



**DENVER**  
THE MILE HIGH CITY

**Department of Environmental Health**  
Division of Environmental Quality  
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October 14, 2014

Mr. Christopher Herndon  
Denver City Council  
City and County Building  
1437 Bannock Street, Room 451  
Denver, Colorado 80202

RE: Recommendation for Approval with Conditions  
Certificate of Designation Application from the Denver Zoological Foundation  
Denver Zoo Waste to Energy System  
Denver, Colorado

Dear Mr. Herndon:

The City and County of Denver (the City), Department of Environmental Health, Environmental Quality Division (DEH) recommends that City Council approve, with conditions, the Denver Zoological Foundation's (DZF) Certificate of Designation application for a proposed waste to energy system at the Denver Zoo.

As part of the Denver Zoo's efforts to become a zero-waste facility by 2025, the DZF is proposing a waste to energy system that will convert wastes generated at the Zoo and urban forest residue from Denver Parks into energy that will power approximately 20% of the Zoo's total energy needs. The waste to energy system will be located within the boundaries of the Zoo's existing Toyota Elephant Passage exhibit, and the City's Department of Parks and Recreation has issued a letter<sup>1</sup> allowing this use at the Zoo.

As required by Colorado statutes and regulations (C.R.S. § 30-20-103; 6 CCR 1007-2, Part 1), the DZF must obtain a Certificate of Designation for the waste to energy system from the local government. Sections 48-101 through 48-105 of the Denver Revised Municipal Code set forth criteria for granting of the Certificate of Designation, including that the system has received approval from the Colorado Department of Public Health and Environment (CDPHE) prior to City approval of the Certificate of Designation.

DEH received and reviewed DZF's request for a Certificate of Designation and its final submittal titled "Engineering Design and Operations Plan (EDOP) Denver Zoological Foundation (DZF) Waste to Energy System", prepared by the Denver Zoological Foundation, dated October 10, 2014. The EDOP describes the operating and monitoring plans for the waste to energy system, and it includes features and processes to address potential health and environmental concerns.

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<sup>1</sup> Letter from Parks and Recreation, Laurie Dannemiller, to City Council, Mary Beth Susman, dated February 26, 2014.

DEH's review of the EDOP assessed the ability of the DZF system to comply with health standards and operating procedures. The review was limited to items of solid waste concern including the management of raw materials and waste streams, documentation, and response. DEH also considered a) past and ongoing coordination of environmental activities between DEH and the Zoo, b) CDPHE's recommendation for approval, with conditions, and c) the absence of public comments during the CDPHE 30-day public comment period. Additionally, DEH solicited input from the other City departments, including Parks and Recreation, Wastewater Management, and the City Attorney's Office. DZF has responded to and incorporated comments from City departments into the final EDOP.

Based upon information provided in the EDOP, DEH recommends approval of the Certificate of Designation with the following conditions incorporated:

1. The DZF waste to energy system shall comply with all State and Federal health laws, standards, permits, rules and regulations, and shall comply with all local laws and ordinances.
2. The DZF must maintain financial assurance for the system. As required by CDPHE "The Financial Assurance Plan, including independent third party or referenced cost estimate, shall be submitted to the Division for review and approval. In addition, the financial assurance mechanism must be in-place and approved by the Division prior to acceptance of solid waste material at the site. Please note that pursuant to the requirements of Section 1.8.3 of the Solid Waste Regulations, the post-closure cost estimate must be adjusted annually to account for inflation or deflation by using the implicit price deflator for the gross domestic product. Additionally, Denver Zoo must replace the original cost estimate every five (5) years unless otherwise required by the Division. Both the annual adjustment and the 5-year update cost estimates must be submitted to the Division for review and approval." The Zoo must forward a copy of each approved financial assurance to DEH.
3. The DZF will provide DEH with the opportunity to review and comment on subsidiary documents, as generated and as discussed in the EDOP.
4. The DZF must keep DEH apprised of potential modifications to the waste to energy system.

Should you have any questions regarding this recommendation, please contact Doug Linkhart (720-865-5483) or Diane DeLillio (720-865-5448).

Sincerely,



Doug Linkhart  
Executive Director  
Department of Environmental Health  
City and County of Denver

cc: Jessica Brody, CCoD- CAO  
Laurie Dannemiller, CCoD-Parks and Recreation  
Larry Bruskin, CDPHE  
Jennifer Hale, DZF