

# MEMORANDUM

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**To:** SFSWMA Joint Powers Board Members  
**From:** Randall Kippenbrock, P.E., Executive Director <sup>RLK</sup>  
**Date:** May 10, 2026  
**Subject:** Request for Approval of Closure/Post-Closure Care Cost Estimates for the Caja del Rio Landfill

## SUMMARY

The Agency is requesting the Board approve the closure and post-closure care cost estimates totaling \$11,369,251 for the Caja del Rio Landfill (Landfill), effective June 30, 2026.

The Agency's auditors may reflect the updated cost estimates in the FY-26 financial statements.

## BACKGROUND

On May 15, 2025, the Board approved the June 30, 2025, closure and post-closure care cost estimates for the Landfill, totaling \$11,074,899. These estimates were published in a May 10, 2025, report prepared by Randall Kippenbrock, P.E.

The cost estimates for June 30, 2026, were developed based on the estimates from June 30, 2025, and were adjusted for an annual inflation rate of 2.7%, using data from the Bureau of Labor Statistics of the U.S. Department of Labor.

All other conditions/factors for the cost estimates remained unchanged.

The filled/active disposal area of the Landfill subject to closure and post-closure care is the entire West Phase (Cells 1-6B) permitted disposal area, totaling 87.3 acres. The East Phase (Cells 7-11) permitted disposal area, totaling 54.3 acres, is not included.

## ACTION REQUESTED

The Agency requests the Board approve the cost estimates for the Landfill's June 30, 2026, closure and post-closure care.

Attachment: Closure/Post-Closure Care Cost Estimates for Landfill for June 30, 2026

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**Attachment**

**Closure/Post-Closure Care Cost Estimates for Landfill for June 30, 2026**

**Closure / Post-Closure Care and Phase I / II Assessment  
Cost Estimates  
for June 30, 2026**

**Caja del Rio Landfill  
SWB Permit No. SWM-261708 and SW98-05(M)  
Santa Fe, Santa Fe County, New Mexico**

**prepared for:**

**Santa Fe Solid Waste Management Agency  
Caja del Rio Landfill  
149 Wildlife Way  
Santa Fe, NM 87506**

**prepared by:**

**Randall Kippenbrock, P.E.  
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149 Wildlife Way  
Santa Fe, NM 87506**

**April 25, 2026**



*Randall Kippenbrock  
4/25/26*

**Closure / Post-Closure Care and Phase I / II Assessment  
Cost Estimates  
for  
June 30, 2026**

**Santa Fe Solid Waste Management Agency  
Caja del Rio Landfill**

The following describes the cost estimates for closure, post-closure care, Phase I assessment and Phase II assessment as per 20.9.10 New Mexico Administrative Code, Financial Assurance.

The closure cost estimate requires a detailed written estimate, in current dollars, showing the cost of hiring a third party to close the largest area of the landfill ever requiring a final closure at any time during the active life when the extent and manner of its operation would make closure the most expensive, as indicated by its final closure plan under 20.9.10.9 NMAC.

The post-closure care cost estimate is based on a detailed written estimate, in current dollars, showing the most expensive costs of hiring a third party to conduct post-closure care for the landfill in compliance with the post-closure care plan under 20.9.10.10 NMAC.

Both Phase I and Phase II assessments are based on written estimates, in current dollars, of the costs of hiring a third party to conduct activities in accordance with 20.9.10.11 NMAC.

This report does not include the cost estimate for a corrective action program.

The unit costs are based on SFSWMA experience with cell development and liner construction projects. The unit costs are not site-specific and include a breakdown of labor, equipment, materials, and other costs. The unit costs, however, are within the range commonly found in cost-estimating references (e.g., cost estimates from consultants/contractors, RS Means, and the EPA).

The closed landfill site will comprise 495 permitted acres, including the disposal area, surrounding buffer zones, and the property designated for drainage, storage, and maintenance facilities.

The annual inflation adjustment for Year 2025 is 2.7%, based on data from the U.S. Department of Labor's Bureau of Labor Statistics.

**The closure cost estimate is based on the following conditions:**

1. Current site conditions.
2. Closing the filled waste disposal area (constructed cells) and placing final cover.
3. The filled/active disposal area encompasses the full  $\pm$  87.3 acres of the West Phase Cells 1-6B permitted disposal area (footprint). This does not include the East Phase Cells 7-11 permitted disposal area (footprint) of 54.3 acres.

4. The required final cover type for the Subtitle D cells consists of an erosion layer (6"), an infiltration layer (18"), and an intermediate cover (12").
5. Assumes the intermediate cover is in place under 20.9.5 NMAC ( $\pm$  73.3 acres).
6. Based on the above, the total number of acres requiring final cover for closure is 87.3 acres as of June 30, 2026, and 87.3 acres at the end of the 20-year permit life.
7. No final cover has been installed (0 acres).

**The post-closure cost estimate is based on the following:**

1. The total number of acres for post-closure care is 87.3 acres.
2. Assume re-seeding every five years for 5% of the landfill area.
3. Assume cover repair for 5% of the landfill area.
4. All groundwater monitoring wells and the active methane gas system are in place prior to closure.
5. Assume the active landfill gas (methane) collection system can be removed after a minimum of 15 years of operation after the landfill closes.
6. The annual leachate volume will drop substantially once intermediate or final cover is applied to an area.
7. Annual groundwater detection monitoring and reporting for the approved Reduced Parameter Sampling List for 24 years.
8. Six years of annual groundwater detection monitoring and reporting for 20.9.9.20 NMAC Subsections A and C.
9. Quarterly methane gas monitoring and reporting for 30 years.

**The cost estimate for Phase I assessment is based on the following:**

1. Assessment monitoring and corrective action are required for a ten-year period.
2. Initial assessment monitoring within 90 days of the determination of an exceedance under Subsection M of 20.9.9.10 NMAC to include sampling and analyzing the groundwater for all constituents and parameters referenced and listed in Subsections B and C of 20.9.9.20 NMAC for each downgradient well (MW-2R and MW-4R).
3. Sample and analyze for any constituents detected in the downgradient wells during the initial assessment monitoring, collecting a minimum of four independent samples from

each upgradient and downgradient well (MW-1, MW-2R, MW-4R).

4. Costs for the 90-day assessment monitoring in MW-1, MW-2R, and MW-4R, per Subsection D (2) of 20.9.9.13 NMAC. This includes sampling and analysis for all constituents listed in Subsections A and C of 20.9.9.20 NMAC, as well as the detected constituents listed in Subsection B of 20.9.9.20 NMAC.
5. Costs for preparing and submitting a report covering the methods and results of the initial assessment monitoring, four independent rounds of assessment monitoring, and the additional 90-day assessment monitoring period.
6. Semiannual monitoring in MW-1, MW-2R and MW-4R for Subsections A and C of 20.9.9.20 NMAC, plus assessment monitoring detections in Subsection B of 20.9.9.20 NMAC, for eight events.
7. Additional detection monitoring costs for the assessment detections in wells MW-1, MW-2R and MW-4R.
8. Assessment monitoring in MW-1, MW-2R and MW-4R for Subsection B of 20.9.9.20 NMAC is required at least once every five years (two events).
9. Install two downgradient corrective action wells per NMED. Costs are based on Well P-5, installed at the landfill in September 2006.
10. Monitoring in the two corrective action wells for the assessment detections.
11. Costs for preparing and submitting a report covering the methods and results of the corrective action well installation and sampling activities.
12. Semi-annual monitoring in the two correction action monitoring wells for the assessment detections.

**The cost estimate for Phase II assessment is based on the following:**

1. Phase II cost is estimated to be \$100,000.

**CAJA DEL RIO LANDFILL - JUNE 30, 2026 CLOSURE COST ESTIMATE <sup>(1)</sup>**

<b>COST ITEM</b>	<b>UNIT</b>	<b>COST</b>	<b>QUANTITY</b>	<b>TOTAL COST</b>
<b>Engineering Costs</b>				
Topographic Survey	Per Acre	\$222	87.3	\$19,381
Boundary Survey for Affidavit	Lump Sum	\$8,764	1	\$8,764
Site Evaluation	Per Acre	\$488	87.3	\$42,602
Final Closure Plans	Per Acre	\$531	87.3	\$46,356
Contract Administration, Bidding and Award	Lump Sum	\$17,532	1	\$17,532
Administrative Costs	Lump Sum	\$17,532	1	\$17,532
Closure Inspection & Testing	Per Acre	\$6,137	87.3	\$535,760
SUBTOTAL.....				\$687,927
10% CONTINGENCY.....				\$68,793
ENGINEERING TOTAL.....				\$756,720
<b>Construction Costs</b>				
Erosion Layer Placement (6" layer and on-site; 87.3 ac)	Per Cubic Yard	\$5.88	70,422	\$414,081
Infiltration Layer Placement (18" layer and on-site; 87.3 ac)	Per Cubic Yard	\$5.88	202,554	\$1,191,018
Seeding, Composting	Per Acre	\$14,928	87.3	\$1,303,214
Drainage Swales	Per Acre	\$2,629	87.3	\$229,512
Active Landfill Gas Well Installation for Cell 6B (13 wells)	Per Well	\$48,347	13	\$628,511
Site Grading & Drainage	Per Acre	\$2,629	87.3	\$229,512
Site Fencing and Security	Lump Sum	\$5,256	1	\$5,256
SUBTOTAL.....				\$4,001,104
10% CONTINGENCY.....				\$400,110
CONSTRUCTION TOTAL.....				\$4,401,214
<b>CALCULATION OF CLOSURE COSTS</b>				
Engineering Total.....				\$756,720
Construction Total.....				\$4,401,214
Groundwater Well Installation Total.....				\$0
Contract Performance Bond: (2% of Construction Subtotal.....)				\$80,022
Legal Fees: (25% of Engineering Subtotal + 10% of Construction Subtotal) .....				\$572,092
<b>TOTAL CLOSURE COST .....</b>				<b>\$5,810,048</b>

1. Total costs rounded to the nearest dollar. CPI for Year 2025 is 2.7%.

**CAJA DEL RIO LANDFILL - JUNE 30, 2026 POST-CLOSURE COST ESTIMATE <sup>(1)</sup>**

COST ITEM	UNIT	COST	QUANTITY	TOTAL COST
<b>Engineering Costs</b>				
Post Closure Plan (one-time event)	Lump Sum	\$13,145	1	\$13,145
Site Inspection & Recordkeeping	Per Annum	\$5,256	30	\$157,680
Correctional Plans & Specifications	Per Annum	\$4,208	30	\$126,240
<b>Site Monitoring Costs</b>				
Detection Monitoring and Reporting for 3 Wells - Reduced Parameter Sampling List	Per Event	\$11,509	24	\$276,216
Detection Monitoring and Reporting for 3 Wells - Subsections A and C of 20.9.9.20 NMAC	Per Event	\$16,172	6	\$97,032
Methane Gas Monitoring and Reporting for 10 Probes	Per Annum	\$5,216	30	\$156,480
<b>Construction and Maintenance Costs</b>				
Cover Repair for 5% of the Landfill Area - 87.3 ac (6" layer and on-site; 5% = 4.37 ac) <sup>(2)</sup>	Per Event	\$20,706	30	\$621,180
Reseed 5% of the Landfill Area <sup>(3)</sup>	Per Event	\$11,197	6	\$67,182
Fence, Gate and Sign Repair /Replacement	Per Annum	\$1,055	30	\$31,650
Groundwater Monitoring Well Replacement <sup>(4)</sup>	Per Annum	\$3,844	30	\$115,320
Groundwater Monitoring Well Maintenance <sup>(5)</sup>	Per Well	\$1,538	3	\$4,614
Active Landfill Gas System - Operation & Maintenance <sup>(6)</sup>	Per Annum	\$162,448	15	\$2,436,720
Decommissioning Active Landfill Gas System (41 wells)	Per Event	\$279,902	1	\$279,902
Leachate Disposal <sup>(7)</sup>	Per Gallon	\$0.090	120,000	\$10,800

<b>CALCULATION OF POST-CLOSURE COSTS</b>	
SUBTOTAL (30-year post-closure period excluding post-closure plan)	\$4,381,016
10% CONTINGENCY .....	\$438,102
Post Closure Plan (one-time cost).....	\$13,145
<b>TOTAL POST CLOSURE COST (Subtotal costs and 10% contingency plus post closure plan)</b>	<b>\$4,832,263</b>

1. Total costs rounded to the nearest dollar. CPI for Year 2025 is 2.7%.
2. Cost is erosion layer placement under the construction section for closure cost.
3. Assume re-seeding once every five years for 5% of the landfill area.
4. Cost includes replacing one of the groundwater wells during the 30-year post-closure period.
5. Cost includes replacement of pumps, well pads and padlocks for 3 wells.
6. Assume the active landfill gas collection system can be removed after a minimum of 15 years in operation after landfill closure.
7. Estimated quantity of leachate generated over the 30-year post-closure period.

**CAJA DEL RIO LANDFILL - JUNE 30, 2026**  
**COST ESTIMATES FOR PHASE I AND PHASE II ASSESSMENT <sup>(1)</sup>**

COST ITEM	UNIT	COST	QUANTITY	TOTAL COST
<b>Phase I Assessment Costs</b>				
Initial Assessment Monitoring for all Constituents for Each Downgradient Wells: MW-2R, MW-4R; Subsections B and C of 20.9.9.20 NMAC	Per Well	\$5,868	2	\$11,736
Four Independent Assessment Monitoring for Detected Constituents from the Initial Assessment Monitoring - Upgradient and Downgradient Wells: MW-1, MW-2R, MW-4R	Per Well	\$2,022	12	\$24,264
Assessment Monitoring Within 90 Days for all Constituents in Subsections A and C, plus Detected Constituents in Subsection B for MW-1, MW-2R, MW-4R	Per Event	\$11,737	1	\$11,737
Assessment Monitoring Report	Per Report	\$5,216	1	\$5,216
Semi-Annual Monitoring - Subsections A and C, plus Assessment Monitoring Detections - Subsection B in MW-1, MW-2R, MW-4R for Eight (8) Events <sup>(3)</sup>	Per Event	\$16,902	8	\$135,216
Additional Assessment Monitoring Detections - Subsection B in MW-1, MW-2R, MW-4R	Per Event	\$587	10	\$5,870
Assessment Monitoring Detections - Subsection B in MW-1, MW-2R, MW-4R at Least Once Every Five (5) Years	Per Event	\$25,627	2	\$51,254
Corrective Action Well (CAW) Installation	Per Well	\$108,818	2	\$217,636
CAW Sampling	Per Well	\$2,022	2	\$4,044
CAW Installation and Sampling Report	Per Report	\$13,042	1	\$13,042
CAW Semi-Annual Monitoring for Two (2) Wells	Per Event	\$4,042	20	\$80,840
SUBTOTAL .....				\$560,855
10% CONTINGENCY .....				\$56,086
<b>TOTAL PHASE I ASSESSMENT COST .....</b>				<b>\$616,941</b>
<b>Phase II Assessment Costs</b>				
Phase II Assessment Total, per NMED	-	\$100,000	1	\$100,000
SUBTOTAL .....				\$100,000
10% CONTINGENCY .....				\$10,000
<b>TOTAL PHASE II ASSESSMENT COST.....</b>				<b>\$110,000</b>

1. Total costs rounded to the nearest dollar. CPI for Year 2025 is 2.7%.
2. Assessment monitoring and corrective action are required for a 10-year period.
3. Costs for eight of the 16 semi-annual events are covered in the post-closure care costs under site monitoring costs.