments and re-developments.
* As a WaterSense Promotional partner Orangetown should continue to encourage Certified Homes standards for all new construction and should promote education about water conservation.
* Prohibit lawn watering when it is raining and limit run-off from lawn watering.

Water source protection recommendations are similar to stormwater controls and aim to recharge aquifers rather than increase stormwater run-off. They include:

* Discourage paving of driveways and encourage pervious alternatives.
* Incentivize reduced lawn area and native plantings in new construction.
* Encourage stormwater infiltration basins for groundwater recharge in areas where impervious surfaces are unavoidable.
* Incentivize green building standards for improved management of water resources.
* Establish lawn watering schedules in summer months.
* Participate in the Cornell Cooperative rain barrel project.

The 2003 Comprehensive Plan makes many recommendations for the purposes of Watershed and Stream Protection with specific zoning and planning activities, and special consideration is given for Sparkill Creek and other critical environmental areas. Those recommendations are generally still valid and should be retained in the new Comprehensive Plan. Likewise, watershed flood prevention and water quality protection are also found in the Rockland County Comprehensive Plan which plan also supports Groundwater Protection Zones for the purposes of protecting drinking water sources, and includes recommendations for water conservation.

**Trees**

Trees are vital elements in our neighborhoods and public spaces. Shade trees help to keep homes cool which reduces air conditioning costs; they offer some level of control of noise pollution, light pollution, and air pollution; they enhance property values; they provide a habitat for wildlife; and, they generate oxygen that we breathe. Trees also contribute to emotional well-being.

The existing Town tree ordinance should be reviewed and enhanced to discourage the felling of trees, to require that replacements be native and drought-resistant species, and, to extend protection to younger trees. Tree clearing should be minimized. Enforcement of tree ordinances should be pursued.

Besides the protection of trees through open space and other land protections, trees may be planted in parts of our previously developed land in Orangetown. As a recognized Tree City USA community, Orangetown should set targets to plant climate-resilient street trees for shade and aesthetics and could apply for funding to make this possible.

* The Street Shade Tree planting program overseen by the Shade Tree Commission should be re-established.
* The Town should encourage the Shade Tree Commission to provide in-person and on-line resources to help residents become informed about suitable trees and should empower the Commission to play a larger role in all matters regarding trees within the Town.
* The Planning Board and ACABOR should rely on the expertise of the Commission including revision of the tree ordinance and in setting standards for the landscaping plans of new developments and re-developments.
* Tree planting is notably useful in buffer zones designed to separate adjacent but incompatible land uses such as commercial areas next to residential areas – see Viewsheds above.
* Innovative projects should be explored for planting along excessively wide roads and in expanses of pavement such as parking lots.
* Children’s playgrounds would benefit from being protected by shade trees.
* Aggregating the bulk purchase of saplings with other municipalities in order to lower costs could be pursued and is already the model in the river villages.

Tree planting programs and other tree protections are recommended in the Rockland County Comprehensive Plan. The 2003 Comprehensive Plan makes many recommendations for adding street trees. Those recommendations should be adopted in the new Comprehensive Plan.

**Energy**

With the residential and commercial sectors consuming the bulk of the energy supply in our area, actions taken by the Town to enhance energy sustainability and resilience will have a significant impact.

Electricity Supply

New York State energy policy allows municipalities to establish Community Choice Aggregation (CCA) programs which provide strong consumer protections and cost savings. In 2020, Orangetown became part of the Rockland Community Power CCA which serves about 36,000 electricity accounts in the County. Unexpected economic conditions resulted in the Town initially choosing as the default the CCA “standard” supply which is based on fossil fuels because it offered a fraction of a cent per kWh saving over the CCA 100% renewable supply. That interim default supply choice should be changed to the 100% renewable source. Orangetown should also continue its work with the CCA Community Solar option that deliver yet more savings to residents.

Adoption of CCA 100% renewable electricity as the default supply in Orangetown conforms with the recommendations of the Rockland County Comprehensive Plan.

Energy Demand, Generation, and Infrastructure

Orangetown recently passed the NYStretch Code for development. One aim of this code is to improve the energy efficiency of buildings so that heating, cooling, and lighting buildings become more efficient thus reducing environmental impact and saving money.

The expected energy demand of new developments and re-developments should be assessed by the Town. Robust green technologies should be required for new constructions and re-developments including air-source or ground-source heat pumps which provide more sustainable heating and cooling solutions than standard air conditioners and natural gas-powered furnaces. Certification in one of the building performance codes such as Energy Star and/or LEED for new construction over a certain size should be required. Orangetown should ensure that new town facilities meet high efficiency energy standards - and include renewable energy.

The existing electrical grid infrastructure is aging and fails to take advantage of advanced technologies. Orangetown should promote micro-grid Community-Distributed Generation of electricity such as through Community Solar installations (currently being established) as a means to protect critical infrastructure and to lower the stress on the existing utility infrastructure.

**Air Quality**

Air Contaminants

Industrial and other commercial operations can generate damaging air contaminants. Recent events have shown the need for strict air quality controls. The Town should continue to review its code and enforce regulations related to air quality.

Engine Idling

Engine idling, from cars, trucks, buses and other vehicles generates elevated levels of benzene, formaldehyde, acetaldehyde, particulate matter and other air toxins tied to respiratory and cardiovascular disease and cancer. Idling also produces carbon dioxide, poisonous carbon monoxide, smog-forming nitrous oxides, and volatile organic compounds. Most modern engines do not need to be idled and idling may, in fact, damage an engine. Idling unnecessarily also wastes money, reduces fuel economy, and contributes to climate change by burning fossil fuels when vehicles are stationary.

Engine idling around school facilities places children at particular risk since their bodies are still developing. Engine idling at industrial sites and warehouses generates significant air pollution from diesel engines.

Rockland County Local Law No. 4 (2007) prohibits engine idling for more than three minutes. Regardless, engine idling is common. Orangetown should promote cleaner air for all of its residents by supporting and enforcing engine idling law within the Town. Awareness efforts and signage to stop idling at schools could be particularly effective where parents routinely wait in idling cars to pick up children. Tackling engine idling at warehouse facilities and at transit hubs should also be a priority. Addressing engine idling within Orangetown conforms with the recommendations of the Rockland County Comprehensive Plan.

Leaf Blowers

Gasoline-powered leaf blowers kick up clouds of dust, debris and fine particulate matter which are harmful to respiration. The blowers also and generate significant noise pollution. Many landscapers use gasoline-powered leaf blowers instead of electric blowers or brooms to push debris off sidewalks, patios, etc. Numerous municipalities have enacted bans in recent years on gasoline-powered leaf blowers to improve air quality, quality of life, and the peaceable character of neighborhoods. Orangetown could consider establishing a working group to evaluate the impact of gasoline-powered leaf blowers within the town.

**Waste stream**

Food scraps

Food scraps constitute a significant proportion of the solid waste stream. At present all food scraps placed in the garbage are trucked from the West Nyack transfer station to the Seneca Meadows landfill near Rochester, NY – a distance of 260 miles each way. That 520-mile round trip journey in diesel-powered trucks contributes particulate matter, greenhouse gases, and other pollutants to our atmosphere. In the landfill, decomposing food waste generates methane, a potent greenhouse gas.

In partnership with Rockland Green, Orangetown initiated a pilot Food Scraps program in December 2021. Preliminary indications are that the program is successful. The program should be extended to include local schools and commercial food generators such as restaurants and local institutions. Removing food scraps from the garbage waste stream is beneficial for all.

Recycling

Recycling in Orangetown is a success in residential areas where curbside collections are the norm. However, there is limited opportunity for recycling in public areas, in business districts, and, perhaps surprisingly, in our schools. The result is that recyclables in Orangetown are often destined for the landfill. Tipping fees for recycling are significantly lower than the per ton rate for garbage. In addition, a municipality is paid a rebate by Rockland Green for each ton of recyclables collected. The Town should consider using the realized savings to pay for an expanded recycling program to purchase and install recycling bins widely for use in parks and public areas. In addition, the Town should explore options to include more businesses, schools, and other institutions in recycling programs. This may be helped by establishing partnerships with non-profits to evaluate the extent of current recycling in non-residential areas and improvements that could be made.

Green Yard Waste

The current Town collection schedule for garden waste – about one pick-up each five weeks – does not adequately support residents in correctly recycling green waste. The collection schedule means that garden waste may be placed in the regular garbage simply for convenience, an action that contributes to greenhouse gas emissions. The green waste collection schedule should be reassessed and made more frequent.

Leaves do not need to be raked and bagged or piled for removal. Mulching leaves in place on grass adds vitality to lawns; piling leaves on flower beds provides an excellent natural mulch that helps reduce water evaporation and weed growth. The Town should promote programs like the “Love ‘Em and Leave ‘Em” that aims to usefully keep leaves on the property. These measures would reduce the need for Town leaf collections, thus lowering costs.

**Light pollution**

Light pollution from artificial lights is problematic even at low lumens levels. Excessive light disrupts the natural rhythm of ecosystems, affects public health, impairs vision, decreases public safety, wastes energy, and changes our relationship to the environment. Light trespass, glare, and over-illumination can be a significant problem for Orangetown residents, pedestrians and motorists.

Although Orangetown zoning code, in Section 4.27, already is intended to constrain exterior artificial lighting, the law appears widely ignored in both commercial and residential areas. The Town could help tackle light pollution by promoting awareness of its deleterious effects, by requiring down-lighting and the use of full cut-off lighting fixtures where appropriate, and by enforcing existing code within the Town. The Orangetown ACABOR board is well-placed to limit light pollution in building applications and should make this a priority. Model ordinances are widely available to help municipalities tackle the burgeoning amount of light pollution and could be adopted by the Town. Addressing light pollution conforms with the recommendations of the Rockland County Comprehensive Plan.

**Transportation**

Transportation Planning

Transportation planning not only can improve the efficiency of transport and better service, it also provides an opportunity to promote better health and address greenhouse emission targets. The transportation carbon footprint in our region has been estimated to be 44% of our total emissions. Local planning can play a large role in reducing these emissions. The following goals should be included in Town planning:

* Plan for electric vehicle charging infrastructure and vigorously promote information about electric vehicles and charging stations. The State offers attractive grants and incentives for municipalities to install public charging stations.
* Transition as many of the town vehicles to electric as is practical.
* Advocate for better local public transportation suitable for Orangetown. This may include updated bus routes, and a town-wide system of mini-vans with particular attention to senior living centers.
* Make walking and biking more attractive by creating safer sidewalk and bike routes and planting street trees to create a more attractive environment.
* The goals of the Complete Streets program should be prioritized for new developments or re-developments to include improvements to accessibility, safety, health, traffic congestion and transportation cost.
* Incentivize mixed-use development with shops and small businesses included where appropriate in new development. Mixed-use zoning allows convenient walking between homes, shops, schools, and possibly workplaces. This human scale planning considerably reduces the need for cars and traffic.
* Commuter Train Access - Work with state, federal and county agencies to increase train service to and from Orangetown. Development of the Gateway Program, the planned phased expansion and renovation of the Northeast Corridor rail line, should create opportunities for the Town to advocate for more and better train service for residents.

Noise pollution

With the dissolution of the Village of South Nyack, Orangetown assumes direct jurisdiction over the areas surrounding the Interstate 87/287 Thruway, its Interchange 10, and the Tappan Zee Bridge landing in the former village. Between Central Nyack and the Hudson River, the eastbound lanes of the Thruway slope down towards the start of the Tappan Zee Bridge. On this long stretch, many trucks control their speed using a loud engine-braking technique commonly called “Jake” braking in which a compression stroke conveys energy to the exhaust instead of to the axles, thus slowing the vehicle. The percussive, jarring noise generated by engine braking is extremely loud can be heard far from the Thruway. It is highly disruptive, waking neighbors, and disturbing the peace. The sound echoes off the hillsides. A large sign at the side of the eastbound Thruway lanes prohibits engine braking but trucks pay scant attention. In April 2020, the Village of South Nyack sent a letter to NYSTA Executive Director Matthew Driscoll covering this topic amongst others but nothing was done. Orangetown should formulate with the New York State Thruway Authority and with State Troopers who patrol the Thruway a plan to address the illegal use of engine braking on the Thruway. Regulation of noise pollution is consistent with the Rockland County Comprehensive Plan.

Bicycle Routes

The existing Bicycle Route Study in Orangetown should be reviewed to prioritize future projects associated with road improvements. Bicycle racks should be installed consistent with this plan and at other locations including parks and trailheads, at shopping areas, and at transit hubs. The bike route plan should also be reviewed for coordination with the Nyack route plan.

**Resources**

The Town of Orangetown operates with a lean staff. The many tasks outlined in the recommendations above and in the updated Comprehensive Plan will clearly not be possible to implement with Orangetown staff alone. However, there are many resources available that should be recognized. Volunteers have long played a key role in the Town. We are fortunate to have a committed and knowledgeable community including:

* Orangetown Environmental Committee. Though we have been successful in working with Town Supervisors and with the Department of Environmental Management and Engineering our group has not connected with the Town Board or with the Planning Board which are both essential for the successful planning and implementation of environmental goals. The Committee has long-established connections with a number of local groups that bring specific knowledge of environmental issues and solutions.
* Nearby Towns and Villages. Our neighbors face many of the same challenges that we do in Orangetown. Sometimes we literally share the same issues across a border. Orangetown can benefit from these experiences.
* Lamont-Doherty Earth Observatory of Columbia University (LDEO). This world class institution counts amongst its staff experts in sustainability measures, in resiliency planning, and in water and air quality research. Orangetown could partner with Lamont to help guide some of the necessary planning and actions that are required to achieve a sustainable, resilient future for the Town.
* Schools and local colleges for which sustainability elements also serve as valuable educational opportunities.