



DEPARTMENT OF PUBLIC WORKS

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## MEMO

TO: CEA Review Committee

FROM: Nathan Loper, Deputy Director of Public Works

DATE: March 31, 2014

SUBJECT: Request to replace and upgrade the Beast grinder in 2015, three (3) years ahead of schedule

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The Department of Public Works is requesting permission to replace the brush and log grinder #120 (Beast) in 2015, 3 years ahead of its scheduled replacement date, and upgrade this unit when it is replaced.

The existing Beast grinder was purchased in 1998 and is in need of replacement due to several mechanical issues that need to be addressed. The operation and maintenance costs for this grinder to date have totaled over \$620,000. If this unit is not replaced in 2015, we can expect to incur an additional \$103,000 in repair costs to address the major issues listed below. There are some issues that are not repairable and therefore not included in this dollar amount. Some of the major issues are as follows:

- Engine is weak and is close to needing a 2<sup>nd</sup> rebuild – Cost is approximately \$18,000
- Grinding drum is badly out of balance – Cost to replace is approximately \$40,000
- Apron slats, drive and idler clogs are worn and thin – Cost to replace is approximately \$45,000
- Side rails for the feed are rusted and weak – not repairable
- Housing that holds the grinding drum is weak and thin – not repairable

This piece of equipment is vital to Public Works operations. It is the only beast grinder in the fleet and is utilized almost daily for grinding of brush and logs from City yard sites, forestry operations, curbside brush collections and storm cleanup operations. The materials generated from the grinding are a key component of the City composting process and are also used as tree planting mulch and playground chips. The remaining ground mulch material is sold to private contractors and made available to residents for landscape and garden mulch. Lastly, this grinder could be used to dispose of emerald ash borer (EAB) infested wood waste at some point in the future. Grinding of the wood waste into mulch will help the City of Appleton meet the Department of Agriculture standard for proper EAB waste management.

The beast grinder is a very specialized piece of equipment and is not readily available to rent or borrow. Heavy equipment suppliers typically will only rent their demo unit and will only do so if the unit is available. Not having guaranteed access to a grinder is a concern due to our limited available storage space at our City yard sites for residents disposing of brush and yard waste. After the August, 2014 storm, communities without a grinder were not able to rent a grinder or find an available contractor to grind their brush. Not having a grinder would leave the City of Appleton without a place to store the significant amount of material that a storm generates and would drastically reduce the efficiency and timeliness of our cleanup operations. Here are the rates for renting a grinder and hiring a contractor for grinding.

<u>Grinder Rental</u>	<u>Hire Contractor</u>	<u>City Owned Cost</u>
Daily rate: \$2,750	Daily rate: \$2,000	Daily rate: \$263
Weekly rate: \$8,250	Weekly rate: \$10,000	Weekly rate: \$1,315
Monthly rate: \$24,750	Monthly rate: \$43,333	Monthly rate: \$5,699
Annual cost: \$297,000	Annual cost: \$520,000	Annual cost: \$68,393
15 year cost: \$4,455,000	15 year cost: \$7,800,000	15 year cost: \$1,337,829

*City owned costs include the projected CEA monthly replacement reserve rate of \$2,234 per month and assumes a 50% increase in operation and maintenance costs over the life of the unit.*

The total cost to replace the grinder in 2015 (without the upgrade) is \$393,489. If approved, CEA will fund \$312,209 from the CEA replacement reserve fund and the additional cost of \$81,280 for the early replacement will be included in the Public Works Department budget request for 2015.

In addition to replacing the Beast grinder #120 in 2015, we are also requesting to upgrade this unit with a grinder mounted, self-powered air compressor for an additional \$8,325. This compressor will allow the grinder operator to perform necessary maintenance operations (cleaning radiator to prevent overheating, changing teeth, etc.) while at the grinding site, instead of hauling the grinder back to the shop or having another employee haul a compressor to the grinding site.

The total cost to replace the Beast grinder in 2015 with the upgrade is \$401,814. If approved, the additional cost of \$8,325 for the upgrade will be included in the Public Works Department budget request for 2015.

**Therefore, the Department of Public Works recommends that the CEA Review Committee approve the replacement and upgrade of the Beast grinder in 2015, three (3) years ahead of schedule, for a total cost of \$401,814, with CEA funding \$312,209 and Public Works submitting a 2015 budget request for the additional \$89,605.**

Thank you for your consideration in this matter.