

AGZA Green Zone[®] Sustainability Progress Report, December 2018

December 2018. Report prepared by:

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The Town of Southampton started its certified AGZA Green Zone[®] programs in 2017 when it created the first Green Zone park in the Eastern United States at the East Quogue Village Green. In 2018, it created a second Green Zone at the Town Hall in Southampton. Creating certified AGZA Green Zone at the East Quogue Village Green (EQVG) is an important step for the Town of Southampton to reduce noise, emissions, and cost. Further, EQVG provides a model for sustainable landscape maintenance that leads by example on LI and the East Coast.

A Green Zone is a defined area of land routinely maintained with low noise, zero emissions methods. Moving away from gas-powered equipment means reductions in noise and elimination of toxic and carcinogenic emissions, greenhouse gases, solid waste, and soil and water pollution during operations. Significant savings accrue from avoided fuel and oil consumption and reduced maintenance requirements. Residents benefit from cleaner, quieter neighborhoods, schools, businesses and public spaces. Work crews benefit from healthier working conditions and increased pride in their work.

This 2018 Sustainability Progress Report quantifies the annual and cumulative environmental and health impacts of establishing EQVG as an AGZA Green Zone.

AGZA GREEN ZONE PROPERTY OVERVIEW

- East Quogue Village Green
- 630 Montauk Hwy, East Quogue, NY 11942
- MAP = http://www.bit.ly/AGZA_GZ_EQVG
- TOTAL PROPERTY AREA = 3.92 acres
- Date of AGZA Green Zone certification = June 2017
- Town Hall
- 116 Hampton Rd, Southampton, NY 11968
- MAP = bit.ly/AGZA_GZ_EQVG_Map
- TOTAL PROPERTY AREA = 2.4 acres
- Date of AGZA Green Zone certification = April 2018

Tables 1 and 2 below quantify the reductions in impacts on annual and cumulative bases from transitioning Routine Maintenance and Special Tasks to battery electric equipment. Major Spring and Fall Clean-Ups are assumed to be performed with gas equipment.

Table 1. Annual Reductions in Impacts Resulting from AGZA Green Zones

| | <u>East Quogue Village Green (June 2017)</u> | <u>Town Hall (April 2018)</u> | <u>Total</u> |
|---|--|-------------------------------|--------------|
| Reductions | | | |
| Toxic and Carcinogenic Emissions (lbs) | | | |
| Non-Methane hydrocarbons | 106 | 93 | 199 |
| Nitrogen oxides | 16 | 13 | 29 |
| Carbon monoxide | 4,741 | 3,835 | 8,576 |
| Fine particulate matter | 13 | 13 | 26 |
| Greenhouse Gases | | | |
| Carbon dioxide | 15,805 | 12,974 | 28,779 |
| Noise (decibel-hours) | 52,719 | 53,200 | 105,019 |
| Fuel Spillage (average gallons) | 1.1 | 1.1 | 2.2 |
| Fuel Consumption (gallons) | 491 | 401 | 892 |
| Fuel Cost (gas only) | \$1,228 | \$1,003 | \$2,231 |

Table 2. Cumulative Reductions Resulting from AGZA Green Zones (thru 12/31/18)

| | <u>East Quogue Village Green (June 2017-Dec 2018)</u> | <u>Town Hall (April - Dec 2018)</u> | <u>Total</u> |
|---|---|-------------------------------------|--------------|
| Reductions | | | |
| Toxic and Carcinogenic Emissions (lbs) | | | |
| Non-Methane hydrocarbons | 159 | 62 | 221 |
| Nitrogen oxides | 24 | 9 | 33 |
| Carbon monoxide | 7,112 | 2,569 | 9,681 |
| Fine particulate matter | 20 | 9 | 28 |
| Greenhouse Gases | | | 0 |
| Carbon dioxide | 23,708 | 8,693 | 32,400 |
| Noise (decibel-hours) | 79,079 | 35,644 | 114,723 |
| Fuel Spillage (average gallons) | 2 | 1 | 2 |
| Fuel Consumption (gallons) | 737 | 269 | 1,005 |
| Fuel Cost (gas only) | \$1,842 | \$672 | \$2,514 |

The expansion of clean, quiet, sustainable methods of grounds maintenance within the Town, and into neighboring communities, significantly benefits the local environment and the health of citizens and animals throughout Long Island. **Thank you!**

ADDENDUM IMPACT INFORMATION

Toxic and Carcinogenic Emissions

- Non-methane hydrocarbons (HC), also known as volatile organic compounds, include benzene, 1,3 butadiene, formaldehyde, and acetaldehyde, all of which are potent carcinogens. Additionally, these compounds combine with nitrogen oxides to form ground level ozone, a cause of lung and heart disease.
- Nitrogen oxides (NOx) combine with non-methane hydrocarbons in warm season months to form ground level ozone.
- Carbon monoxide (CO) is a toxic gas which can accumulate in enclosed settings (sheds, trailers) and result in death.
- Fine particulate matter (PM2.5) is a cause of cancer, lung disease, heart disease, and premature death.

Greenhouse Gases

- Carbon dioxide was quantified in pounds per year. CO₂ is a major greenhouse gas that contributes to global warming and climate change.

Noise

- Noise levels of all types of gas equipment may harm workers (if not properly using Town-assigned safety gear), passers-by, and the immediate surrounding community.
- Chronic loud noise may cause irreversible hearing damage, cognitive and psychological problems, and sleep disruption, and contribute to heart disease and other stress-related disorders.
- Loud noise is particularly problematic around playgrounds, schools, homes, and offices in which people are working, studying, or simply trying to enjoy themselves indoors or outdoors.
- Children with autism and people with hearing and sensory deficit disorders are especially vulnerable.
- Loud noise is also known to disrupt animal communications and decrease biodiversity.

Fuel Spillage

- Spilled gasoline can cause groundwater or surface water contamination.
- Spilled gasoline can persist in soil or sediment for a longer period of time.