Environment Committee

Meeting date: February 14, 2017

For the Metropolitan Council meeting of February 22, 2017

Subject: University of Minnesota Phosphorus Study

District(s), Member(s): All

Policy/Legal Reference: Council Policy 3-3 Expenditures – Procurement of Goods and Services

Staff Prepared/Presented: Larry Rogacki, 651-602-8225; Cristine Voigt, 651-602-8371; Dr. Carl Rosen (Department of Soil, Water and Climate, U of MN), 612-625-8114

Division/Department: MCES c/o Leisa Thompson, 651-602-8101

Proposed Action

That the Metropolitan Council authorize its Regional Administrator to enter into a contract with the University of Minnesota for $605,108 to conduct an evaluation of metro sewage sludge incinerator ash as a phosphorus source for crop production.

Background

Procurement of goods and services for amounts exceeding $500,000 requires Council approval.

Rationale

The Metropolitan Wastewater Treatment Plant processes sewage sludge by means of an incineration process. Incineration is effective at reducing waste volume, removing toxic organics and pathogens, and recovering energy for heating and electrical generation. Currently the resulting ash material is landfilled.

Sewage sludge ash contains significant quantities of phosphorus, an essential macronutrient for plant growth but a non-renewable natural resource. Previous studies have found that ash can be a viable phosphorus source for crop production. This incubation and field study will explore the capabilities of incinerator ash generated at the Metropolitan Wastewater Treatment Plant as a phosphorus fertilizer.

Thrive Lens Analysis

This action advances the Thrive outcomes of Sustainability, Collaboration and Stewardship. This project supports sustainability by evaluating the potential for using phosphorus contained in the ash as a nutrient rather than disposing of it in a landfill. Collaboration of the research resources at the University and the operational experience of Council staff will result in a more comprehensive study. Replacing commercial sources of phosphorus with ash has the potential to reduce nitrogen infiltration and support stewardship of water resources.

Funding

2017 MCES Authorized Capital Program, Project 806220
Currently Authorized: $700,000
Unencumbered Funds: $700,000
Requested Amount: $605,000

Known Support / Opposition

None

METROPOLITAN COUNCIL