

**City Water, Light & Power  
Springfield, Sangamon County, Illinois**

**Periodic Hazard Potential Classification  
Assessment for  
Coal Combustion Residuals Surface  
Impoundments**

**July 2025**



*Prepared for:*  
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## 1. INTRODUCTION

City Water, Light and Power (CWLP) Lakeside Ash Pond and Dallman Ash Pond are coal combustion residuals (CCR) surface impoundments. A periodic hazard potential classification assessment for the CCR surface impoundments was conducted as required by 40 CFR 257.73(a)(2)(i).

Andrews Engineering, Inc. (Andrews) reviewed aerial maps and current hazard potential classification status information regarding the Lakeside Ash Pond and Dallman Ash Pond as part of this Periodic Hazard Potential Classification Assessment. A summary of this information, as well as conclusions for the assessment is provided below.

## 2. CCR UNIT INFORMATION

Both the Lakeside Ash Pond and the Dallman Ash Pond are owned and operated by CWLP. The ponds are operated under National Pollutant Discharge Elimination System (NPDES) Permit Number IL0024767.

The Lakeside Ash Pond is primarily a diked embankment with some incising along the east perimeter and was placed into service prior to 1958. The original Lakeside Ash Pond has been divided into four separate ponds since it was expanded vertically in 1988, including three lime ponds and the settling pond. The vertical expansion consists of berms built on top and inside of the existing embankments. The current Lakeside Ash Pond is approximately 35 acres and ceased receiving ash in 2009. Lakeside Ash Pond ceased receiving lime sludge in October 2023.

The second impoundment, the Dallman Ash Pond, which is a diked embankment, was placed into service in approximately 1976. The Dallman Ash Pond is approximately 34.5 acres and ceased receiving ash in 2021 and ceased receiving all CCR and non-CCR wastes in October 2023.

Settled stormwater water from both the Dallman Ash Pond and Lakeside Ash Pond flows into opposite sides of a Clarification Pond before being discharged to Sugar Creek at Outfall 004 pursuant to the aforementioned NPDES permit.

## 3. HAZARD CLASSIFICATION

The hazard potential classifications include high hazard potential, low hazard potential, and significant hazard potential defined as follows:

1. High hazard potential CCR surface impoundment means a diked surface impoundment where failure or mis-operation will probably cause loss of human life.
2. Low hazard potential CCR surface impoundment means a diked surface impoundment where failure or mis-operation results in no probable loss of human life and low economic and/or environmental losses. Losses are principally limited to the surface impoundment owner's property.
3. Significant hazard potential CCR surface impoundment means a diked surface impoundment where failure or mis-operation results in no probable loss of human life, but can cause economic loss, environmental damage, disruption of lifeline facilities, or impact other concerns.

## **4. CLASSIFICATION ANALYSIS**

The following information was considered for the Periodic Hazard Potential Classification Assessment of the CWLP surface impoundments performed by Karl Finke, PE, in July 2025.

### **4.1 Downstream Conditions**

Both the Lakeside Ash Pond and Dallman Ash Pond are immediately adjacent to Sugar Creek. There are no homes, recreational facilities, businesses, roads, or other permanent structures immediately downstream of the impoundments. The floodplain area adjacent to the immediate downstream Sugar Creek is entirely comprised of agricultural fields and timber areas. The closest structures downstream along Sugar Creek from the ash ponds are a pedestrian bridge servicing the Lost Bridge Trail system at more than 4,000 feet downstream from Dallman Ash Pond, and a vehicle bridge for IL Route 29 at more than a mile downstream from Dallman Ash Pond.

### **4.2 Safety Factor Assessment**

A Safety Factor Assessment was performed by Andrews for both the Dallman Ash Pond and Lakeside Ash Pond. This assessment included slope stability analyses for critical sections in the surface impoundments, including the constructed berms and underlying soils. The analysis utilized current conservative parameters derived from current and previous geotechnical data from subsurface drilling and testing programs, published literature, and field surveys were used to assess factors of safety. The assessment concluded that all applicable factors of safety under 40 CFR 257.73(e) for both surface impoundments were exceeded by the results of these analyses.

### **4.3 Additional Information**

The eastern portion of the original Lakeside Ash Pond is incised. The entire ash pond abuts the Lake Springfield dam to the south. The northern portion of the ash pond is separated by a roadway from the Unit 1 landfill and the clarification pond. The only portions of the Lakeside Ash

Pond with open downstream slopes are the west dike of the original ash pond and the vertical expansion berms, which were constructed on the east, west and north boundaries of the ash pond.

The entire Dallman Ash Pond is partially incised. Material from the center of the ash pond was excavated and utilized in the construction of the dikes. The Dallman Ash Pond abuts the CWLP landfills to the east and the clarification pond to the south. The only open downstream slopes of the Dallman Ash Pond are on the west and north dikes.

A stability analysis was performed by Andrews in 2024 as part of the geotechnical investigation required by USEPA and in 2025 as part of the geotechnical investigation addendum. This analysis included a review of all of the subsurface studies performed up to present at the site. The geotechnical analysis relied upon the parameters primarily obtained during the 2023 through 2025 investigations while the site lithology relied upon all available data. Laboratory testing completed on all cohesive soil samples included analyses on: moisture content, in-place dry density, unconfined compressive strength, torvane, grain size analysis, Atterberg limits, hydraulic conductivity, unconsolidated-undrained and consolidated undrained triaxial compression, and one-dimensional consolidation.

The geologic characteristics at the site were determined via subsurface boring programs related to permitting and monitoring of the landfill units as well as the drilling conducted for the monitoring and geotechnical investigation program currently implemented for the ash impoundments. The geologic characteristics were determined to be fairly consistent throughout the site. The structural characteristics of the soils also apply to the entire site, which includes the ash ponds.

#### 4.4 Hazard Classification

Based on the information presented in this report, there is a low probability of a failure for either ash pond. In addition, there is no probable loss of human life, but a failure or mis-operation of the diked surface impoundment can cause economic loss, environmental damage, disruption of lifeline facilities, or impact other concerns. Therefore, both the Lakeside Ash Pond and Dallman Ash Pond qualify as “**Significant Hazard Potential Classification**” under the qualifications described in 40 CFR 257.53.

## 5. STATEMENT

This Periodic Hazard Potential Classification Assessment for Coal Combustion Residuals Surface Impoundments was completed for CWLP by Andrews Engineering, Inc. in accordance with the requirements under 40 CFR 257.73(a)(2)(ii).

Signature: Karl W. Finke

Illinois P.E. No.: 062.068571

Date: 07/11/25



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