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November 18, 2026

Mr. Brian Rath
Land Quality Bureau
Iowa Department of Natural Resources
6200 Park Ave
Des Moines, IA 20321

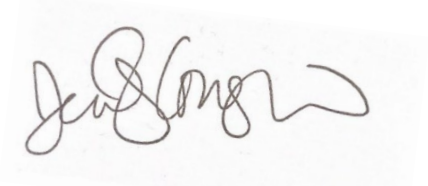
Subject: **Interstate Power and Light Company – Marshalltown East Fly Ash Disposal Site (Closed) Permit #64-SDP-05-91C**
Response to IDNR Comments
Request to Permanently Shut-Off Groundwater Gradient Control and Leachate Collection Systems

Dear Mr. Rath:

On behalf of Interstate Power and Light Company (IPL), Alliant Energy is respectfully providing the attached responses to your comments on our request to permanently cease operation of the Groundwater Gradient Control System (GWGCS) and Leachate Collection System (LCS) associated with the closed Marshalltown East fly ash disposal site located in Marshalltown, Iowa. The comments, received June 2, 2026 via email, were discussed in phone conversations with the department in June, October, and November 2026. The permanent shut-off of these systems is part of the progression toward an eventual transfer of post-closure requirements to an environmental covenant and recission of the site closure permit (#64-SDP-05-91C).

Please call me at (515) 558-9704 or email me at jennycoughlin@alliantenergy.com with any questions regarding the request.

Sincerely,



Jenny Coughlin
Sr. Environmental Specialist
Alliant Energy Corporate Services, Inc.

Enclosure

Cc: SCS Engineers

November 18, 2026
File No. 25225255.00

Mr. Brian Rath
IDNR Land Quality Bureau
6200 Park Avenue
Des Moines, IA 50321

Subject: Interstate Power and Light Company Marshalltown East Fly Ash Disposal Site (Closed)
Permit #64-SDP-05-91C
Response to DNR Comments
Request to Permanently Shut-Off Groundwater Gradient Control and Leachate Collection Systems

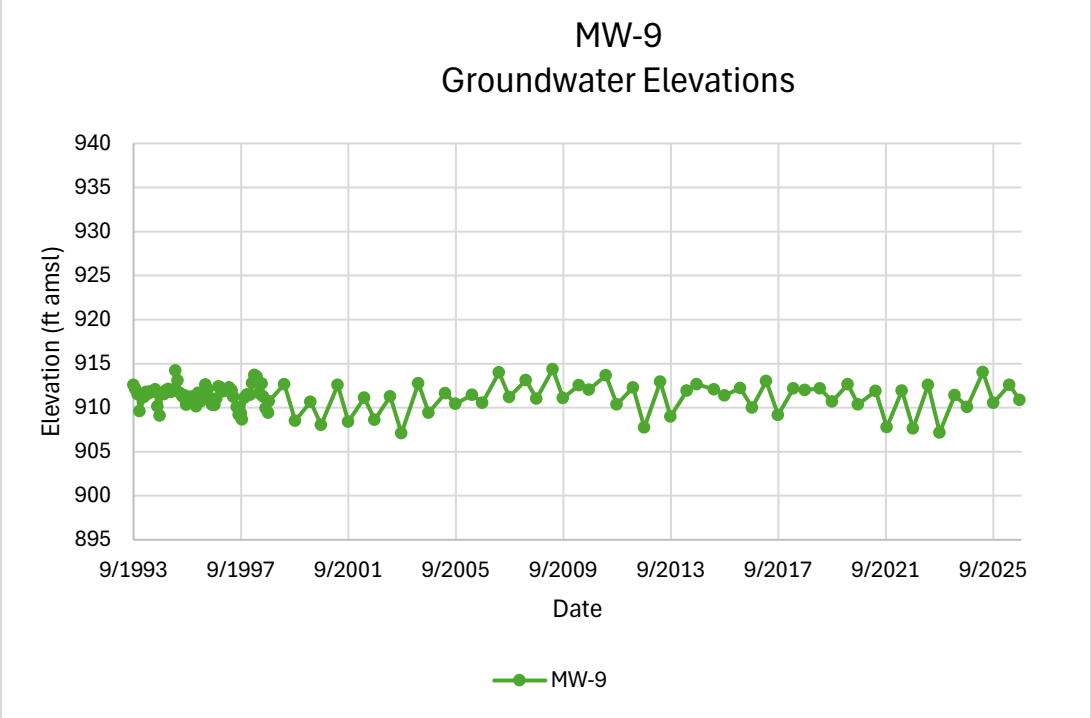
Dear Mr. Rath:

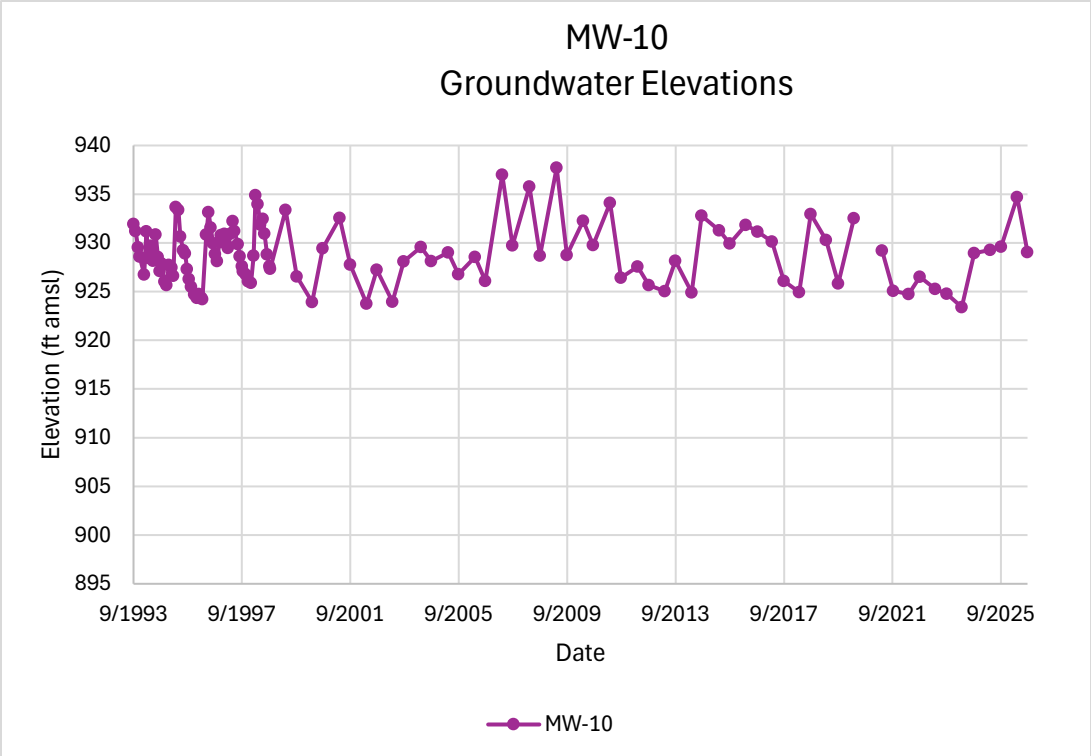
On behalf of Interstate Power and Light Company (IPL), SCS Engineers (SCS) provides this response to the Shutoff Request comments contained in your email dated June 2, 2026, which requested additional data and justification to support the Request to Permanently Shut-Off Groundwater Gradient Control and Leachate Collection Systems dated April 30, 2026. Permanent shut-off of the groundwater gradient control system (GWGCS) and the leachate collection system (LCS), both associated with the East Fly Ash Disposal Site (East Landfill), are part of the progression toward an eventual transfer of applicable post-closure requirements to an environmental covenant and rescission of Permit #64-SDP-05-91C.

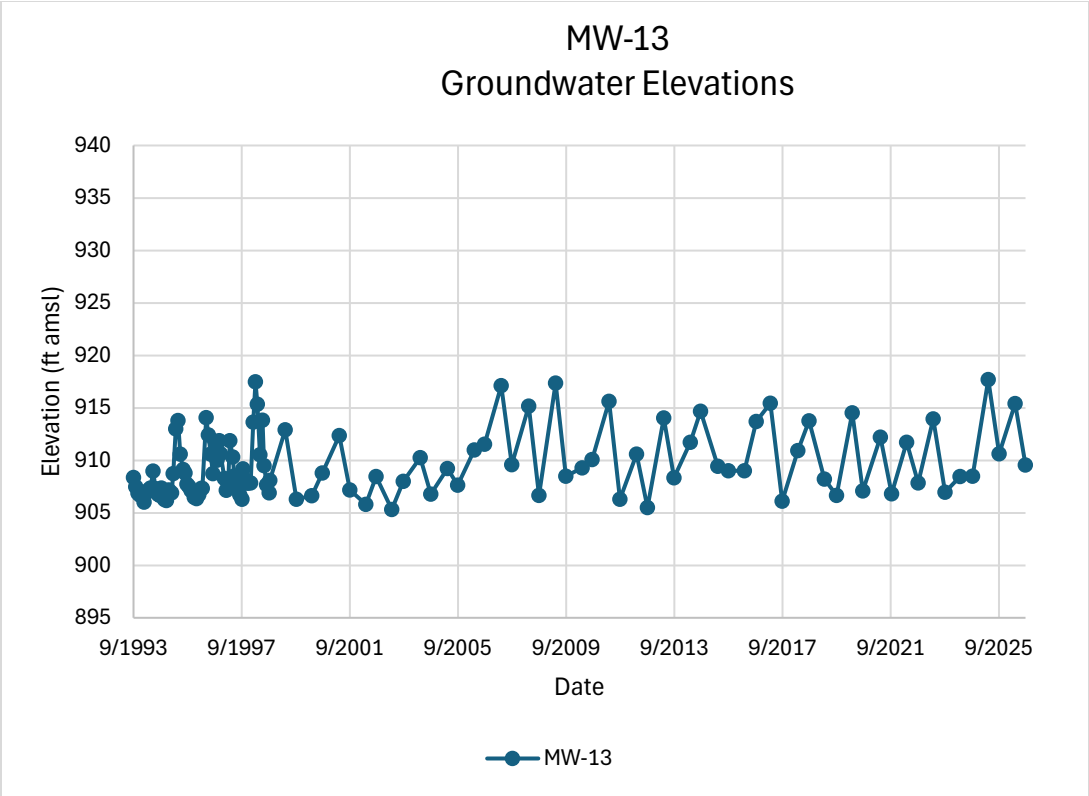
The June 2, 2026, comments were discussed in a phone conversation on June 23, 2026, to understand more specifically the additional supporting data and justification needed regarding nearby groundwater elevations, leachate levels, and GWGCS flow given that recent data appear to be outside historical trends. These aspects are addressed individually below.

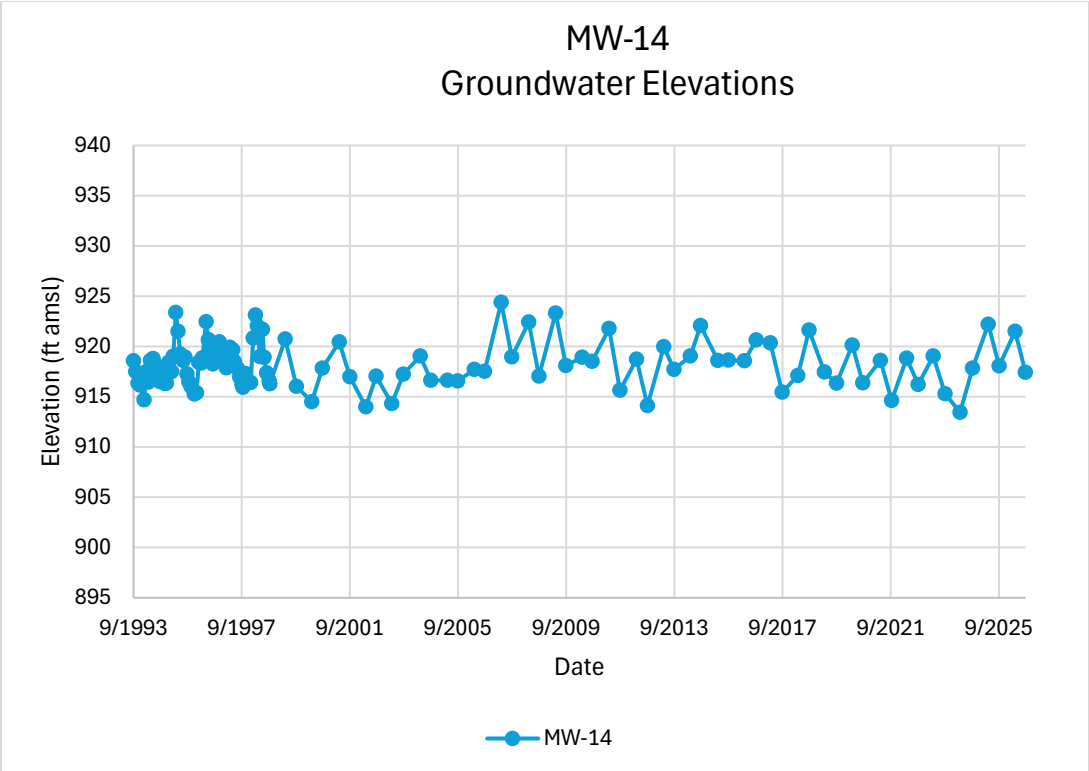
Groundwater Elevations

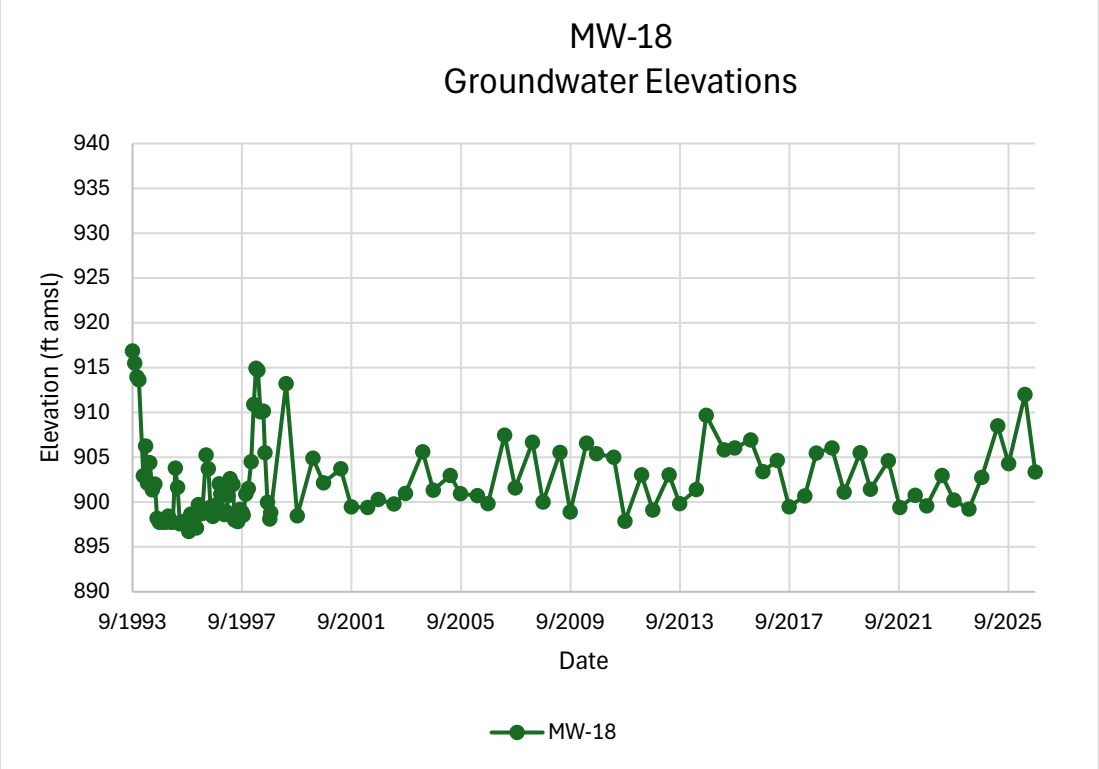
The historical records of groundwater elevation measurements ending with calendar year 2026 for the shallow groundwater monitoring wells generally encircling the East Landfill (MW-9, MW-10, MW-13, MW-14, MW-18, and MW-22) were reviewed. The well locations are shown on the attached Site Plan. It should be noted that monitoring wells MW-9, MW-10, MW-14, and MW-18 are located more than 200 feet distant from the East Landfill limits of waste, while monitoring wells MW-13 and MW-23 are located within approximately 50 feet or less of the East Landfill limits of waste. Time series plots of the groundwater elevations for the six listed monitoring wells are shown on the following pages.

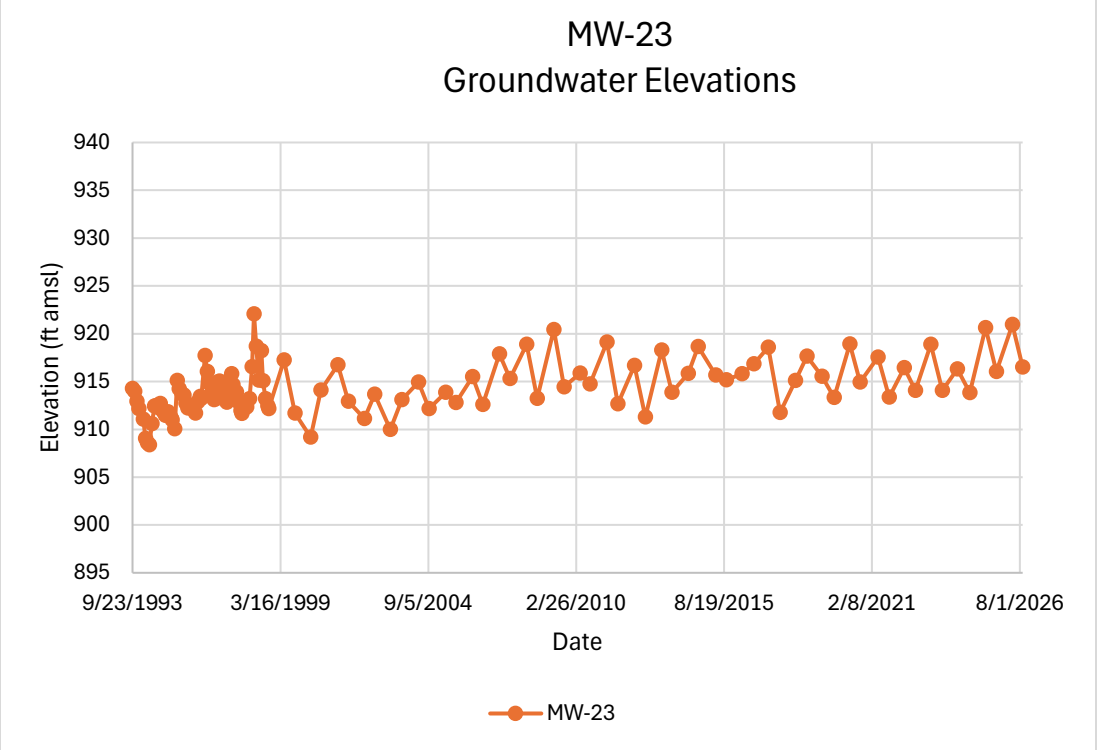

MW-9
Groundwater Elevations
940
935
930
925
920
915
910
905
900
895
Elevation (ft amsl)
9/1993
9/1997
9/2001
9/2005
9/2009
9/2013
9/2017
9/2021
9/2025
Date
MW-9


MW-10
Groundwater Elevations
940
935
930
925
920
915
910
905
900
895
Elevation (ft amsl)
9/1993
9/1997
9/2001
9/2005
9/2009
9/2013
9/2017
9/2021
9/2025
Date
MW-10

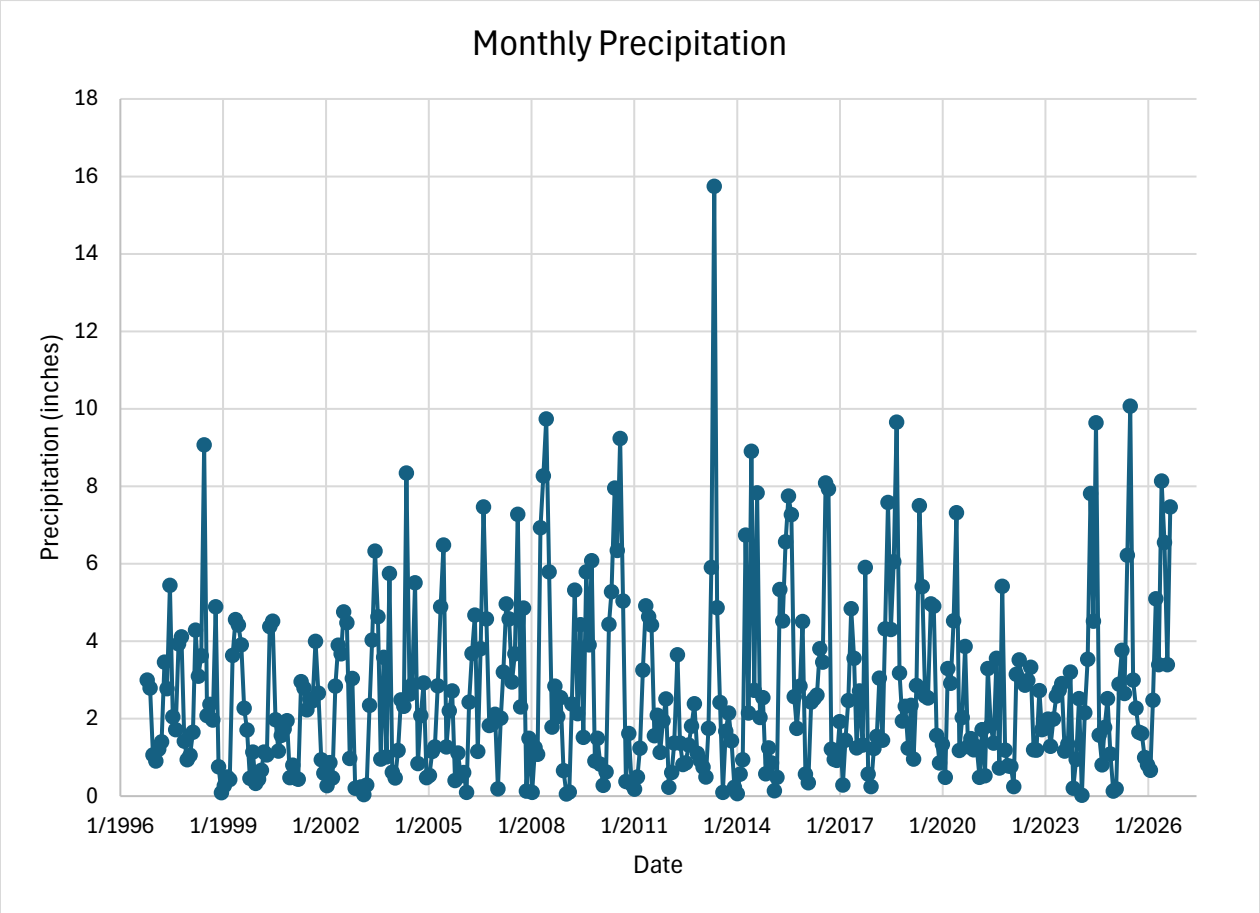

MW-13
Groundwater Elevations
940
935
930
925
920
915
910
905
900
895
Elevation (ft amsl)
9/1993
9/1997
9/2001
9/2005
9/2009
9/2013
9/2017
9/2021
9/2025
Date
MW-13

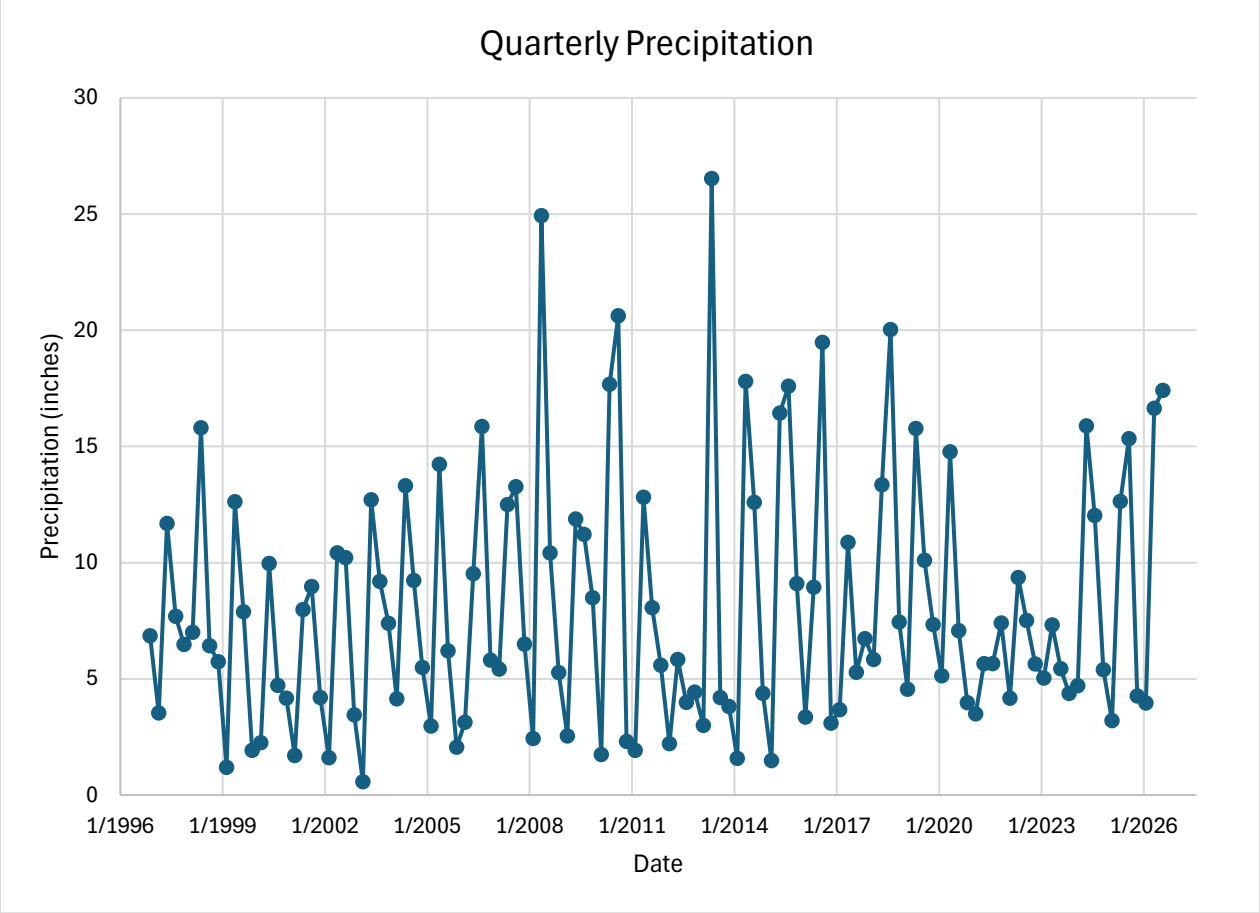

MW-14
Groundwater Elevations
940
935
930
925
920
915
910
905
900
895
Elevation (ft amsl)
9/1993
9/1997
9/2001
9/2005
9/2009
9/2013
9/2017
9/2021
9/2025
Date
MW-14


MW-18
Groundwater Elevations
940
935
930
925
920
915
910
905
900
895
890
Elevation (ft amsl)
9/1993
9/1997
9/2001
9/2005
9/2009
9/2013
9/2017
9/2021
9/2025
Date
MW-18


MW-23
Groundwater Elevations
940
935
930
925
920
915
910
905
900
895
Elevation (ft amsl)
9/23/1993
3/16/1999
9/5/2004
2/26/2010
8/19/2015
2/8/2021
8/1/2026
Date
MW-23

Precipitation records for Marshalltown, Iowa (Station ID: IA5198) were also reviewed. Precipitation records were obtained from the Iowa State University Iowa Environmental Mesonet website (IEM :: Climodat Reports). Below are monthly and quarterly time series graphs of the precipitation records through September 30, 2026, or the end of the 3rd quarter of calendar year 2026. For each graph, the approximate midpoint of the time interval was used to create the x-axis value for graphing (the 15th of the month for the monthly data and the 15th of the middle month in the quarter for the quarterly data).





Review of the groundwater elevation records for the shallow groundwater in the vicinity of the East Landfill and precipitation records for Marshalltown indicated the following:

- All of the more recent groundwater elevations were within the historical range with the exception of the monitoring well MW-13 elevation measured on April 24, 2025, which was 0.22 feet higher than the previous maximum elevation.

- There is a relatively consistent seasonality in the groundwater elevation measurements, with higher elevations measured in the April sampling events and lower elevations measured in the September sampling events.

- Similarly, there is a relatively consistent seasonality in the amounts of precipitation, with the highest amounts generally occurring in the second quarter of the year and the lowest amounts occurring in the first quarter of the year.

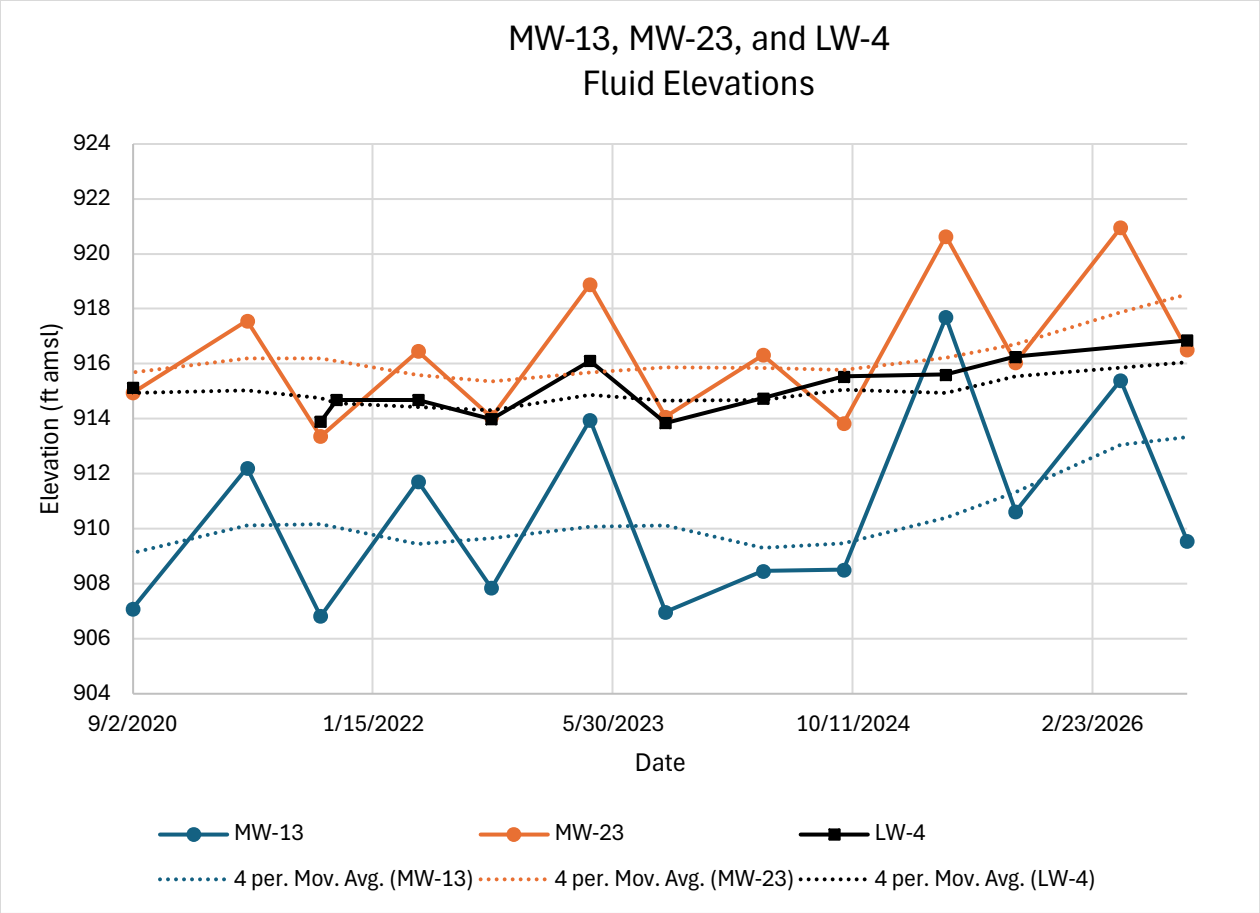
- Comparing precipitation data from 2021 through 3rd quarter 2026, the period from spring 2024 through 2026 is generally significantly wetter than the period from 2021 through early 2024. This latter wetter period appears to manifest in increased shallow groundwater elevations beginning in the 2025 measurements.

In general, the review indicated that the more recent groundwater elevations are consistent with the historical record and that, as expected, the shallow groundwater elevations are strongly influenced by precipitation, as the periods of greater amounts of precipitation generally align with the dates of the higher groundwater elevation measurements.

Leachate Levels

Recent liquid level measurements at leachate piezometer LW-4 have indicated increased fluid thicknesses. As reported previously in the Request to Permanently Shut-Off Groundwater Gradient Control and Leachate Collection Systems dated April 30, 2026 (Doc #117014), the final cover of the East Landfill includes a 40-mil geomembrane liner; therefore, surface infiltration of precipitation is expected to be minimal. Final cover construction was completed on October 26, 1995.

Leachate elevations at leachate piezometer LW-4 were compared to nearby shallow groundwater monitoring wells MW-13 and MW-23. Below is a graph of liquid elevations for the three monitoring points listed along with 4-point rolling averages for each point for the period from fall 2020 through fall 2026. The graphed period encompasses the more recent trend of increased fluid levels in leachate piezometer LW-4.



The above graph indicates a general correlation present in the 4-point rolling averages between the LW-4 fluid elevations and the nearby groundwater elevations. Additionally, the graph indicates that monitoring well MW-13 groundwater elevations are, with one exception, below the LW-4 fluid elevations while the monitoring well MW-23 groundwater elevations fluctuate both above and below the LW-4 fluid elevations, with the average MW-23 groundwater elevations slightly higher than the average LW-4 fluid elevations.

GWGCS Flow

As reported in Table 1 of the Request to Permanently Shut-Off Groundwater Gradient Control and Leachate Collection Systems dated April 30, 2026, measurable flow from the GWGCS was recorded during both the April and September 2025 sampling events, while in previous years, dating back to 2014, there was generally no flow or flow was not determined due to ponded water or runoff in the ditch where the GWGCS outlet is located. Review of the groundwater monitoring well water level graphs for the six shallow monitoring wells surrounding the East Landfill and particularly for monitoring wells MW-13 and MW-23, both closest to the East Landfill, indicated the following:

- In monitoring well MW-13, the April 2025 water level was the highest in the period of record dating back to September 1993, and the September 2025 water level was the highest September level since 2018.

- In monitoring well MW-23, the April 2025 water level was the second highest in the period of record dating back to September 1993, with the highest water level recorded in March 1998. The September 2025 water level was the highest September level since 2018.

- It could not be determined if the GWGCS was flowing in September 2018 due to the amount of surface water flowing in the ditch in which the underdrain outlet pipe is located.

- The April 2025 water levels in monitoring wells MW-9, MW-14, and MW-18 were the highest measured levels in more than a decade.

- The April and September 2025 water levels in monitoring well MW-10 were the highest measured levels since 2020.

Based on the review of water levels, particularly those nearest the East Landfill, groundwater elevations were higher than normal in 2025, potentially resulting in the observation of flow from the GWGCS discharge.

SUMMARY

The above review evaluated whether or not the 2025 and 2026 groundwater level, leachate levels, and GWGCS flow were outside historical trends. The review indicated the following:

- The measured 2025 and 2026 groundwater elevations in monitoring wells surrounding the East Landfill were within the range of historical measurements with the exception of the April 2025 groundwater level in monitoring well MW-13, which was a new maximum. However, the level was not out of the ordinary as three similar levels were previously measured in March 1998, April 2007, and April 2009. Therefore, the measured 2025 groundwater elevations are considered consistent with the historical record.

- Fluid levels in leachate piezometer LW-4 have increased in recent years. The increased LW-4 fluid elevations appear to correlate with the 4-point rolling average trends in nearby groundwater monitoring wells MW-13 and MW-23.

- The measured GWGCS flows of 0.26 gallons per minute (gpm) in April 2025 and 0.32 gpm in September 2025 appear related to the higher groundwater levels measured in the vicinity of the East Landfill, particularly in monitoring wells MW-13 and MW-23 near the south side of the cell near where the lowest GWGCS pipe elevation occurs. Higher-than-typical groundwater elevations are the likely explanation for the observations of flow in 2025. The GWGCS pipe was temporarily plugged in late 2025.

Based on the above review, IPL requests that the current temporary shut-off status of the leachate collection system and the GWGCS for the East Landfill be made permanent. If the DNR concurs with this request, a plan to implement permanent shut-off of these two systems will be prepared and submitted for DNR review.

If you have any questions regarding this response, please contact Jenny Coughlin at (515) 558-9704 or jennycoughlin@alliantenergy.com.

Sincerely,



Timothy C. Buelow, P.E.
VP/Senior Project Advisor
SCS Engineers



Meghan Blodgett
Hydrogeologist
SCS Engineers

TCB/JC/MDB

copy: Jenny Coughlin, Alliant Energy

Enclosures: Site Plan

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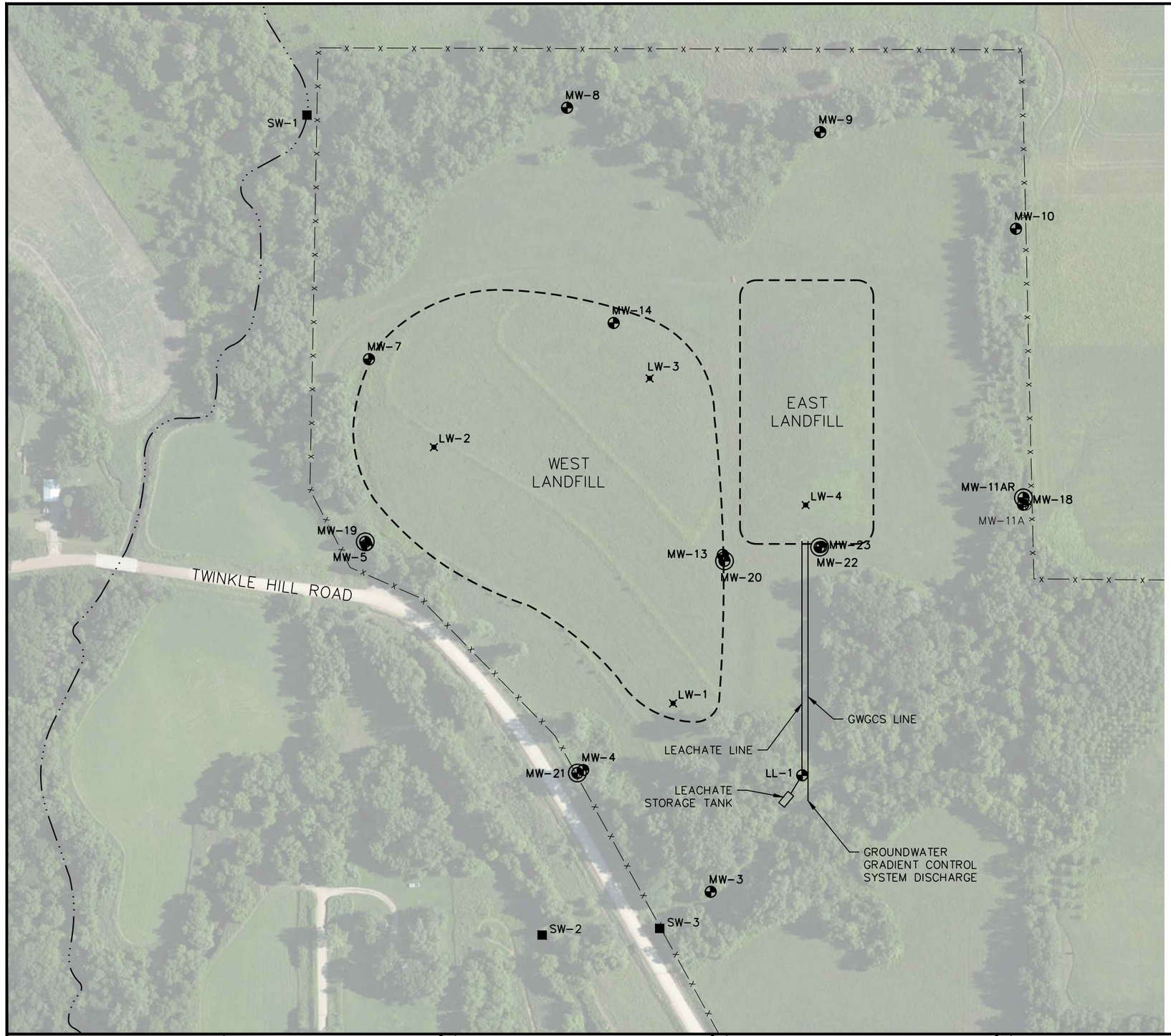

LEGEND

- APPROXIMATE LIMITS OF ASH DISPOSAL
- FENCE
- STREAM
- MONITORING WELL
- DEEP MONITORING WELL
- ABANDONED WELL
- LEACHATE HEAD WELL
- SURFACE WATER SAMPLING POINT

NOTES:

1. MONITORING WELL AND LEACHATE HEAD WELL LOCATIONS BASED ON SURVEY PERFORMED BY CLAPSADDLE-GARBER ASSOCIATES IN OCTOBER 2025. OTHER SITE FEATURE LOCATIONS ARE APPROXIMATE.

N

200 0 200

SCALE: 1" = 200'

PROJECT NO.	25219064.00	DRAWN BY:	BJM/RVG
DRAWN:	10/28/16	CHECKED BY:	KAK
REVISED:	11/07/2025	APPROVED BY:	TK 11/20/2025

ENGINEER: SCS ENGINEERS
2830 DAIRY DRIVE MADISON, WI 53718-6751
PHONE: (608) 224-2830

CLIENT: ALLIANT ENERGY INTERSTATE POWER AND LIGHT

SITE: MARSHALLTOWN EAST AND WEST CLOSED LANDFILLS MARSHALLTOWN, IOWA

MONITORING WELL LOCATIONS

FIGURE 2

I:\25219064.00\Drawings\Monitoring Well.dwg, 11/7/2025 6:15:55 PM