

From: [Elijah Welch](#)
To: [IDEM OLO Solid Waste Permits Submittals](#)
Cc: [Pat Smoker](#); [Darren Duncan](#); [Elijah Welch](#)
Subject: New Paris Pike Landfill Annual Contour Update FP #89-02
Date: Friday, June 14, 2024 2:01:48 PM
Attachments: [2023 Landfill Airspace Calcs worksheet.pdf](#)
[2023 NEW PARIS PIKE LANDFILL COVER LETTER.pdf](#)

**** This is an EXTERNAL email. Exercise caution. DO NOT open attachments or click links from unknown senders or unexpected email. ****

See attached. These files, in addition to the CAD file, may be downloaded using the link below. If you have any issues with the download, please let me know.

<https://drive.google.com/drive/folders/19JSPxeWmSSMIIPgQoKdLfpK4GTRcnOZD?usp=sharing>

Thanks,

Elijah W. Welch, P.E. | District Engineer
Richmond Sanitary District
2380 Liberty Ave.
Richmond, IN 47374
Office 765.983.7483
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New Paris Pike Landfill Airspace Calculations

Prepared by the Richmond Sanitary District

June 14, 2024

1. Airspace Consumed Between March 16, 2023 and April 8, 2024:

Volume of airspace consumed	133,528 cubic yards ¹
Tonnage of waste disposed	83,177 tons ²

2. Estimated Density of Airspace Consumed:

	83,177 tons
	133,528 cubic yards
Waste per cubic yard of airspace (in tons)	0.63 tons
Waste per cubic yard of airspace (in pounds)	1260 lbs

3. Estimated Volume of Permitted Airspace Remaining in Phases 3 and 4:

a. Total permitted airspace in Phases 3 and 4	11,067,355 cubic yards ³
b. Estimated volume of permitted airspace remaining in Phases 3 and 4	7,488,073 cubic yards ⁴
c. Estimated volume of airspace remaining in presently constructed cells	2,453,980 cubic yards ^{5,7}
d. Estimated tonnage of waste remaining in presently constructed cells	
Average density over 10 of past 15 years	0.61 tons per cubic yard ⁸
Tons of waste	1,496,879 tons⁷

4. Estimated Remaining Life of Constructed Airspace

Average annual gate rate in <u>2023-2024</u>	83,177 tons
Estimated remaining life of constructed airspace	18.00 years⁷

5. Airspace Expiration

Date of Survey	4/8/2024
Remaining constructed airspace will be consumed by (latest date – based on filling to maximum permitted grades) ⁷	4/7/2042

6. Construction Schedule

The latest construction, 12.4+/- acres construction of Cell 4A/4B and Piggyback, was approved for use by IDEM on May 1, 20

Notes:

¹ Airspace was measured using an aerial topographic survey done on 3/19/2011, and a survey done on 3/15/2022. Topographic surface models were prepared with AutoCAD computer software; the difference between the two surface models represents the airspace consumed between the dates listed.

² Waste tonnage is from 2021 and 2022 New Paris Pike Landfill gate records

³ From Major Permit Modification Application, approved December 20, 2002

⁴ Estimated constructed volume of airspace remaining is calculated by subtracting the consumed airspace from the maximum permitted airspace in Phases 3A, 3B, 3C, 3D, 3E, 3F, 3G and 4C (see attached Airspace Consumption Estimate table)

⁵ Estimated permitted constructed volume of airspace remaining is calculated using Topographic surface models in AutoCAD, the difference between the two surface models represents the airspace remaining. This is reflected in the calculation for airspace remaining in the constructed cells (see attached Airspace Consumption Estimate table).

⁶ In accordance with 327 IAC 10, calculation 3(d) represents remaining permitted airspace in all currently constructed cells

⁷ These volumes assume filling to maximum permitted grades. Filling to these grades can't be accomplished before additional parts of phase 4 are constructed.

⁸ This is the average density calculated over 10 of the past 15 years. This density was used as it is believed to be a good average representation of the types of densities we can expect to achieve during filling.

Airspace Consumption Estimate

Total Permitted Airspace in Phases 3 and 4	11,067,355 cubic yards ¹
Total Permitted Airspace in Phases 3A, 3B, 3C, 3D, 3E, 3F, 3G, 4C, 4A AND 4B	6,033,262 cubic yards ²

Total Airspace consumed to date in Phases 3 and 4	
Airspace Consumed Before 3/16/2023	3,445,754 cubic yards
Airspace Consumed Between 3/16/2023 and 4/8/2024	133,528 cubic yards
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	3,579,282 cubic yards ³

Total Remaining Permitted Airspace in Phases 3 and 4

7,488,073 cubic yards⁴

Total Remaining Constructed Airspace in Phases 3A-3G, 4C, 4B, 4A

2,453,980 cubic yards⁵

Notes:

¹All airspace volumes are net volumes estimated at permitted final grades (excludes final cover and includes daily cover volumes).

²The total permitted airspace volume in Phases 3A, 3B, 3C, 3D, 3E, 3F, 3G and 4C is the net volume that is presently constructed. Therefore, this volume is the constructed airspace volume.

³The consumed airspace is located in Phases 3A, 3B, 3C, 3E, 3F, 3G and 4C. The airspace consumed volumes were estimated using AutoCAD computer software and survey work.

⁴The permitted airspace volumes were taken from the Major Permit Modification Application approved December 20, 2002.

⁵The Permitted volume remaining based on filling to the maximum permitted grades during filling.



RONALD OLER, PhD
Mayor

PATRICK SMOKER
Director

CITY OF RICHMOND

DEPARTMENT OF SANITATION
2380 LIBERTY AVENUE • RICHMOND, INDIANA 47374
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Emailed to solidwastesubmittals@idem.in.gov

June 14, 2024

Indiana Department of Environmental Management
Office of Land Quality
100 N. Senate Ave.
Indianapolis, IN 46204-2251

RE: 2023/2024 Annual Contour Update as Required by 329 IAC 10-20-24
New Paris Pike Landfill - Richmond, Indiana

To Whom It May Concern:

Attached is an electronic drawing containing the annual survey which is being submitted on the above referenced landfill by the Richmond Sanitary District. The submittal follows the procedures outlined in IDEM's Guidance for the Submission of Landfill Contour Maps and in accordance with 329 IAC 10-20-24. Also, enclosed as a separate document are airspace calculations for the site. These were prepared by the Richmond Sanitary District.

If there are questions regarding these documents, please contact me at (765) 983-7483 or by e-mail at ewelch@richmondindiana.gov.

Sincerely,

A handwritten signature in blue ink that reads "Elijah W. Welch".

Elijah W. Welch, P.E.
District Engineer

Enclosures

cc: Patrick Smoker, RSD Director
Darren Duncan, Landfill Manager

