



July 3, 2019

MEMO TO : Park Board Commissioners

FROM : Malcolm Bromley
General Manager, Vancouver Board of Parks and Recreation

SUBJECT : **Emissions Free Landscape Equipment Pilot – Board Briefing Memo**

Dear Commissioners,

The purpose of this memo is to update you on the work underway in response to the "[Renewal Strategy for Landscape Equipment - Towards an Emission Free Reality](#)" motion approved on January 28, 2019. This update includes an overview of ongoing green fleet initiatives and an emission-free equipment pilot, along with an outline of the steps required in order to report back with recommendations for a transition plan and renewal strategy.

There has been demonstrated progress to date in greening the fleet within Park Operations. In 2018, a UBC Greenest City Scholar conducted a study that indicated switching to electric equipment would allow the Park Board to reduce annual average GHG emissions of almost six hundred (600) tons of carbon dioxide. Since the report, Park Operations has replaced a total of eighty-seven (87) gas powered tools/items in the fleet with battery powered equipment, including five (5) hybrid models. In addition, work requests have been submitted to install infrastructure to support electric equipment including: outlets, circuit breakers, and shelving to house battery chargers.

In response to the Board [motion](#), staff will be conducting an emission-free equipment pilot program over the summer/fall to test and evaluate battery powered equipment in order to inform a comprehensive transition plan. During the pilot, select gas powered equipment will be replaced with battery powered alternatives to be thoroughly tested and evaluated by trim and garden crews. A Request for Application (RFA) was issued to the market for the purchase of select battery powered equipment and it is currently being evaluated by the procurement and fleet team.

Following are the key details of the emissions-free equipment pilot:

- pilot to run through the peak summer months until mid-October to ensure equipment can be tested in all weather conditions;
- equipment tested will include line trimmers, pole saws, backpack blowers, lawn mowers, hedge trimmers, and chain saws;
- equipment costs for the pilot are estimated at \$30K; to be funded through the Park Operations budget;
- respective labour unions have been informed of the pilot;
- a comprehensive evaluation will be undertaken during the pilot; outcomes will inform the recommendations that will be presented to the Board.



The comprehensive evaluation conducted during the pilot will include:

- evaluation of equipment performance in various environments and weather;
- assessment of ergonomics, such as handling, vibration, noise;
- estimate of charge time and back up battery needs;
- assessment of overall performance, quality and operator satisfaction collected through a daily feedback report;
- estimate of GHG emissions reductions;
- estimate of the costs and timing of recommended equipment replacement;
- assessment of customer support needs, including availability of replacement parts and ease of repairs;
- assessment of infrastructure needs, such as outlets, circuit breakers, and shelving to house battery chargers; and
- review of safe handling and disposal of equipment, batteries etc.

Collectively this information will be used to inform an equipment transition plan that will include:

- recommendations on types of equipment that should be transitioned;
- recommendations on vendors & products that should be used;
- equipment transition timeline and budget;
- summary of financial and non-financial benefits; and
- creation of Standard Operating Procedures (SOP) for new equipment, including a training plan.

Subject to the outcomes of the above pilot and evaluation, staff are aiming to report back to the Board with recommendations on a transition plan and renewal strategy in late 2019.

Regards,

A handwritten signature in black ink, appearing to read "Malcolm Bromley".

Malcolm Bromley
General Manager - Vancouver Board of Parks and Recreation

/si/clc

Copy to: PB Senior Leadership Team
PB Fleet Supervisor
PB Special Projects Manager
PB Communications