

Memorandum

To: Frank Clifton, County Manager

From: Gayle Wilson, Solid Waste Director

Subject: Remaining MSW Landfill Capacity

Date: July 13, 2010

A topographic survey was performed in March 2010. In order to project the remaining landfill capacity the resulting data was transmitted to Draper Aden Associates for comparing the volume between the mapping provided by the surveyor and the final grades authorized in the existing facility permit. Current incoming tonnages were provided along with recent compaction rates. The result was a new projected capacity date of March 2013. The previous projection was July/August 2012.

Given the importance of this projection I have requested that our new consultant, HDR Engineering provide their own independent projection based on the survey data. HDR Engineering has estimated a current projection of June 2013, given the current facility permit stipulations and conditions.

Our consultants tell us that as a landfill approaches the end of its life experiencing additional and unanticipated capacity is commonplace. Projections typically are not able to accurately estimate subsidence (garbage decomposition/settlement). Additionally, experienced environmental staffs make conservative projections because to err on the short side can be problematic in several ways. County staff rebuilt a side slope last year that had settled due to decomposition providing for some additional recovered capacity. Finally, incoming tonnages have fallen again over the most recent study period.

This additional capacity will delay the necessity of hauling to the Durham Transfer Station, saving considerable expense to the County and our municipal partners. It will also delay the outlay of funds for closure.

Our new engineering consultant has performed a preliminary review of our facility permit and has identified a possible strategy to obtain some additional capacity. When our facility was permitted in 1995 the standard outside side slope grade was 4:1. Since that time most landfill permits have been issued at a steeper 3:1 grade because of better slope stability construction techniques. Steeper slopes provide a wedge of additional capacity. Based on a preliminary assessment HDR Engineering has indicated that state approval of the increased side slope grade could extend capacity until possibly July 2014. Therefore, I have authorized HDR to proceed with an analysis of reasonable options available to the County to extend landfill capacity to also include the most economical and environmentally efficient method for closure of the MSW unit.

Please let me know if you have questions or require further information.