



## **CITY OF GLENDALE, CALIFORNIA REPORT TO THE CITY COUNCIL**

### **AGENDA ITEM**

Report: Regarding Replacement of Gas Powered Equipment with Zero Emission Battery Powered Equipment for Designated "Green Zone" Facilities in the City of Glendale to Achieve a Green Zone Certification

- 1) Resolution establishing standardization of manufacturer, dispensing with competitive bidding and authorizing the Purchasing Administrator to purchase STIHL landscape maintenance equipment.
- 2) Resolution of appropriation to appropriate \$28,650 from the General Fund Undesignated Fund Balance Account 25300-1010-NON-0000 to the Park Services Small Tools Account 45300-1010-CSP-3008-P5150 for the purchase of battery operated equipment.

### **COUNCIL ACTION**

**Item Type:** Action Item

**Approved for** March 24, 2020 **calendar**

### **ADMINISTRATIVE ACTION**

**Submitted by:**

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**Prepared by:**

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**Reviewed by:**

Michele Flynn, Director of Finance

Roubik R. Golanian, P.E., Assistant City Manager

Michael J. Garcia, City Attorney

**Approved by:**

Yasmin K. Beers, City Manager

**{{section.number}}b**

## **RECOMMENDATION**

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Staff respectfully recommends that City Council approve:

- 1) Resolution establishing standardization of manufacturer, dispensing with competitive bidding and authorizing the Purchasing Administrator to purchase STIHL landscape maintenance equipment.
- 2) Resolution of appropriation to appropriate \$28,650 from the General Fund Undesignated Fund Balance Account 25300-1010-NON-0000 to the Park Services Small Tools Account 45300-1010-CSP-3008-P5150 for the purchase of battery operated equipment.

## **BACKGROUND/ANALYSIS**

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In our continued effort to reduce carbon emissions and be environmentally friendly, the Park Services Section of the Community Services and Parks Department (CSP), with the direction of City Council, entered into a Professional Services Agreement with the American Green Zone Alliance (AGZA) to develop “Green Zones” within the City’s park system. In order to achieve the Green Zone Certification, the facilities chosen shall remove the routine / more frequently used gas powered equipment and replace them with zero emission battery powered equipment.

Representatives from AGZA, City Manager’s office, and CSP staff met in October to identify a number of battery operated equipment to be tested in the field by Park Services staff. The team selected the most commonly used landscape equipment made by Oregon, E-Go, and STIHL manufacturers. The selected equipment included backpack blowers, weed eater, hedge trimmers, mowers, and edgers. The testing of the commercial electric tool platforms commenced over a two month period with different crews and in a variety of different settings on city grounds. This allowed staff to test the quality and feasibility of the equipment, the battery life, and the power generated to complete the work at hand. Staff also visited the City of Ontario to discuss their use of the equipment at select facilities and lessons learned from their approach.

City of Glendale carefully selected several city properties to substantially reduce noise and air pollution and gas-related fuel, oil and parts. These initial AGZA Green Zone properties will serve as permanent examples for the city and community to demonstrate City of Glendale’s environmental stewardship and sustainability for grounds maintenance operations.

All gas-powered equipment used for routine grounds maintenance on the designated Green Zone properties have been inventoried by tool, hours used per year, and confirmed by physical verification and property assessments. An initial impact report has been generated measuring ground ozone criteria pollution and CO2 resulting from gas equipment use. Said report estimates the reduction of 15.2 tons of airborne pollutants per year, including 12.3 tons of CO2 and 2.9 tons of criteria pollutants (CO, HC, PM, NOx).

The gas powered equipment has been assessed and commercial-grade electric equipment has been specified based on the gas workload capability. The new battery-electric tools, battery bank, and charging infrastructure were specified. Modest updates to electrical outlets and panel breakers are in process with the support of Public Works Facilities Maintenance Division. To achieve efficiency within the operation, it is critical to standardize the equipment. As such, and upon diligent review, CSP has narrowed down their choice to one tool platform for use on the designated Green Zone properties: STIHL brand products. In comparison with the other two brands, STIHL was the only one that had all the equipment with appropriate power readily available. Oregon Brand did not have a mower available for testing since the company has just started manufacturing mowers and the E-Go brand did not have the necessary commercial level power to its equipment therefore, the batteries do not last as long and the equipment is not powerful enough.

### **Green Zone Designated Facilities**

Upon careful evaluation of facility needs, operational efficiency, and minimal impact to operational changes, CSP selected the following facilities / routes for Green Zone designation:

- Verdugo Adobe
- City Hall Complex
- Route 1:
  - Casa Adobe de San Rafael
  - Maryland Ave Park
  - Heritage Garden
- Route 2:
  - Wilson Mini Park
  - Doran Mini Park
  - Harvard Mini Park

The selected facilities represent historic sites, as well as routes that have at least one gardener's room selected as battery charging areas. Staff assigned to those routes will check in at their respective headquarters (Brand Park yard for routes one and two, and Verdugo Park yard for the Verdugo Adobe), get their assignments and commence with their day by visiting the site with the gardeners' room where equipment is stored / being charged. At the end of their day, staff would make their final visit to their respective gardeners' room and plug the batteries back in their respective charging stations.

The primary challenge at the selected gardeners' rooms as battery charging areas are high temperatures, air circulation, and additional needed circuits. Batteries and charging stations are better suited for cooler temperatures. CSP is working with PW Facilities to address these challenges allowing for safe operation of the battery charging areas.

### **Training and Education**

Park Services staff have been educated and trained on commercial electric equipment through several AGZA visits and equipment demos and workshops, as well as allowing

staff use a variety of different commercial tool platforms for extended periods of time. An indoor classroom session for optimal operation, including safe battery management and charging procedures and environmental benefits will be scheduled in the near future.

### **Pricing and Purchase of the Equipment**

The Southern California Air Quality Management District (SC-AQMD) has an equipment exchange program wherein individuals or agencies may exchange gas powered landscape equipment with battery operated equipment at 76-83% off the Manufacturers Suggested Retail Price (MSRP). With that approach, the cost to purchase equipment that fall in this program (backpack blowers and mowers) will be same with all vendors.

Upon Council approval, staff will work with the Purchasing Department to procure the equipment. STIHL Brand battery operated products shall be the standard battery operated equipment for a period of 10 years. Staff will evaluate the equipment every 5 years and return to council if better products are available in the future.

### **FISCAL IMPACT**

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The estimated cost to purchase the necessary equipment is \$28,650. CSP requests council approval to appropriate funds in the amount of \$28,650 from the General Fund Undesignated Fund Balance Account 25300-1010-NON-0000 to the Park Services Small Tools Account 45300-1010-CSP-3008-P5150 for the purchase of battery operated equipment.

The cost of battery operated equipment is significantly higher than gas operated equipment. For example, a common commercial backpack blower costs about \$350-\$400; whereas a battery operated one can cost \$1,560 (including the battery and charging station). In addition, batteries used for these equipment have a life span of 2-3 years, wherein they being operating at 75-80 percent of their original capacity. As such, funds would be necessary for battery replacement on equipment every 3-5 years.

However, CSP anticipates lower hourly operational costs of the electric equipment resulting in savings over a period of time. An assessment of lower hourly operational costs of the electric fleet will provide data of financial savings over gas operations. Net operational savings will compound annually to achieve a healthy return on investment. This assessment is still in progress.

In addition, CSP intends to take advantage of SC-AQMD exchange program where individuals or agencies may exchange gas powered landscape equipment with battery operated equipment at 76-83% off the Manufacturers Suggested Retail Price (MSRP).

## **ALTERNATIVES**

Alternative 1: The City Council may choose to approve:

- 1) Resolution establishing standardization of manufacturer, dispensing with competitive bidding and authorizing the Purchasing Administrator to purchase STIHL landscape maintenance equipment.
- 2) Resolution of appropriation to appropriate \$28,650 from the General Fund Undesignated Fund Balance Account 25300-1010-NON-0000 to the Park Services Small Tools Account 45300-1010-CSP-3008-P5150 for the purchase of battery operated equipment.

Alternative 2: The City Council may consider any other alternative not proposed by staff.

## **CAMPAIGN DISCLOSURE**

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N/A

## **EXHIBITS**

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1. Environmental Landscape Footprint (ELF) Report for the City of Glendale