



GRETCHEN WHITMER  
GOVERNOR

STATE OF MICHIGAN  
DEPARTMENT OF  
ENVIRONMENT, GREAT LAKES, AND ENERGY

LANSING



Phil Roos  
DIRECTOR

December 27, 2023

VIA EMAIL

«AddressBlock»

Dear «Permittee»:

SUBJECT: Perfluoroalkyl and Polyfluoroalkyl Substances (PFAS) and the Land Application of Biosolids – Notice of Modification of Approved Residuals Management Program  
Designated Name: «Site\_Name»  
Permit Number: «Permit\_Number»

In 2021, «Site\_Name» was provided notification that the Department of Environment, Great Lakes, and Energy (EGLE), Water Resources Division (WRD), modified the facility's Residuals Management Program (RMP) to incorporate conditions of the *Land Application of Biosolids Containing PFAS Interim Strategy (2021)*. With this letter, EGLE is providing notification of an update to the *Land Application of Biosolids Containing PFAS* (hereafter *2024 Interim Strategy*) and is hereby modifying the approved RMP for your facility by incorporating the conditions contained in the updated [2024 Interim Strategy](#). Specifically, facilities that plan to land apply biosolids on or after January 1, 2024, may have additional requirements concerning submittal and evaluation of results, potential limitations on land application, and communication of the results to landowners/farmers as provided herein.

The implementation of these updated measures is part of a strategy to mitigate risk to public health and the environment from potential adverse effects of emerging pollutants, specifically PFAS. These additional requirements are considered a modification to the approved RMP and are made in accordance with provisions outlined within Michigan's Part 24 Administrative Rules, Land Application of Biosolids, promulgated pursuant to Part 31, Water Resources Protection, of the Natural Resources and Environmental Protection Act, 1994 PA 451, as amended (NREPA), specifically Rule 2404(1), and language contained within existing discharge permits.

The *2024 Interim Strategy* can be found by going to [Michigan.gov/Biosolids](https://Michigan.gov/Biosolids); then under the *Information* section select "Michigan Biosolids PFAS-related information and links," then under the *Interim Strategy – Land Application of Biosolids Containing PFAS* section select "Interim Strategy – Land Application of Biosolids Containing PFAS (2024)".

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Moving forward, and as new information becomes available, EGLE will continue to adapt to evolving science and make amendments to the *Interim Strategy*, as appropriate. Any future revisions to the *Interim Strategy* are to be presumed a modification to your approved RMP. The WRD will provide written notification of the updates to the *Interim Strategy* accordingly.

Background information about PFAS, as well as information about Michigan's efforts regarding this issue, may be found in the *2021 Interim Strategy* and at [Michigan.gov/PFASLandApplication](https://Michigan.gov/PFASLandApplication).

### Updated Interim Strategy Actions

As detailed in the *2024 Interim Strategy*, the WRD is revising the following actions for facilities with approved RMPs conducting land application:

- **Inclusion of PFOA as a Limiting Analyte** – Perfluorooctanoic acid (PFOA) will be an additional regulated analyte for the land application of biosolids. Required actions will be based on the concentrations of either perfluorooctane sulfonate (PFOS) or PFOA.
- **Industrially Impacted Threshold** – Biosolids with a PFOS or PFOA concentration of 100 micrograms per kilogram ( $\mu\text{g}/\text{Kg}$ ) or parts per billion (ppb) or higher are deemed industrially impacted and cannot be land applied.
- **Mitigation and Additional Requirements** – Biosolids with PFOS or PFOA concentration at or above 20  $\mu\text{g}/\text{Kg}$ , but below 100  $\mu\text{g}/\text{Kg}$ , are considered elevated and require a reduced land application rate of 1.5 dry tons per acre (dt/acre) or an alternative risk mitigation strategy, sampling of the source effluent, and a source investigation.
- **Monitoring Frequency** – All facilities land applying Class A or Class B biosolids will be required to collect one representative sample per calendar year for PFAS prior to land application.
- **Biosolids designated as Exceptional Quality (EQ)** – For a facility to obtain and/or maintain the EQ designation for biosolids, the combined concentration of PFOS and PFOA must be below 20  $\mu\text{g}/\text{Kg}$  and the facility must demonstrate concentrations are maintained below these criteria via quarterly monitoring.
- **EPA Method 1633** – The United States Environmental Protection Agency (USEPA) is in the process of finalizing Draft Method 1633 for analysis of wastewater and solids. USEPA has indicated they expect the method will be approved for biosolids analysis by the end of 2024. EGLE will not require facilities with National Pollutant Discharge Permits or groundwater discharge

permits to analyze biosolids utilizing the approved method until it has formally been published in Title 40 of the Code of Federal Regulations (40 CFR), Part 136. That being said, the WRD recommends facilities begin researching lab availability to analyze biosolids using Method 1633 and consider utilization of the method once it is approved. The approved method will provide a consistent methodology for the analysis of 40 PFAS analytes moving forward.

### All Required Actions

As part of the *2024 Interim Strategy*, the WRD is requiring continued implementation of the following actions for all facilities with approved RMPs for land application occurring in the State of Michigan:

- **PFAS Biosolids Sampling** – A representative sample of biosolids must be collected and analyzed for PFAS prior to land application. All samples must be submitted to the WRD via the MiEnviro Portal at least two weeks prior to land application.
- **Landowners and Farmers Communication** – Facilities with approved RMPs shall provide the PFAS analytical results and additional information specific to PFAS and biosolids in Michigan prior to land application of biosolids.
- **PFAS Source Identification and Reduction** – Source identification and reduction efforts may be required (based on PFOS and/or PFOA concentrations) of biosolids and/or effluent for facilities with approved RMPs.

These general requirements are described in more detail below.

### Biosolids Sampling, Analysis, Frequency, Notification, and Evaluation Requirements

**Sampling:** Pre-application sampling of biosolids by facilities with approved RMPs is key to evaluating land application issues related to PFAS. Importantly, it will help assure industrially-impacted biosolids are not land applied. One representative sample of the final biosolids product per calendar year shall be collected prior to land application. Biosolids and sludge PFAS sampling guidance can be found by going to [Michigan.gov/PFASResponse](https://Michigan.gov/PFASResponse); then under the *Testing* section, select “Sampling Guidance”, then under the *For technical staff* section select “Biosolids and Sludge.”

**Analysis:** Currently, there are no USEPA-approved methods for PFAS analysis of sludge and biosolids. DRAFT EPA Method 1633 (an isotope dilution method) is currently undergoing multi-laboratory validation as part of the federal Clean Water Act method approval process. When a final PFAS analytical method for wastewater and solids is published in Title 40 of the Code of Federal Regulations (40 CFR), Part 136,

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Guidelines Establishing Test Procedures for the Analysis of Pollutants, this method shall be required for sampling conducted under your Permit. *PFAS results shall include the 28 analytes previously used on the Michigan PFAS Action Response Team PFAS Minimum Laboratory Analyte List*, which is enclosed for your reference. Be sure to choose a laboratory experienced in PFAS biosolids analysis that has a usual reporting level of 2 µg/Kg for PFOS and PFOA. Also note that PFAS analyses typically have a long turnaround time, up to six weeks, depending on the laboratory chosen.

All biosolids and sludge samples, including those with low solids content, shall be analyzed as solids and must be reported on a dry weight basis. The dry weight analysis (i.e., moisture content) must be performed on the samples as received, not on centrifuged solids when centrifugation is performed. The entire sample is recommended to be extracted and analyzed, even if the solids are separated by centrifugation as part of the sample preparation.

#### **Sampling Frequency and Notification:**

- **All facilities with Class A or Class B biosolids** that intend to land apply in Michigan shall, prior to land application, collect and analyze a minimum of one representative biosolids sample for PFAS in each calendar year they intend to land apply. All results of PFAS biosolids analysis and associated laboratory reports shall be submitted a minimum of two weeks prior to initial land application each year via the MiEnviro Portal schedule, *Biosolids PFAS Monitoring Report*, or as otherwise required by WRD staff.
- **All facilities with EQ biosolids** that intend to land apply in Michigan shall, prior to land application, collect and analyze, at minimum, quarterly (4) representative biosolids samples for PFAS in each calendar year they intend to land apply. All results of PFAS biosolids analysis and associated laboratory reports shall be submitted a minimum of two weeks prior to initial land application each year via the MiEnviro Portal schedule, *Biosolids PFAS Monitoring Report*, or as otherwise required by WRD staff.

**Evaluation of Results:** PFAS results will be evaluated consistent with the updated *2024 Interim Strategy*. Please evaluate the results of your residuals and provide notification to the WRD and other parties as described below.

- **Facilities with approved RMPs with PFOS or PFOA at or above 100 µg/kg in their residuals** cannot land apply and are required to do all the following:
  - Immediately notify WRD's Biosolids Program staff of PFAS results by submittal via MiEnviro Portal.
  - Arrange for alternative treatment and/or disposal of solids.
  - Sample the biosolids source wastewater treatment plant (WWTP) effluent.
  - Investigate potential sources to develop a source reduction program if this has not already been done.

- **Facilities with approved RMPs with PFOS or PFOA at or above 20 µg/kg, but below 100 µg/kg, in their residuals** require a risk mitigation strategy prior to land application and are required to do all the following:
  - Immediately notify WRD’s Biosolids Program staff of PFAS results by submittal via MiEnviro Portal.
  - Reduce land application rates to no more than 1.5 dry tons per acre or submit an alternative risk mitigation strategy for approval by WRD staff to reduce overall loading to the application site(s). Alternative risk mitigation strategies must be submitted to the WRD’s Biosolids Program staff to provide adequate time to process (minimum of 14 days but preferably 30 days) prior to the planned land application date, via the MiEnviro Portal schedule, *Biosolids Program – Alternative Risk Mitigation Strategy Report*.
  - Communicate with landowners/farmers prior to land application.
  - Sample the biosolids source WWTP effluent.
  - Investigate potential sources to develop a source reduction program if this has not already been done.
  
- **Facilities with approved RMPs with PFOS or PFOA below 20 µg/kg in their residuals** may land apply after submittal of results via MiEnviro Portal and are required to do all the following:
  - Submit results via MiEnviro Portal.
  - Communicate with landowners/farmers prior to land application.

Additional requirements, including sampling for other PFAS analytes, sampling frequency, limits, and notification requirements, may be amended as new information becomes available. In order to prepare for full implementation, the WRD recommends that these same protocols be implemented prior to that time, but they are not required.

### **Communication to Landowners/Farmers**

Prior to land application at a site, provide the PFAS analytical results to the landowner and farmer (if different), along with WRD contact information and additional information sources related to PFAS, such as Landowners/Farmers PFAS Resources available by going to [Michigan.gov/Biosolids](https://Michigan.gov/Biosolids), then under the *Information* section, select “Michigan Biosolids PFAS-Related information and links”, and then under the *Interim Strategy – Land Application of Biosolids Containing PFAS* section, select “Landowner/Farmer Notification Template Letter.”

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### More Information

If you have questions about biosolids sampling procedures for PFAS or this effort, please contact your District Biosolids Program staff. Contact information can be found by going to [Michigan.gov/Biosolids](https://Michigan.gov/Biosolids); then under the *Contact* section select “Biosolids Program Staff Map.”

If you have questions about PFAS and facilities with approved RMPs, please contact the Statewide Biosolids PFAS Contact or your Regional IPP PFAS Specialist. Contact information can be found at [Michigan.gov/IPP](https://Michigan.gov/IPP); under the *PFAS* section select “IPP PFAS Initiative,” and then under the *Strategy and Implementation* section select “IPP PFAS Staff Map.”

Please be aware that compliance with the requirements outlined in this letter does not constitute a release or waiver of liability for compliance with your Permit, Permit Application, or Part 31, Water Resources Protection, of the NREPA.

Thank you for your cooperation in this matter and for doing your part to protect Michigan’s public health and environment from these emerging pollutants.

Sincerely,



Phil Argiroff, Acting Director  
Water Resources Division

Enclosure

cc: Stephanie Kammer, EGLE

Sarah Campbell, EGLE

«**EGLE\_Biosolids\_Contact**», Biosolids Program Staff, EGLE