September 5, 2025

HR Green
Attention: Matt Wildman
8710 Earhart Lane SW
Cedar Rapids, Iowa 52404
Email: mwildman@hrgreen.com

RE: Comments on the Antidegradation Alternatives Analysis for Interstate Power and Light in Ottumwa, Iowa

Dear Mr. Wildman:

The Iowa Environmental Council (IEC), Environmental Law and Policy Center (ELPC), and Sierra Club offers the following comments on the Antidegradation Alternatives Analysis for Interstate Power and Light Company (IPL), provided for public notice on August 8, 2025.

These comments represent the views of the Iowa Environmental Council, an alliance of more than 100 organizations, over 500 individual members, and an at-large board of farmers, business owners, and conservationists. IEC works to build a safe, healthy environment and sustainable future for Iowa. Our members care about air and water quality across the state, and they hike, recreate, and enjoy the outdoors in Iowa and beyond.

ELPC is a Midwest-based not-for-profit public interest environmental legal and economic development advocacy organization focused on improving environmental quality, including clean water and healthy clean air, and protecting the Midwest's natural resources. ELPC has members who reside in the State of Iowa and an office in Des Moines.

Sierra Club is a nonprofit organization with more than 800,000 members nationally and over 7,000 members in the state of Iowa, many of whom are IPL ratepayers. Sierra Club's mission includes promoting clean energy, and reducing air and water pollution associated with electricity generation. Many Sierra Club members in Iowa are IPL customers who have a strong interest in receiving reliable power that is generated and supplied in a cost-effective and environmentally sound manner.

HR Green conducted an Antidegradation Alternatives Analysis (AAA) for the IPL Ottumwa Midland Landfill (OML), which was publicly noticed on August 8, 2025 and provided a 30-day notice period to submit comments. The AAA evaluates four alternatives to allow IPL to discharge the OML underdrain water to the Des Moines River. On August 14, 2025, IPL submitted a request to amend the Ottumwa Midland landfill permit (Sanitary Disposal Project Permit #90-SDP-8-92P) to start construction of the AAA selected alternative as early as August

25, 2025.[1] On the same day, IPL submitted a request for an expedited review and IDNR conditionally approved the request to start construction of Alternative 3.[2] IPL provided additional information on August 25, 2025, and IDNR provided its approval for construction.[3]

IEC finds the AAA is inadequate, fails to address the actual underdrain water being discharged, and appears to be perfunctory given that construction of Alternative 3 has been approved by IDNR before the end of the AAA 30-day comment period.

IPL must revise the AAA to address cobalt, lithium, manganese, and molybdenum as pollutants of concern in the underdrain water and add additional alternatives based on chemical precipitation consistent with the 2024 ELG. In addition, the AAA must analyze the social/economic importance and provide a justification for degrading water quality in the Des Moines River. In conducting its evaluation, IPL needs to address the ancillary benefits to water quality and environmental justice issues. In short, IPL needs to address deficiencies in the AAA before an NPDES permit and construction can proceed, as detailed in the comments that follow.

[1] Letter from Jeff Maxted (Alliant Energy) to Brian Rath (IDNR), Aug. 14, 2025, available at https://programs.iowadnr.gov/solidwaste/OpenText/DownloadDocument/113669.
[2] Email from Brian Rath to Jeff Maxted, Aug. 14, 2025, available at https://programs.iowadnr.gov/solidwaste/OpenText/DownloadDocument/113670.
[3] Email from Brian Rath to Jeff Maxted, Aug. 25, 2025, available at https://programs.iowadnr.gov/solidwaste/OpenText/DownloadDocument/113722.

I. Background

The Clean Water Act requires an antidegradation review before new or increased discharges of pollutants.[4] Antidegradation is a fundamental part of the Clean Water Act's effort to restore the "chemical, physical, and biological integrity" of water across the country.[5] These requirements apply to the underdrain discharges from the Ottumwa Midland Landfill, which contains numerous metals.

A. Antidegradation Requirements in Iowa

Paired with designated uses and water quality criteria, antidegradation procedures act as a ratchet to prevent water quality from worsening. EPA has adopted regulations defining how states implement antidegradation requirements, including the process of considering alternatives and providing a justification before degrading water quality.[6] EPA requires that in conducting an AAA:

[4] 33 U.S.C. § 1313(d)(4)(B).
[5] 33 U.S.C. § 1251.
[6] 40 C.F.R. § 131.12.

> "The analysis of alternatives shall evaluate a **range of practicable alternatives that would prevent or lessen the degradation** associated with the proposed activity. When the analysis of alternatives identifies one or more practicable alternatives, the State shall only find that a lowering is necessary if one such alternative is selected for implementation."[7]

In Iowa, the Department of Natural Resources is responsible for implementing antidegradation requirements. Iowa has a complicated history of antidegradation policy. Iowa adopted an antidegradation policy in 2010 that incorporated an Antidegradation Implementation Procedure (AIP), which U.S. EPA approved.[8] Under this policy, degradation of surface water that meets water quality standards is only allowed where "lower water quality is necessary to accommodate important economic or social development in the area in which the waters are located."[9] In 2016, Iowa attempted to update its antidegradation policy, but the EPA disapproved the proposed rule amendments in 2017.[10] The denial left the 2010 Antidegradation Implementation Procedure issued by the Iowa Department of Natural Resources (IDNR) in effect as an enforceable water quality standard,[11] even though state rules were not updated to reflect the denial.

As noted in the AAA, the current stream designation for the impacted section of the Des Moines River is A1, B (WW-1), HH.[12] The Des Moines River meets water quality standards for numerous pollutants, so it qualifies for Tier 2 protection according to the AIP.[13] The AIP states:

> "Where the quality of the waters exceeds levels necessary to support propagation of fish, shellfish, and wildlife and recreation in and on the water, that quality *shall be maintained and protected unless* the department finds, after full satisfaction of the intergovernmental coordination and public participation provisions, that *allowing lower water quality is necessary to accommodate important economic or social development in the area in which the waters are located.* In allowing such degradation or lower water quality, the department shall assure water quality adequate to protect existing uses fully. Further, *the department shall assure the highest statutory and regulatory requirements for all new and existing point sources* and all cost-effective and reasonable best management practices for nonpoint source control *before allowing any lowering of water quality.*[14]

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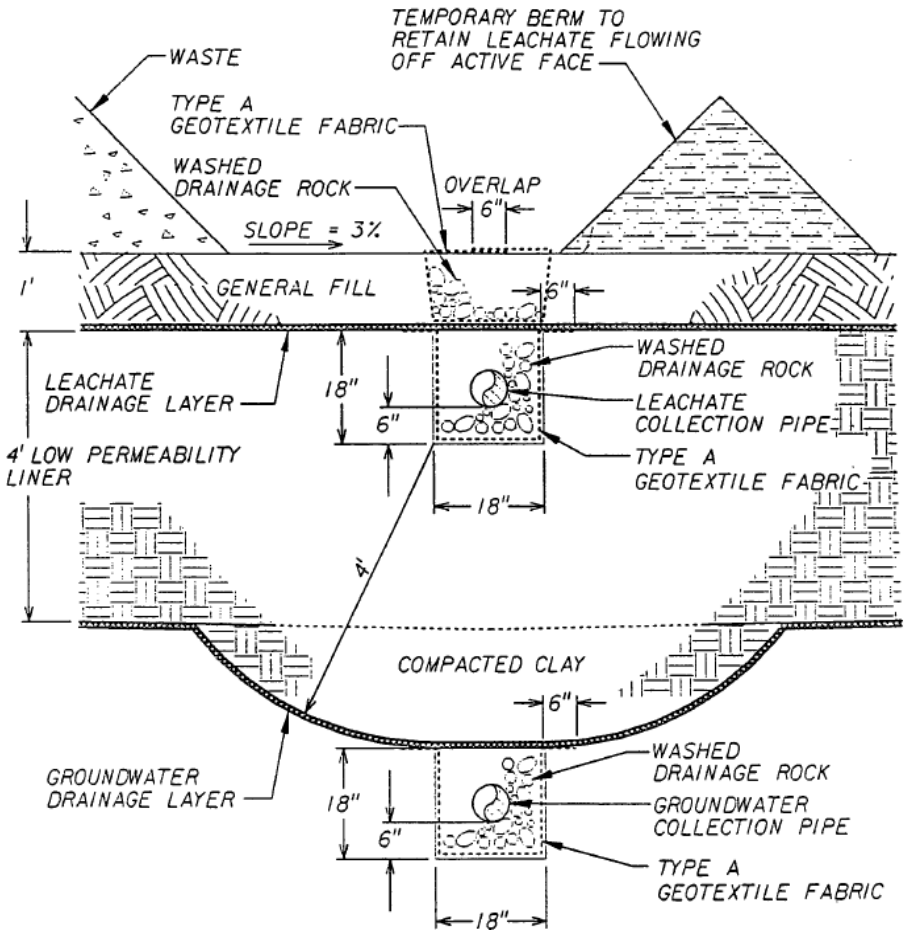
[7] 40 C.F.R. § 131.12 (a)(2)(ii).
[8] *See* "Chapter 61, Water Quality Standards," U.S. EPA, available at https://www.epa.gov/sites/production/files/2017-05/documents/ia-chapter61-provisions.pdf.
[9] 40 C.F.R. § 131.12(a)(2); IOWA ADMIN. CODE r. 567-61.2(2).
[10] Letter from Mark Hague, U.S. EPA Region 7, to John Tack, IDNR (Jan. 19, 2017), at 8 ("Despite the concerted effort by IDNR and EPA to reach consensus on an approvable rule, the EPA is disapproving the revised rules.").
[11] *Id.* ("Pursuant to 40 C.F.R. 131.21, the Antidegradation Rules and AIP approved by the EPA on September 30, 2010 remain in effect for CWA purposes."). *See* "Section 2: Chapter 61, Water Quality Standards," U.S. EPA, available at https://www.epa.gov/sites/production/files/2017-05/documents/ia-chapter61-provisions.pdf.
[12] "Ottumwa-Midland Landfill Underdrain Outfall Relocation" ("2025 AAA"), H.R. Green for Alliant Energy (Aug. 8, 2025) at 3.
[13] "Iowa Antidegradation Implementation Procedure," Iowa DNR (Feb. 17, 2010), at 4, available at https://www.iowadnr.gov/Portals/idnr/uploads/water/standards/files/antideg_2_17.pdf ("Tier 2 protection level applies to all surface waters where existing water quality is better than applicable water quality standards as determined on a pollutant-by-pollutant basis").
[14] *Id.* at 4 (emphasis added).

B. Underdrain Discharges from the Ottumwa Midland Landfill

IPL owns and operates the Ottumwa Midland Landfill for the disposal of coal ash combustion residual waste. As part of the design, the landfill uses a "leachate collection" system, where leachate is "collected and diverted into a lined pond," and eventually hauled off-site.[15]

Figure 1. Cross-Section of Ottumwa Midland Landfill Leachate and Underdrain Collection System.[16]



The piping at the bottom of Figure 1 is called an "underdrain" because it removes groundwater below the liner, which, in theory, should have no contact with the leachate above the liner. Since OML first started operations in 1995 and until recently, OML had been pumping the underdrain water into a wetland. The wetland connects to the Des Moines River via unnamed creeks. IPL applied for the undrain water to be covered under IDNR Stormwater General Permit number 1,

[15] 2025 AAA at 3.

[16] Solid Waste Permit 90-SDP-8-92P, Construction Certification Report filed July 11, 1995, at Appendix A (Montgomery Watson, Apr. 4, 1995), *available at* https://programs.iowadnr.gov/solidwaste/OpenText/DownloadDocument/59283.

and received initial approval from the Iowa Department of Natural Resources (IDNR) on October 1, 1994.

However, as a condition of coverage under Stormwater General Permit 1, "all discharges covered by this permit shall be composed entirely of storm water except as follows:… uncontaminated groundwater…". The underdrain water is contaminated and is not an allowed discharge under Stormwater General Permit 1. In response to IDNR communication in 2023 to seek an individual National Discharge Pollution Elimination System (NPDES) permit for the OML underdrain water, IPL conducted an antidegradation analysis noticed on December 19, 2024.[17]

On January 17, 2025, the Iowa Environmental Council (IEC), Environmental Law and Policy Center (ELPC), and Sierra Club submitted comments on the 2024 Antidegradation Alternatives Analysis (2024 AAA) for Interstate Power and Light Company (IPL), noticed on December 19, 2024. The comments concluded that:

> "IPL must perform the AAA to address arsenic, cobalt, lithium, manganese, and molybdenum as pollutants of concern in the underdrain water. In addition, the AAA must analyze the social/economic importance of the discharge and provide a justification for degrading water quality in the Des Moines River. In conducting its evaluation, IPL needs to address the ancillary benefits to water quality and environmental justice issues. In short, IPL needs to address deficiencies in the AAA before an NPDES permit can proceed."

On May 1, 2025, IPL started trucking the underdrain water (which is discharged through the Landfill Outfall 001) together with the underdrain collection system (which is discharged through Outfalls 002 and 003) to the Ottumwa Water Pollution Control Facility (WPCF). The Ottumwa Water Pollution Control Facility issued Industrial User Permit (Permit Number 36) to Ottumwa Midland Landfill for the coal combustion residue leachate, and was amended to accept the underdrain water from GU-EX and GU-1 effective May 1, 2025.

Consistent with the Iowa Antidegradation Implementation procedure, *all new or expanded regulated activities are subject to antidegradation review requirements*.[18] The creation of a discharge of the underdrain water to the Des Moines River will clearly result in the addition of pollution, including numerous pollutants found in the underdrain water that will degrade water quality. Thus, the proposed change in process requires an antidegradation analysis.

II. A New Discharge and Additional Pollutants of Concern Trigger a New Antidegradation Review that Corrects Deficiencies of the Prior Analysis.

The AAA-selected alternative proposes to pump the underdrain water from OML to an area IPL characterizes as a wetland, which then connects to the Des Moines River via unnamed creeks.[19]

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[17] 2024 Antidegradation Alternatives Analysis at 1 (December 19, 2024); email from Matthew Bizjack (Alliant Energy) to DNR, dated Sept. 6, 2023.

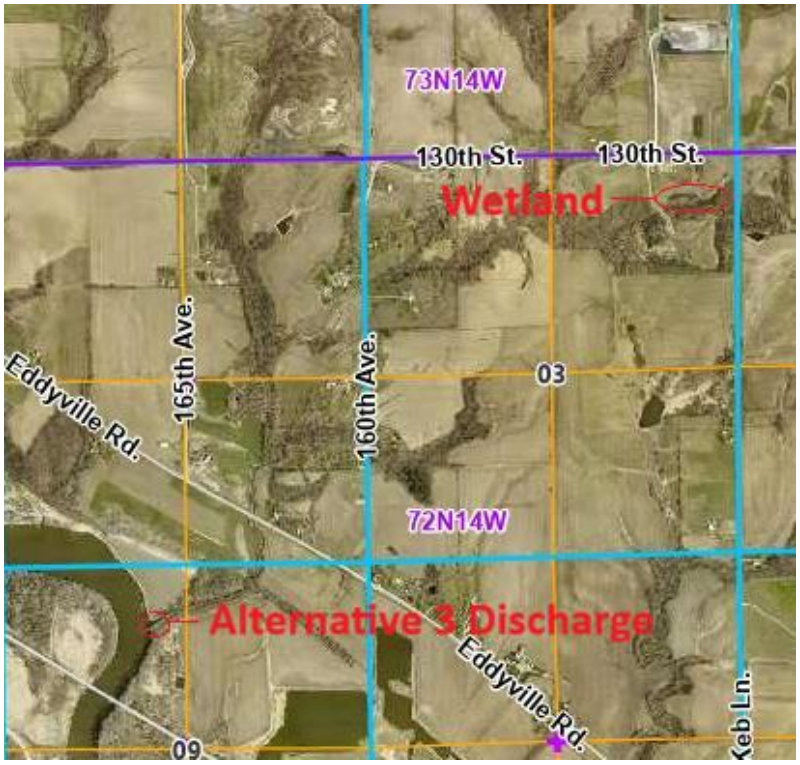
[18] "Iowa Antidegradation Implementation Procedure," Iowa DNR (Feb. 17, 2010), at 12, available at https://www.iowadnr.gov/Portals/idnr/uploads/water/standards/files/antideg_2_17.pdf

[19] Antidegradation Alternatives Analysis at 1.

The proposed discharge point is shown in Figure 1 and 2. As can be seen in Figure 1, the segment of the Des Moines River where the OML discharge is proposed is not currently an impaired water based on the 2024 section 303(d) listing of impaired waters.

Figure 1. Proposed OML Underdrain Discharge

Figure 1. OML site (top right) and potential discharge point at the Des Moines River.



Since the December 19, 2024 AAA, the underdrain water is being trucked to the Ottumwa Water Pollution Control Facility instead of discharging to the wetland and IPL provided no new sampling data with the AAA. Table 1 summarizes the alternatives identified in each AAA.

Table 1: AAA Cost Comparison.

12/19/24 AAA	20-yr Cost	8/8/25 AAA	20-yr Cost
1. Continued discharge to creek under stormwater permit	Not allowed	1. Continue trucking to OWPC facility	$25,929,000
2. Pipe to the Des Moines River	$4,101,000	2. Pipe to the Des Moines River	$6,627,000
3. Iron and Manganese treatment prior to discharge to wetland	$7,593,400	3. Iron removal with bag filters and discharge to wetland	$1,852,000
		4. Reverse Osmosis and discharge to wetland	$16,654,600

The current AAA selected Alternative 3 to remove particulate iron via bag filters and discharge to the nearby Wetland Complex. However, given that the proposed discharge traverses over and through the soils between the landfill and the river, it is highly improbable that the entire underdrain water discharge reaches the river. By discharging to a wetland, some of the water infiltrates or evaporates on its path from the existing discharge point and the Des Moines River. The evaporation and infiltration that occurs before reaching the Des Moines River, as proposed by Alternative 3, allows the pollutants of concern to re-enter groundwater. The AAA indicates

that all pollutants but iron remain in the wastewater.[20] As a result, Alternative 3 not only further contaminates the ground water, but would clearly increase the polluted discharge to the river from current conditions.

A. The Antidegradation Alternatives Analysis for Ottumwa Midland Landfill Must Evaluate Additional Alternatives for all Pollutants.

The AIP requires that the DNR "assure the highest statutory and regulatory requirements for existing point sources must be met before allowing any lowering of water quality."[21] The alternative selected in the AAA is inconsistent with both the state's antidegradation requirements and the statutory intent of the Clean Water Act. Discharging the underdrain water to the Des Moines River via the wetland and unnamed streams neither prevents nor lessens the degradation, and as discussed below, has not been justified.

Given the disparity in sampling results and the failure to address all pollutants of concern in the AAA, IEC calculated the potential quantity of toxics and pollutants using the maximum concentrations experienced, as shown below in screenshots of Table 11 and Appendix F, over the 2020 through 2024 timeframe.[22]

[20] Antidegradation Alternatives Analysis at 17 (comparing relative degradation of alternatives).
[21] AIP at 4.
[22] Annual Water Quality Report, Monitoring System Evaluation Report, Leachate Performance Evaluation Report; 2024 AWQ MSER LCSPER at pages 43 and 437.

Table 11
Data Analytical Summary - Additional Points
2024 Annual Water Quality Report
Ottumwa Midland Landfill
Permit No. 90-SDP-8-92P

CHEMICAL PARAMETER	GWPS	GWPS SOURCE	EVENT	GU-1 TEMP	GU-2	GU-EX	LP-1	SW-1R	SW-2R	SW-3	SW-4	SW-5	LEACHATE BASIN	TCB-1/2
ARSENIC, µg/L	10	MCL	2024-Aug	<0.53		0.70 J				2.0			9.7	0.95 J
BARIUM, µg/L	2,000	MCL	2024-Aug	38		35				52			72	76
BERYLLIUM, µg/L	4	MCL	2024-Aug	<0.33		<0.33				<0.33			<0.33	<0.33
BORON, µg/L	6,000	SWS	2024-Aug	270		900				560			2,100	430
CALCIUM, mg/L	--	--	2024-Aug	230		150				61			260	130
COBALT, µg/L	2.1	SWS	2024-Aug	11		3.5				0.20 J			0.68	<0.17
COPPER, µg/L	1,300	SWS	2024-Aug	<1.8		<1.8				<1.8			<1.8	<1.8
FLUORIDE, mg/L	4	MCL	2024-Aug	0.42 J		0.46 J				<0.38			<0.38	<0.38
IRON, µg/L	--	--	2024-Aug	<36		260				76 J			<36	<36
LEAD, µg/L	15	SWS	2024-Aug	<0.26		<0.26				<0.26			<0.26	<0.26
LITHIUM, µg/L	14	SWS	2024-Aug	48		26				8.7 J			43	3.3 J
MAGNESIUM, µg/L	--	--	2024-Aug	61000		36000				23000			28000	14000
MANGANESE, µg/L	300	SWS	2024-Aug	2000	DRY	250	DRY	DRY	DRY	26	DRY	DRY	86	6.0 J
MOLYBDENUM, µg/L	40	SWS	2024-Aug	2.2		48				9.9			680	3.9
SELENIUM, µg/L	50	MCL	2024-Aug	1.4 J		4.7 J				1.9 J			76	<1.4
ZINC, µg/L	2000	SWS	2024-Aug	29		39				<9.7			<9.7	<9.7
CHLORIDE, mg/L	--	--	2024-Aug	20		32				4.6 J			1000	12
SULFATE, mg/L	--	--	2024-Aug	390		460				250			1,900	380
TOTAL DISSOLVED SOLIDS, mg/L	--	--	2024-Aug	1100		930				410			5,000	590
TOTAL SUSPENDED SOLIDS, mg/L	--	--	2024-Aug	<1.4		2.5				8.3			6.0	3.9
pH, SU	--	--	2024-Aug	6.73		7.70				8.56			8.60	8.06
TEMPERATURE, DEGREES C	--	--	2024-Aug	20.7		23.3				28.1			25.8	28.3
DISSOLVED OXYGEN	--	--	2024-Aug	6.66		7.22				8.94			12.64	8.39
OXIDATION REDUCTION POTENTIAL	--	--	2024-Aug	83.1		56.2				18.0			63.7	71.9
SPECIFIC CONDUCTANCE, UMHOS/CM	--	--	2024-Aug	1438		1281				651			6,769	863

NOTES:
MCL = Maximum Contaminant Level
SWS = Statewide Standard for Groundwater
-- = Not Applicable
J = Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

Updated by: LH Date: 9/26/2024
Checked by: RM Date: 11/5/2024

I:\25224073.00\Deliverables\2024 AWQR\Tables\[AWQR_OML_Tables_241104.xlsx]11-Additional Points

Appendix F
Additional Points Data History, 2020-Present*
Ottumwa Midland Landfill
Permit No. 90-SDP-8-92P

CHEMICAL PARAMETER	GU-1 TEMP					GU-2					GU-EX					LP-1				
	2020	2021	2022	2023	2024	2020	2021	2022	2023	2024	2020	2021	2022	2023	2024	2020	2021	2022	2023	2024
ARSENIC, UG/L	<0.88	<0.75			<0.53						<0.88	1.9 J	2.2		0.70 J					
BARIUM, UG/L	45	41 B			38						30	25 B	64		35					
BERYLLIUM, UG/L	<0.27	<0.27			<0.33						<0.27	<0.27	<0.27		<0.33					
BORON, UG/L	520	370			270						1,000	1,000	870		900					
CALCIUM, MG/L[1]	--	--			230						--	--	--		150					
COBALT, UG/L	11	14			11						1.3	2.6	4.0		3.5					
COPPER	<1.5	<1.4			<1.8						<1.5	<1.4	7.5		<1.8					
FLUORIDE, MG/L	<0.23	0.47 J			0.42 J						0.30 J	0.76	<0.22		0.46 J					
IRON, UG/L	<50.0	41 J			<36						720	810	6,900		260					
LEAD, UG/L	<0.11	<0.21			<0.26						<0.11	<0.21	1.1		<0.26					
LITHIUM, UG/L[1]	--	--			48						--	--	--		26					
MAGNESIUM, UG/L	70,000	67,000	Too Little		61000						29,000	38,000	53,000		36000					
MANGANESE, UG/L	3,100	3,000	Water to	DRY	2000	DRY	DRY	DRY	DRY	DRY	240	530	400	DRY	250	DRY	DRY	DRY	DRY	DRY
MOLYBDENUM, UG/L[1]	--	--	Sample		2.2						--	--	--		48					
SELENIUM, UG/L	<1.0	<0.96			1.4 J						<1.0	0.97 J	2.0 J		4.7 J					
ZINC, UG/L	40	35			29						10.0 J	<10	36		39					
CHLORIDE, MG/L	16	17			20						5.5	8.2	15		32					
SULFATE, MG/L	500	460			390						390	440	700		460					
TOTAL DISSOLVED SOLIDS, MG/L	1,200	1,100			1100						750	880	1,200		930					
TOTAL SUSPENDED SOLIDS, MG/L[1]	--	--			<1.4						--	--	--		2.5					
pH, SU	7.03	6.44			6.73						7.16	7.25	6.76		7.7					
TEMPERATURE, DEGREES C	16	15.9			20.7						20.5	19.9	17.8		23.3					
SPECIFIC CONDUCTANCE, UMHOS/CM	1,758	1,615			6.66						1,114	1,298	1,489		7.22					
OXIDATION REDUCTION POTENTIAL, MV[1]	--	--			83.1						--	--	--		56.2					
DISSOLVED OXYGEN, MG/L[1]	--	--			1438						--	--	--		1281					

NOTES:
1. Parameter added to sampling list in 2023 as part of monitoring program modifications directed by IDNR.
2. Specific conductivity probe was likely not fully submerged in liquid at SW-3 in 2023.
* Historical data through 2019 are included in Appendix C
C:\Users\lhawksworth\AppData\Roaming\Microsoft\Excel\[AWQR_OML_Tables_241104 (version 1).xlsb]Appendix F_Add. Points History

Updated: LH, 9/26/2024
Checked: RM, 11/5/2024

The table below shows the IEC-calculated potential annual quantity of toxics and pollutants proposed to be discharged into the Des Moines River based on the OML monitoring data above.[23]

Table 2. Potential Annual Discharge Mass by Pollutant.

Based on 84,000 gallons per day (30,660,000 gallons per year)							
Conversion Factors:	1 gallon = 3.78541178 Liters						
	1 mg = 0.0000022046 lbs						
Highlighted rows:	**toxics identified by the World Health Organization, and ELG POC's**						
Highlighted rows:	**Analytes above groundwater protection stantards**						
Analyte	**2020-2024**			**Highest**	**Maximum**		
	GU1	**GU-EX**	**GWPS**	**mg/L**	**Liters/year**	**mg**	**lbs**
ARSENIC, UG/L	<0.88	2.20		0.0022	116,060,725	255,334	0.56
BARIUM, UG/L	45.00	64.00		0.064	116,060,725	7,427,886	16.38
BERYLLIUM, UG/L	<0.33	<0.33		0.0003	116,060,725	38,300	0.08
BORON, UG/L	520.00	1000.00		1	116,060,725	116,060,725	255.87
CALCIUM, MG/L[(1)]	230.00	150.00		230	116,060,725	26,693,966,790	58,849.52
COBALT, UG/L	14.00	4.00	2.1 UG/L	0.014	116,060,725	1,624,850	3.58
COPPER	<1.8	7.50		0.0075	116,060,725	870,455	1.92
FLUORIDE, MG/L	0.47	0.76		0.76	116,060,725	88,206,151	194.46
IRON, UG/L	41.00	6900.00		6.9	116,060,725	800,819,004	1,765.49
LEAD, UG/L	<0.26	1.10		0.0011	116,060,725	127,667	0.28
LITHIUM, UG/L[(1)]	48.00	26.00	14 UG/L	0.048	116,060,725	5,570,915	12.28
MAGNESIUM, UG/L	67000.00	53000.00		67	116,060,725	7,776,068,587	17,143.12
MANGANESE, UG/L	2000.00	400.00	300 UG/L	2.000	116,060,725	232,121,450	511.73
MOLYBDENUM, UG/L[(1)]	2.20	48.00	40 UG/L	0.048	116,060,725	5,570,915	12.28
SELENIUM, UG/L	1.40	4.70		0.005	116,060,725	545,485	1.20
ZINC, UG/L	40.00	39.00		0.04	116,060,725	4,642,429	10.23
CHLORIDE, MG/L	20.00	32.00		32	116,060,725	3,713,943,206	8,187.76
SULFATE, MG/L	500.00	700.00		700.00	116,060,725	81,242,507,622	179,107.23
TOTAL DISSOLVED SOLIDS, MG/L	1200.00	1200.00		1,200.00	116,060,725	139,272,870,210	307,040.97
TOTAL SUSPENDED SOLIDS, MG/L[(1)]	<1.4	2.50		0.0025	116,060,725	290,152	0.64

This represents the potential of over 573,000 pounds of untreated pollutants per year being discharged from the Ottumwa landfill to the Des Moines River, and includes four pollutants (Cobalt, Lithium, Manganese, and Molybdenum) above groundwater protection standards.

The AAA makes the representation that the "Pollutants of Concern (POCs) for the underdrain operation are listed in Table 3 and include all parameters that have a reasonable potential to be present in the underdrain water and are *currently sampled for compliance monitoring.*"[24]

[23] Annual Water Quality Report, Monitoring System Evaluation Report, Leachate Performance Evaluation Report; 2024 AWQ MSER LCSPER at pages 43 and 437.
[24] 2025 AAA at 5.

However, the 2025 AAA identifies several parameters without any monitoring data[25] for which DNR set wasteload allocations.[26] These include Cadmium, Chromium, Cyanide, Nickel, Silver, and Thallium.[27] The AAA does not explain how the wasteload allocations were set in the absence of monitoring data, or where to find any monitoring data that may exist.

B. The AAA Fails to Consider Viable Alternatives

The 2025 AAA excluded an alternative that was part of the 2024 AAA and also ignores the potential treatment through chemical precipitation. Both alternatives should have been included in the 2025 analysis.

In the 2024 analysis, the iron-manganese filter process would have removed more than just iron from the wastestream. The analysis showed that the iron and manganese concentrations would both drop with this treatment process.[28] The 2024 AAA took the position that no other parameters were "anticipated to be present in levels that will degrade either receiving stream."[29] This suggests that treating iron and manganese would significantly reduce potential degradation of the downstream waters.

The constituents in the underdrain water have significant overlap with the parameters in the combustion residual leachate – primarily heavy metals and dissolved solids.[30] The 2024 ELG Rule requires numeric limits on arsenic and mercury for "unmanaged" leachate discharges *based on the installation and operation of chemical precipitation technology*.[31] Neither the 2024 AAA or 2025 AAA proposed an alternative utilizing chemical precipitation. (See Table 1).

Before an NPDES permit can be issued, the AAA needs to include alternatives based on chemical precipitation.[32] Because the 2024 ELG Rule rule sets new, more stringent "best available technology," or BAT for "unmanaged" leachate discharges, the current AAA cannot rely merely on calculating waste load allocations/Permit Limits for IPL Ottumwa Midland Landfill's Wastewater Discharge.[33]

III. The Ottumwa Midland Landfill is Subject to the 2024 ELG Rule and must meet new BAT limits on leachate.

On May 9, 2024, EPA published a supplemental Clean Water Act rule updating the agency's effluent limitation guidelines for steam electric generating units, with an effective date of July 8,

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[25] Annual Water Quality Report, Monitoring System Evaluation Report, Leachate Performance Evaluation Report; 2024 AWQ MSER LCSPER at pages 43 and 437 (containing no monitoring for these parameters).
[26] 2025 AAA at 5-6.
[27] *Id.*
[28] *Id.* at 13.
[29] *Id.*
[30] *Compare* Annual Water Quality Report, Monitoring System Evaluation Report, Leachate Performance Evaluation Report; 2024 AWQ MSER LCSPER at pages 43 and 437 (showing monitoring results for leachate and underdrain).
[31] 40 C.F.R. §§ 423.13(*l*)(1)(i)(A), (*l*)(2)(i)(A), (*l*)(2)(ii) (emphasis added).
[32] *Id.*
[33] 2025 AAA at 32; 89 Fed. Reg. at 40,210 ("Each of the treatment technologies identified for legacy wastewater above is applicable to all legacy wastewaters; treatment may require a combination of those technologies (*e.g.*, chemical precipitation and membrane filtration)").

2024. *See* 89 Fed. Reg. 40,198 (May 9, 2024) ("2024 ELG Rule"). That rule sets new, more stringent "best available technology," or BAT, limits on the three largest toxic waste streams from coal-burning power plants: flue gas desulfurization ("FGD") wastewater, bottom ash transport water, and managed and unmanaged combustion residual leachate ("CRL" or "leachate").

Relevant here, the 2024 ELG Rule sets new BAT limits on leachate, including what EPA calls "managed" and "unmanaged" leachate.[34] "Managed" leachate is leachate that is collected in a leachate collection and management system, typically at the bottom of, or within, a coal ash landfill or impoundment unit, and then discharged to a waterway. "Unmanaged" leachate is leachate that has leaked out of a coal ash waste management unit and contaminated groundwater and then subsequently discharged to a waterway.[35] Leachate (whether "managed" or "unmanaged") contains the same heavy metals and other pollutants, like lead, mercury, selenium, boron, and arsenic, that are found in coal ash and flue gas desulfurization wastewater.[36]

The 2024 ELG Rule requires coal plants to meet numeric limits on arsenic and mercury for "unmanaged" leachate discharges, and to eliminate "managed" leachate discharges entirely.[37] Specifically, for unmanaged leachate, the *ELG Rule's numeric limitations for arsenic and mercury are based on the installation and operation of chemical precipitation technology*; for managed leachate, the rule is based on the installation of membrane filtration or other zero-discharge technology.[38] For direct dischargers (i.e., coal-burning EGUs that discharge directly to waters of the United States), the rule requires state permitting authorities to incorporate those BAT limitations into the facility's NPDES permit "as soon as possible on or after July 8, 2024, but no later than December 31, 2029."[39] For indirect discharges (*i.e.,* coal-burning EGUs that discharge to publicly owned treatment works ("POTWs"), the rule requires coal plants to meet the pretreatment BAT standards set out in 40 C.F.R. § 423.16 no later than May 9, 2027.

A. IPL's Ottumwa Midland Landfill Discharges Managed and Unmanaged Combustion Residual Leachate.

Because IPL plainly maintains operational control over both the Ottumwa Generating Station and the nearby Ottumwa Midland Landfill, any leachate wastewater collected at the Ottumwa Midland Landfill fits within EPA's definition of combustion residual leachate, and must be regulated as such.[40] As noted, the 2024 ELG Rule requires IPL to eliminate all managed leachate discharges "as soon as possible beginning July 8, 2024, but no later than

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[34] 89 Fed. Reg. at 40,292.

[35] *Id*. at 40,247; 40 C.F.R. § 423.11(ff)(2).

[36] *See, e.g.*, EPA, Technical Development Document for Final Supplement Effluent Limitations Guidelines and Standards for the Steam Electric Power Generating Point Source Category, at 73 (Tbl. 20) (Apr. 2024) ("2024 ELG TDD"), https://www.epa.gov/system/files/documents/2024-04/se11757_steam-electric-elg-tdd_508.pdf.

[37] 40 C.F.R. §§ 423.13(*l*)(1)(i)(A), (*l*)(2)(i)(A), (*l*)(2)(ii).

[38] 89 Fed. Reg. at 40,200, 40,214. For direct discharges of unmanaged leachate, a facility must meet the numeric limits set out in 40 C.F.R. § 423.13(*l*)(2)(A). (emphasis added).

[39] 89 Fed. Reg. at 40,200; *see generally* 40 C.F.R. § 423.13.

[40] 40 C.F.R. § 423.11(r) (combustion residual leachate "includes wastewater from landfills and surface impoundments located on *non-adjoining property when under the operational control of the permitted facility*.") (emphasis added).

December 31, 2029." Notably, combustion residual leachate also "*includes* wastewater from landfills and surface impoundments located on *non-adjoining property when under the operational control of the permitted facility*."[41]

The ELG Rule defines "combustion residuals" as:

> Solid wastes associated with combustion-related steam electric power plant processes, including fly ash and BA from coal-, petroleum coke-, or oil-fired units; FGD solids; FGMC wastes; and other wastewater treatment solids associated with steam electric power plant wastewater. In addition to the residuals associated with coal combustion, this also includes residuals associated with the combustion of other fossil fuels.[42]

The rule further defines "combustion residual leachate" as:

> Leachate from landfills or surface impoundments that contains combustion residuals. Leachate is composed of liquid, including any suspended or dissolved constituents in the liquid, that has percolated through waste or other materials emplaced in a landfill, or that passes through the surface impoundment's containment structure (e.g., bottom, dikes, berms). *Combustion residual leachate includes seepage and/or leakage from a combustion residual landfill or impoundment unit*.[43]

As noted, the 2024 ELG Rule sets different BAT limits for "managed" and "unmanaged" leachate. "Managed" leachate is leachate that is collected in a leachate collection, management, or piping system, and then discharged to a waterway. "Unmanaged" leachate is leachate that has leached from a waste management unit and contaminates groundwater prior to being captured and pumped to the surface and discharged directly to a waterway.[44]

Because IPL maintains "operational control" over both the Ottumwa Generating Station and the Ottumwa Midland Landfill, however, any managed leachate wastewater collected at the Landfill plainly falls within EPA's definition combustion residual leachate and must be regulated as such.[45] Again, the 2024 ELG Rule requires IPL to eliminate all managed leachate discharges "as soon as possible."[46]

IDNR must also address IPL's apparent discharge of *unmanaged* combustion residual leachate from the Ottumwa Midland Landfill. IPL has used the underdrain system to collect and pump as much as 84,000 gallons of groundwater per day[47] and discharge it through a point source to an

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[41] *Id*. (emphasis added).
[42] 89 Fed. Reg. at 40,292.
[43] *Id.*; 40 C.F.R. § 423.11(r).(emphasis added).
[44] 89 Fed. Reg. at 40,247; 40 C.F.R. § 423.11(ff)(2).
[45] 40 C.F.R. § 423.11(r) (combustion residual leachate "includes wastewater from landfills and surface impoundments located on *non-adjoining property when under the operational control of the permitted facility*.") (emphasis added).
[46] 89 Fed. Reg. at 40,200; *see generally* 40 C.F.R. § 423.13.
[47] 2025 Antidegradation Alternatives Analysis at pdf page 1.

area IPL characterizes as a wetland,[48] which flows to an unnamed creek that enters the Des Moines River north of Ottumwa. Although IPL continues to claim the underdrain water consists solely of background groundwater that does not contact any landfilled waste,[49] IPL's own groundwater monitoring data demonstrates that the Ottumwa Midland Landfill underdrain groundwater discharges contain heavy metals and toxic pollutants commonly found in combustion residual leachate, including arsenic, barium, boron, calcium, cobalt, iron, lithium, magnesium, manganese, molybdenum, and zinc. [50] In the instances highlighted below, the underdrain water exceeds the concentrations in the background wells (and sometimes that of the leachate itself in 2024).

Table 3. Average Pollutant Concentrations.[51]

	Background Wells		Underdrain, 2020-2024		Leachate, 2024
Parameter *(µg/L unless noted)*	**M-1/1R**	**MW-102P**	**GU-1**	**GU-EX**	**Basin**
Arsenic			<0.88	2.2	9.7
Barium	71	23	45	64	72
Beryllium			<0.33	<0.33	<0.33
Boron		1700	520	1000	2100
Calcium (mg/L)	90	430	230	150	260
Cobalt		0.74	14	4	0.68
Copper		4.3	<1.8	7.5	<1.8
Fluoride (mg/L)	0.46		0.47	0.76	<0.38
Iron	46	5500	41	6900	<36
Lead			<0.26	1.1	<0.26
Lithium	23	230	48	26	43
Magnesium	28000	150000	67000	53000	28000
Manganese		530	2000	400	86
Molybdenum	1.6		2.2	48	680
Selenium			1.4	4.7	76
Zinc		12	40	39	<9.7
Chloride (mg/L)	29	9.4	20	32	1000
Total dissolved solids (mg/L)	470	2800	1200	1200	5000
Sulfate	80	1400	500	700	1900

B. The Underdrain Water is Just as Likely Unmanaged Leachate Without Further Demonstration

[48] Ottumwa's underdrain and pump system is "a discernible, confined, and discrete conveyance, including but not limited to any pipe, ditch, channel, tunnel, conduit, well, discrete fissure, container, . . . from which pollutants are or may be discharged." 33 U.S.C. 1362(14); 40 C.F.R. § 122.2.
[49] 2025 Antidegradation Alternatives Analysis at pdf page 3.
[50] Annual Water Quality Report, Monitoring System Evaluation Report, Leachate Performance Evaluation Report; 2024 AWQ MSER LCSPER at pages 43 and 437.
[51] *Id*. at 43, 437, Table 6.

IPL disputes the presence of combustion residual leachate in Ottumwa Midland Landfill's underdrain groundwater. The AAA claims the "underdrain water does not contact waste, and data is regularly submitted to IDNR to show that the liner remains intact."[52] However, the regularly submitted data is based on visual inspections, and as such is clearly insufficient to demonstrate an intact liner.[53] The 2024 annual inspection consisted of the following:[54]

> SCS completed a visual inspection of OML to identify signs of distress or malfunction of the CCR unit. The visual inspection included observations of the following:
> • CCR placement areas including active filling areas, intermediate cover areas, and exterior non-CCR berms or slopes.
> • Leachate collection and removal system components including visible leachate drainage layer materials, leachate vaults, cleanouts, and the leachate storage lagoon.
> • Contact water run-off management features including internal contact water drainage features and Temporary Contact Water Basin 1/2.
> • Non-contact storm water run-on and run-off control features including swales and sedimentation basins located adjacent to active fill areas but outside the landfill limits.
> • Groundwater underdrain system components including the visible underdrain discharge pipes.

The visual inspection cannot conclusively demonstrate that the liner is intact, or that the underdrain water has not come into contact with the coal combustion residue.

In fact, the hydrogeological studies concluded that the Ottumwa Midland landfill was constructed over old underground coal mines raising the prospects that the liner is not intact.[55] At the time, this raised the very likely prospect that underground cavities would jeopardize the structural integrity of the landfill structures rendering the site unacceptable.[56] Despite evidence that the site was not acceptable, the landfill construction proceeded.

During construction additional evidence of landfill instability suggests the landfill is prone to a lack of structural integrity.[57] In 1995, the engineering contractor for the landfill construction sent a letter notifying IDNR of "a small landslide" on the east berm due to the slope material and groundwater seepage.[58] The letter called for the installation of "finger drains" to reduce

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[52] 2025 Antidegradation Alternatives Analysis at pdf page 2.
[53] Periodic Inspection report December 2024, available at https://ccr.alliantenergy.com/-/media/aeccr/ccrdocuments/ottumwa/landfill/operatingcriteria/omlannuallfinspection2024.pdf?sc_lang=en
[54] *Id.* at 3.
[55] *See* meeting notes from January 14, 1994 identifying the discovery of underground coal mines during the hydrogeologic study, available at https://programs.iowadnr.gov/solidwaste/OpenText/DownloadDocument/66345
[56] *Id.*
[57] Thomas Blair (Project Engineer), "Geotechnical Report - Landslide Area" (January 19, 1995), available at https://programs.iowadnr.gov/solidwaste/OpenText/DownloadDocument/59293.
[58] *Id.*

groundwater in the area and avoid further landslides.[59]

More significantly, the landslide was followed by settling during early operation of the landfill that caused a leachate line to crack.[60] The crack occurred near the end of the leachate line, which caused erosion the operator could see.[61] Had the crack been further up the line, rather than at the end, it is not clear that the operator would have known about it. This type of structural instability shows that the assumptions of separation between the coal combustion residue and the underdrain require more proof than a surface-level visual inspection.

The following wells showed exceedances of the ground water protection standards (GWPS) as part of the 2024 Annual Water Quality Report:[62]

> GWPS exceedances in 2024 were:
> - Shallow wells:
>   - Cobalt above the SWS at MW-108
>   - Lithium above the GWPS at MW-1R, MW-15R, MW-100R, and MW-108
>   - Manganese above the SWS at wells MW-15R and MW-108
> - Mid-depth Pennsylvanian wells:
>   - Lithium at MW-12, MW-13, MW-14, MW-16R, and MW-102P

Notably, as shown in Table 2, the underdrain water exceeds the GWPS for cobalt, lithium and manganese. Although IPL attempts to point to other sources as being responsible for the exceedances, given the potential lack of structural integrity and stability issues, it is just as plausible that the coal combustion residue is contributing to the exceedances and is contaminating the underdrain water.

The Company does not dispute that the groundwater is contaminated and no longer eligible for discharge under Stormwater General Permit No. 1. Moreover, IPL now collects wastewater from the leachate system (which is discharged through the Landfill Outfall 001) together with the underdrain collection system (which is discharged through Outfalls 002 and 003) for transport offsite by truck.[63] As noted, because IPL maintains "operational control" over both the Ottumwa Generating Station and the Ottumwa Midland Landfill, IDNR must evaluate whether the wastewater collected at the Landfill includes managed or unmanaged leachate.

As noted above, there is no dispute that the Ottumwa Midland Landfill uses a managed leachate system. Under the 2024 ELG Rule, IPL must eliminate all managed leachate discharges "as soon as possible beginning July 8, 2024, but no later than December 31, 2029."[64] If unmanaged leachate from the Landfill has leaked into the Ottumwa Landfill's underdrain system, IDNR

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[59] *Id.*
[60] *See* December 20, 1995 letter notifying DNR of a cracked leachate line due to settlement, *available at* https://programs.iowadnr.gov/solidwaste/OpenText/DownloadDocument/59253
[61] *Id.*
[62] Annual Water Quality Report, Monitoring System Evaluation Report, Leachate Performance Evaluation Report; 2024 AWQ MSER LCSPER at page 16.
[63] Industrial User Permit (Permit Number 36) for Ottumwa Midland Landfill, Ottumwa Water Pollution Control Facility.
[64] 40 C.F.R. § 423.13(*l*)(i)(A).

must impose numeric arsenic and mercury limits on any such discharges, as soon as possible.[65]

IV. The AAA Completely Misunderstands Social and Economic Importance.

Antidegradation regulations prohibit degradation of water unless the lower water quality is "necessary to accommodate important economic or social development in the area in which the waters are located."[66] The DNR has explained that this importance addresses the "social and economic benefits to the community that will occur from any activity resulting in a new or expanded discharge"[67]

The AAA notes "Alternative 3 uses Iron Removal via Bag Filters and Discharges to Wetlands.[68] Alternative 1, continuing to truck the underdrain water to the Ottumwa Water Pollution Control Facility, is listed as a non-degrading alternative. [69] The AAA notes that Alternative 3 and Alternative 4 are less degrading than Alternative 2.[70] However, in attempting to justify the proposed degradation and demonstrate the important economic and social development in the area, the AAA provides an abbreviated and deficient analysis. It never identifies the "benefits to the community" that justify the new discharge.

The analysis compares five social and economic factors of Ottumwa to the Iowa average. The analysis notes that this implies that Ottumwa is more susceptible to social and economic disruption than the average town in Iowa, and that "IPL has an obligation to prevent unnecessary increases to energy customer costs."[71] The AAA further claims that Alternative 3 "is not anticipated to impact the local community" and offers significant cost savings long-term compared to the other Alternatives.[72] These claims misrepresent the impact of costs and ignore the potential downstream impact of the degradation on the community drinking water supply.

The analysis never identifies impacts to the local community – either socioeconomic benefits or avoided costs – that could possibly justify degradation. The only potential socioeconomic benefit identified in the AAA is avoidance of treatment costs. But those costs would be spread over the full-service area of IPL, not just Ottumwa customers.

The AAA estimates the 20-year cost of indirectly discharging to the Des Moines River with treatment for iron removal at $1.85 million ($92,600 per year) while estimating the 20-year cost of treating the underdrain water prior to discharge using reverse osmosis at $16.65 million ($832,730 per year).[73] The AAA claims that this difference in 20-year costs ($3.5 million) is significant, and implies that the cost to treat the water poses an "important economic impact."

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[65] 40 C.F.R. § 423.13(*l*)(ii) & Tbl. 11.
[66] 40 C.F.R. § 131.12(a)(2); IOWA ADMIN. CODE r. 567-61.2(2)(b).
[67] AIP at 2.
[68] 2025 Antidegradation Alternatives Analysis at pdf page 15.
[69] *Id.* at 8.
[70] *Id.* at 16.
[71] *Id.* at 18.
[72] *Id.* at 18.
[73] *Id.* at 9, 11.

In the latest IPL rate case, the agreed upon amount IPL is allowed to charge customers annually was $1,961,339,337.[74] Although rates are determined based on a class of service study, and the rates for industrial, commercial, and residential customers are based on the cost to serve each class of customer, for purposes of demonstrating the insignificant impact of the cost to treat the underdrain water, a simplified analysis is sufficient. In 2024, IPL sold 13,612,143,000 kwh to customers.[75]As demonstrated below, the customer impact to treat the water using reverse osmosis prior to discharge adds a little over 6.12 cents to a residential customer's electric bill, compared to the customer impact to discharge after iron filtration to the wetland adding 0.68 cents to the customer's electric bill.

Table 4. Marginal cost of treatment for typical residential customer.

	20-Year Cost	Average cost/year	2024 Kwh sold	$/Kwh	Customer impact per month*
Alternative 3	$ 1,852,000	$92,600	13,612,143,000	0.0000068	$ 0.007
Alternative 4	$ 16,654,600	$832,730	13,612,143,000	0.0000612	$ 0.061
Alternative 1	$ 25,929,000	$1,296,450	13,612,143,000	0.0000952	$ 0.095
* Based on average residential customer usage of 1000 kwh/month					

By any definition, this is an insignificant economic impact to either the local community or IPL customers. In fact, even alternative 1 to continue trucking to the Ottumwa Water Pollution Control Facility would add under ten cents to a residential customer's bill.

The AAA also argues that the degradation is justifiable because the effluent being discharged will still reach the same body of water (Des Moines River) while avoiding the need for treatment.[76] However, the AAA does not mention or discuss the underdrain water POCs above groundwater protection standards from OML in the design conditions or in the alternatives analysis.[77]

Five miles downstream from the proposed discharge, the City of Ottumwa has a drinking water intake on the Des Moines River.[78] The AAA proposes to discharge the underdrain water to the wetland with minimal treatment.[79] The AAA makes no effort to account for potential treatment costs by the city for removing the tons of pollutants discharged by from underdrain. By its own findings, the socioeconomic analysis of Ottumwa means that if the drinking water treatment system requires upgrades due to the pollution load, the community is "more susceptible" to disruption from those costs.[80]

Because the AAA did not identify any legitimate social or economic benefits from the degradation, no degradation is allowed by law.

[74] IPL Rate Case Order, RPU-2023-0002, September 17, 2024 at 6.
[75] IPL 2024 FERC Form 1 at page 304.
[76] *Id.* at 6 -12.
[77] *Id.* at 6 -12.
[78] See Antidegradation Alternatives Analysis at 22.
[79] See 2025 Antidegradation Alternatives Analysis at 17.
[80] *Id.* at 14.

V. The AAA Cannot Ignore Ancillary Water Quality And Environmental Justice Benefits of Treatment.

In its recently revised technology-based effluent limitations guidelines and standards (ELGs) for the steam electric power generating point source category, EPA included an analysis on environmental justice. The analysis showed that benefits associated with improvements to water quality, wildlife, and human health resulting from reductions in pollutants in surface water and drinking water will accrue to minority and low-income populations at a higher rate under some or all of the proposed regulatory options.

Using the Environmental Justice Screening tool,[81] the area within 15 miles of the Ottumwa Midland Landfill has potentially significant environmental justice issues. The area is above the 50th percentile nationally for multiple demographic indicators (low-income, unemployment, limited English speaking households, less than high school education, under age 5, and over age 64) as well as numerous environmental indicators (lead paint, Superfund proximity, RMP facility proximity, underground storage tanks, and drinking water non-compliance).[82]

Figure 3. EJScreen Report Center Point.

[81] "EJScreen," available at https://pedp-ejscreen.azurewebsites.net/ (last visited Sept. 3, 2025) (re-posting EPA's EJScreen data on a non-governmental website).
[82] "EJScreen Multisite Report," available at https://ejamapi-84652557241.us-central1.run.app/report?lon=-92.450358&lat=41.07912&buffer=15 (last accessed Sept. 4, 2025).

Table 5. EJScreen Multisite Report.

SELECTED VARIABLES	VALUE	STATE AVERAGE	PERCENTILE IN STATE	USA AVERAGE	PERCENTILE IN USA
POLLUTION AND SOURCES					
Particulate Matter (PM 2.5 in ug/m3)	7.61	7.66	59	8.45	32
Ozone (ppb)	56.7	57.9	29	61.8	31
Nitrogen Dioxide (NO2)	5.2	7.0	27	7.8	25
Diesel Particulate Matter (ug/m3)	0.104	0.113	54	0.191	30
Toxic Releases to Air	560	2,800	46	4,600	48
Traffic Proximity and Volume (daily traffic count/distance to road)	590,000	1,400,000	55	1,700,000	43
Lead Paint Indicator (% pre-1960s housing)	0.53	0.45	58	0.3	76
Superfund Proximity (site count/km distance)	0.00	0.16	71	0.39	56
RMP Proximity (facility count/km distance)	0.45	0.89	39	0.57	61
Hazardous Waste Proximity (facility count/km distance)	0.5	0.6	56	3.5	32
Underground Storage Tanks (UST) indicator	1.7	1.9	68	3.6	60
Wastewater Discharge Indicator (toxicity-weighted concentration/distance)	5	1,100	35	700,000	31
Drinking Water Non-Compliance	1.0	0.16	96	2.2	84
SOCIOECONOMIC INDICATORS					
Demographic Index USA	1.13	1.31	73	1.34	49
Supplemental Demographic Index USA	1.75	1.46	78	1.64	62
% Low Income	36%	29%	70	30%	64
% in limited English-speaking Households	3%	2%	83	5%	69
% Unemployed	4%	4%	66	6%	54
% with Less Than High School Education	12%	8%	80	11%	64
% under Age 5	6%	6%	60	5%	64
% over Age 64	18%	19%	49	18%	57
% People of Color	19%	15%	71	40%	35

At a state level, the area is at the 84th percentile in the state for drinking water non-compliance. The antidegradation analysis makes no mention of the drinking water intake for the City of Ottumwa downstream from the proposed discharge point.

Accordingly, we recommend that Interstate Power and Light consider the environmental justice issues associated with Ottumwa as a part of a new antidegradation analysis.

VI. The AAA Conflates the Need to Operate the Underdrain System with Justified Degradation.

The AAA notes that the underdrain system is required to continue to discharge to maintain landfill stability and comply with the disposal permit issued by the IDNR, regardless of whether the generating station or landfill were to cease operations.[83] It then makes a giant leap in logic that "degradation of surface water is justified because the landfill is required to maintain a separation between the groundwater table and liner."[84]

[83] 2025 AAA at 17.
[84] *Id.*

As discussed above, antidegradation regulations prohibit degradation of water unless the lower water quality is "necessary to accommodate important economic or social development in the area in which the waters are located."[85] Not only has the AAA failed identify any legitimate social or economic benefits from the degradation, it failed to identify any alternatives to minimize the degradation under the claim that the landfill is required to maintain a separation between the groundwater table and liner.

VII. Conclusion

Prior to issuing an NPDES permit for OML, IPL must perform the AAA to address cobalt, lithium, manganese, and molybdenum as pollutants of concern in the underdrain water and expand the alternatives to evaluate chemical precipitation. In addition, the AAA must analyze the social/economic importance and provide a justification for degrading water quality in the immediate receiving waters and the Des Moines River. In conducting its evaluation, IPL needs to address the ancillary benefits to water quality and environmental justice issues.

Thank you for the opportunity to comment. We would be happy to discuss any of these comments informally prior to submission of the final alternatives analysis to DNR. If you have questions or we can clarify these comments further, please feel free to contact us.

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[85] 40 C.F.R. § 131.12(a)(2); IOWA ADMIN. CODE r. 567-61.2(2)(b).