



Department Source: City Utilities - Solid Waste  
To: City Council  
From: City Manager & Staff  
Council Meeting Date: April 16, 2018  
Re: Accepting the Columbia Landfill Site Master Plan

## Executive Summary

Staff has prepared for Council consideration a resolution accepting the Columbia Landfill Site Master Plan. The purpose of this Landfill Site Master Plan is to demonstrate the need for landfill disposal area expansion on the existing Columbia Landfill property, examine the beneficial environmental features that can be incorporated into the Site development and to conceptualize a long term development plan for the Columbia Landfill property.

## Discussion

Columbia residents and businesses enjoy the benefit of comprehensive solid waste services provided at low costs and in a manner which prioritizes the protection of the environment and natural resources.

Landfill operations at the Columbia Landfill property began in 1986. The existing permitted landfill area is estimated to reach capacity between 2026 and 2031. The expansion of the landfill into the southern portion of the Columbia Landfill property is believed to be the best alternative for the Solid Waste Utility to continue providing solid waste disposal services.

A new landfill disposal area in the southern portion of the Landfill property is estimated to add 40 to 80 years of disposal capacity. Construction of the new southern landfill disposal area is designed to minimize environmental impacts while enhancing our natural resources in a cost effective manner over time. The intent is to preserve, enhance and create sufficient high value wildlife habitat in and around the development to support the existing wildlife populations that occur in the area.

A new landfill disposal area will also allow the Solid Waste Utility to continue providing landfill gas to the Electric Utility for electric power production. Utilization of landfill gas is an integral part of the City's Renewable Energy Portfolio. It is anticipated that the existing landfill and the proposed new landfill disposal area would produce sufficient volume of landfill gas to produce 5MW of electric production by the year 2040.

Permitting and development of the proposed southern landfill disposal area will require significant time and effort to plan and design. For planning purposes, it is recommended that the first disposal cell be constructed and ready to receive waste prior to 2026.

Upon Council's acceptance of the Landfill Master Plan, staff would begin work on the Landfill Expansion Permitting Project that is contained in the FY2018 Solid Waste Utility Capital Improvement Plan budget.



## Fiscal Impact

Short-Term Impact: Term Impact: Upon Council approval of the Landfill Site Master Plan, staff will proceed with the Landfill Expansion Project as outlined in the FY18 CIP. This project is anticipated to take up to 5 years to complete and is estimated to cost up to \$1,200,000. Long-Term Impact: Costs associated with the construction of future landfill disposal cells will be included in future Capital Improvement budgets for Council consideration.

## Strategic & Comprehensive Plan Impact

### Strategic Plan Impacts:

Primary Impact: Infrastructure, Secondary Impact: Not Applicable, Tertiary Impact: Not Applicable

### Comprehensive Plan Impacts:

Primary Impact: Infrastructure, Secondary Impact: Environmental Management, Tertiary Impact: Not Applicable

## Legislative History

Date	Action
02/09/2018	City Council Work Session – City of Columbia Landfill Master Plan Presentation
02/02/2015	Agreement with Burns & McDonnell Engineering Company, Inc. for Bioreactor Landfill Operational Support Services

## Suggested Council Action

Approve the resolution adopting the Columbia Landfill Site Master Plan.