

Hearing Summary

Rule Package: Biosolids Program Rules
June 14, 2018

Original filing date: June 14, 2018

Public comment start date: July 24, 2018

Public comment end date: July 24, 2018

Public hearing date: _____

List of Rules: OAC 3745-40-01 through 3745-40-12

Were there any participants in this public hearing beyond Ohio EPA staff or JCARR staff?

☐ Yes

☒ No

Were there comments received during the public comment period outside of those presented at this hearing?

☒ Yes

☐ No

This hearing summary has been compiled to meet the requirements of Section 119.03 of the Revised Code.

This hearing summary includes this cover sheet and the following attachments:

1. **Attachment A** - A copy of the public notice for this hearing.
2. **Attachment B** - A copy of the sign-in sheet for this hearing.
3. **Attachment C** - A copy of the script read into the record to begin and end the hearing.
4. **Attachment D** - A copy of the response to comments.

Ohio EPA's response to comments document includes the comments received, who commented, the agency response to comments, and a statement of whether or not the rule was changed due to the comments.

Ohio EPA digitally records all public hearings for rules. The digital recordings are available upon request in a WAVE (.wav) file format. These recordings may be sent out for transcription if necessary.

**BEFORE THE
OHIO ENVIRONMENTAL PROTECTION AGENCY**

**Public Notice
Proposed Rulemaking Governing
Biosolids Program**

Notice is hereby given that the Director of Environmental Protection, under the authority of Sections 6111.03 and 6111.042 of the Ohio Revised Code and in accordance with Chapter 119, proposes to amend the following rules of the Ohio Administrative Code (OAC):

Rule Number	Rule Title
3745-40-01	Definitions.
3745-40-02	Purpose, applicability, general requirements, exclusions and prohibitions.
3745-40-03	NPDES permit requirements and biosolids management plan requirements.
3745-40-04	Biosolids classifications.
3745-40-05	Notice and necessary information requirements for biosolids.
3745-40-06	Beneficial use site authorizations for class B biosolids.
3745-40-07	Requirements for the field storage of biosolids and regional facility storage.
3745-40-08	Requirements for the beneficial use of biosolids: general requirements, prohibitions, isolation distance requirements, site specific requirements, and additional site restrictions for the beneficial use of class B biosolids.
3745-40-09	Approved sampling methods, monitoring frequency requirements, record retention and annual reporting requirements.
3745-40-10	Facility storage requirements.
3745-40-11	Signage requirements for beneficial use sites receiving class B biosolids.
3745-40-12	Compliance and enforcement; and spill notification requirements.

The rulemaking includes the five-year review of twelve rules in OAC Chapter 3745-40, which contains the rules for the disposal, use, storage, transfer, and treatment of sewage sludge and biosolids, and the beneficial use of biosolids. The major updates being considered in this rulemaking include the addition of a self-certification requirement for beneficial use sites, and the addition of requirements for approval of non-traditional or alternative feedstocks for use in anaerobic digestion.

The Agency invites all interested parties to comment on these rules. The public comment period will run until **July 24, 2018**. A public hearing on this proposed rulemaking will be held to consider public comments in accordance with Section 119.03 of the Ohio Revised Code. This hearing will be held at **Conference Room A at the Ohio EPA Central Office, 50 West Town Street, Suite 700, Columbus, Ohio at 10:30 a.m. on July 24, 2018**. All visitors to Ohio EPA must register at the

Security desk in the lobby upon arrival. Please bring photo identification (such as a valid driver's license). For security reasons, visitors are required to wear their badge at all times while in the building. Please arrive early to complete these procedures.

To facilitate the scheduling of oral presentations, persons intending to give testimony at the hearing should notify the Ohio EPA Public Interest Center, P.O. Box 1049, Columbus, Ohio 43216-1049, (614) 644-2160. Prior registration will ensure that registrants are heard ahead of those individuals who register at the hearing. Oral testimony may be limited to five minutes, depending on the number of persons testifying. All interested persons are entitled to attend or be represented and to present oral and/or written comments concerning the proposed rulemaking.

Written testimony should be sent to the attention of Emily DeLay at the Division of Surface Water, P.O. Box 1049, Columbus Ohio 43216-1049. Written comments may also be submitted to the Hearing Officer at the public hearing. Written testimony will receive the same consideration as oral testimony. All testimony received at the hearing or by close of business on **July 24, 2018**, will be considered by Ohio EPA prior to final action on this rulemaking proposal. Written comments submitted after this date may be considered as time and circumstances permit.

The proposed rules and a fact sheet explaining the rule revisions are posted on the Ohio EPA website at www.epa.ohio.gov/dsw/dswrules.aspx. The proposed rules are also available on the Register of Ohio website at www.registerofohio.state.oh.us. Questions regarding this rule package should be directed to Betsy VanWormer at the Division of Surface Water, at (614) 644-2150.



SIGN-IN SHEET

Proposed Rulemaking Governing Biosolids Program
Ohio EPA
July 24, 2018

Please Print Clearly

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NAME: _____ PHONE: _____

EMAIL ADDRESS: _____

STREET ADDRESS: _____

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OAC Rules 3745-40-01 through 3745-40-12
Proposed Rulemaking Governing Biosolids Program

July 24, 2018

My name is Darla Peelle and I am a public involvement coordinator in Ohio EPA's Public Interest Center. I will preside over today's public hearing. Thank you for attending this hearing before Ohio EPA.

The purpose of today's hearing is to obtain comments from any interested person regarding Ohio EPA's Division of Surface Water's proposed rulemaking governing biosolids program.

The rulemaking includes the five-year review of 12 rules in OAC Chapter 3745-40, which contains the rules for the disposal, use, storage, transfer and treatment of sewage sludge and biosolids, and the beneficial use of biosolids. The major updates being considered in this rulemaking include the addition of self-certification requirement for beneficial use sites, and the addition of requirements for approval of non-traditional or alternative feedstocks for use in anaerobic digestion.

To be included in the official record, written comments must be received by Ohio EPA by the close of business, today, Tuesday, July 24, 2018. These comments may be filed with us today, or sent to Emily DeLay at emily.delay@epa.ohio.gov. All written comments submitted for the record receive the same consideration as the oral testimony presented at the hearing. Statements submitted after today may be considered as time and circumstances permit, but will not be part of the official record of this hearing.

If no one is present or wishes to provide, "The time is now _____, and we will go off record until 11 a.m.

If you wish to present oral testimony at today's hearing and have not already signed the registration sheet, please do so at this time. The sheet is available at the registration table. Persons will be called in the order in which they have registered and will be limited to five minutes to present testimony.

There is no cross examination of speakers or of representatives of Ohio EPA in public hearings. Ohio EPA hearings such as this afford citizens the opportunity to provide comments on the official record. Therefore, we will not be able to answer questions during the hearing. However, members of the panel may ask clarifying questions of the person testifying to ensure the record is as complete and accurate as possible.

I will now read the names of those who have registered at this hearing and will give each person an opportunity to testify.

Is there anyone else who wishes to provide testimony?

Seeing no further requests for testimony, I remind you that written comments can be submitted through the close of business today, July 24, 2018.

Thank you for attending. The time is now _____ a.m. and this hearing is adjourned.

Seeing no requests for testimony, the time is now _____ a.m. and this hearing is adjourned.



Division of Surface Water Response to Comments

Rules: Biosolids Program Rules, OAC Chapter 3745-40

Rule Number	Title
3745-40-01	Definitions.
3745-40-02	Purpose, applicability, general requirements, exclusions and prohibitions.
3745-40-03	NPDES permit requirements and biosolids management plan requirements.
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3745-40-12	Compliance and enforcement; and spill notification requirements.

Agency Contact for this Package

Division Contact: Betsy VanWormer
Division of Surface Water
614-644-2150
Betsy.VanWormer@epa.ohio.gov

Ohio EPA held a public hearing and proposed rule comment period from June 14, 2018 to July 24, 2018 regarding twelve rules in OAC Chapter 3745-4, Biosolids Rules. This document summarizes the comments and questions received during the associated comment period.

Ohio EPA reviewed and considered all comments received during the public comment period. By law, Ohio EPA has authority to consider specific issues related to protection of the environment and public health.

In an effort to help you review this document, the questions are grouped by topic and organized in a consistent format. The name of the commenter follows the comment in parentheses.

General:

Comment 1: The Changes to OAC 3745-40-02 and 3745-40-03 will allow the Ohio EPA to hold permittees using biosolids more accountable.

The Ohio EPA has implemented the following changes to OAC 3745-40-02 and 3745-40-03:

OAC 3745-40-02:

- A requirement that the treatment, storage, transfer or disposal of sewage sludge or biosolids and the beneficial use of biosolids shall be done in a manner as to minimize odors.
- The option to use foreign/inert matter testing to obtain approval for an alternate method to meet screening requirements. Sampling results and methods would mirror Table 3 in OAC 3745-560-330.
- Requirements for approval of non-traditional feedstocks for use in anaerobic digestion.

OAC 3745-40-03:

- The Director may require an NPDES permit or biosolids management plan for the beneficial use of exceptional quality biosolids.
- The Director may establish permit conditions to specify counties where beneficial use of class B biosolids may be authorized, establish a procedure to approve feedstocks, and establish an odor management plan.
- Ohio EPA may request standard operating procedures (SOPs) in permits.
- More detailed requirements to biosolids management plans.

Taken together, these implemented changes strengthen the NPDES permit requirements for the biosolids program and provide the Ohio EPA with additional tools to manage the use of biosolids. The OEC particularly supports providing the Ohio EPA with the ability to require standard operating procedures in permits and specify the requirements of biosolids management plans in more detail.

These changes will further strengthen protections for water quality and allow the Ohio EPA to hold bad actors accountable when they fail to meet the terms of their permit. (Ohio Environmental Council, OEC)

Response 1: No response required, thank you for your feedback.

3745-40-01:

Comment 2: (A) "Agronomic Rate" - The basic concept of the agronomic rate is to match nutrient applications to what crops need for maximum growth in order to produce optimal yields. One explanation offered by the Northeast Biosolid and Residual Association states,

When biosolids and other organic residuals are applied to soil, the amount used is determined by the agronomic rate. This means that the number of tons per hectare or acre is determined based on the amount of nutrients in the biosolids/residuals and the amount of nutrients needed by the crop being grown.¹

Looking at Ohio EPA's proposed definition at 3745-40-01(E), it states:

(E) "Agronomic rate" means a rate of application of nutrients from any source to the land or an amount of nutrients removed by crop based on all of the following:

- (1) Nutrient content of the biosolids to be applied;
- (2) Nutrient needs of the current or planned crops; and
- (3) Nutrient holding capacity of the soil.

The OEC certainly supports the inclusion of an agronomic rate definition in the rules, and clarifying that all of the enumerated conditions are considered. However, we urge Ohio EPA to further clarify its meaning. As proposed, the definition does not definitively link nutrient content of the soil and biosolids to amounts necessary for optimal crop growth. This gap allows for excess nutrient applications. Therefore, we propose the following alternative definition:

(E) "Agronomic rate" means the necessary amount of nutrients from any source that must be added to the soil for optimum crop growth for one growing cycle based on all of the following:

- (1) Nutrient content of the biosolids to be applied;
- (2) Nutrient needs of the current or planned crops;
- (3) Nutrient holding capacity of the soil, which shall include nutrient content in the soil as determined by soil tests completed at least every two years using precision 2.5-acre grid or zone soil sampling or smaller.

This alternative definition ensures nutrient applications match only what is necessary for optimal crop production in a single growing season, thereby limiting multi-year applications and reducing the risk of nutrient buildup in the soil that could become a source of pollution. It also clarifies nutrient content in the soil must be informed by soil tests with sampling that ensures accurate measurement. We urge the Ohio EPA to incorporate this definition and update all other biosolids rule sections and supporting documents to reflect this direction. (OEC)

Response 2: As Ohio EPA previously stated in the response to comments from the Interested Party Review comment period:

Ohio EPA appreciates OEC's proposal of a new definition of "agronomic rate", however, the definition in the draft rules is comparable to the Northeast Biosolids and Residuals Association's (NEBRA) definition which is also cited by OEC. The NEBRA definition does not consider the nutrient content of the soil, while the draft rule definition takes the nutrient holding capacity of the soil into

¹ <https://www.nebiosolids.org/agronomic-rate/>

consideration. To alleviate the concerns raised by OEC regarding the consideration of nutrient content of the soil, soil phosphorus is addressed in rule OAC 3745-40-08. OAC 3745-40-08(D)(3) requires monitoring for soil phosphorus every three years and specifies sampling protocol to determine the appropriate agronomic rate in accordance with the soil phosphorus results as outlined in OAC 3745-40-08(A)(2). The Agency does not anticipate changing the proposed language.

Comment 3: (B)(9) *“Bulk exceptional quality biosolids’ means exceptional quality biosolids that are not sold or given away in a container ~~more than three hundred dry tons of exceptional quality biosolids beneficially used during a crop year on a beneficial use site that is utilized for the production of:~~*
(1) Feed crops;
(2) Fiber crops;
(3) Food crops; or
(4) Pasture land.”

Synagro agrees that the environment must be protected; however, the revision in our opinion is overly restrictive for bulk exceptional quality biosolids that will be beneficially used. Synagro believes striking out the quantity of biosolids would be problematic for Ohio water treatment plants that are producing bulk exceptional quality biosolids. The economic cost due to an eminently higher fee of beneficial use to the municipalities and Ohio taxpayers should be assessed. Synagro recommends no revision to the definition or amending the proposed definition to include “for any purpose other than beneficial reuse in which” between the words container and more. (Synagro)

Response 3: As Ohio EPA previously discussed with Synagro during an additional outreach period and via phone conversation:

Ohio EPA acknowledges Synagro’s concerns with the July 2017 draft change in the “bulk exceptional quality biosolids” definition, but respectfully disagrees with the sentiment that the cost to municipalities and Ohio taxpayers would increase. The proposed definition change will require records of the nutrients from the use of Exceptional Quality (EQ) biosolids on agricultural fields to be reported. Under the current definition, these records should already be maintained even if less than 300 dry tons of EQ biosolids is used at a beneficial use site during the crop year. The beneficial use of EQ biosolids on all agricultural fields should already be occurring at the appropriate agronomic rate. This includes sampling the soil every three years and providing the farmers with the biosolids nutrient content. Since the nutrient records are already being maintained, the only extra task will be providing the records to Ohio EPA on an annual basis. Ohio EPA does not foresee any additional cost incurred by municipalities that would be passed on to the taxpayers of Ohio.

The change was made to ensure that EQ biosolids are applied in accordance with the 4Rs: Right Source, Right Rate, Right Time, Right Place. The additional restrictions that will be a result of the new definition of bulk EQ biosolids include adhering to site restrictions that help prevent nutrient runoff: not applying on frozen ground or before large rains and maintaining a 33 feet

isolation distance from surface waters. Most of these are best management practices that should already be practiced under the current rules and will not result in any additional expense to the municipality. The Agency does not anticipate making changes to the definition.

Comment 4: (F) The definition of “Feedstock” (Proposed OAC 3745-40-01 Definitions.) seems unnecessarily restrictive given the myriad of organic materials that might readily be anaerobically digested. It appears the intent of the definition, in combination with the related rule regarding “Non-traditional feedstocks” (Proposed OAC 3745-40-02 Purpose, applicability, general requirements, exclusions and prohibitions.), is to carefully regulate the appropriateness of digesting materials that might affect the digestion process and thereby the material produced for beneficial reuse. The requirement for prior approval of feedstocks not conforming to the narrow list proposed, along with the associated pilot testing requirement, may inhibit broader beneficial reuse of materials that might otherwise be disposed of less favorably.

Rather than a prescriptive list of permitted feedstocks and a requirement for pilot testing, we suggest the rule be written with general proscriptions such that the utility operators would be obliged to evaluate feedstocks with respect to their compatibility for producing biosolids for beneficial reuse that comply with the quality standards already included in the rule. Under such a regulatory framework more feedstocks may be considered for beneficial reuse further advancing waste minimization in Ohio. (Metropolitan Sewer District of Greater Cincinnati)

Response 4: The Agency appreciates your comment and understands the concern with limiting the organic materials that may be used as feedstocks for anaerobic digestion. OAC 3745-40-04(B)(4) currently limits the feedstocks for anaerobic digestion to yard wastes, animal wastes, food scraps, or alternative feedstocks authorized by Ohio EPA. Existing NPDES permits for merchant anaerobic digester facilities limit feedstocks to the list found in the proposed definition of “feedstock”. Ohio EPA’s intent with the proposed changes was to increase the feedstock options while still protecting public health and the environment and encouraging the beneficial use of biosolids. Ohio EPA’s experience with feedstocks supports limiting traditional feedstocks as proposed and requiring extensive evaluation of “non-traditional feedstocks”.

The Agency does not intend to make changes to these definitions as we believe that these new definitions will not discourage participation in the beneficial use of biosolids and align with the Agency’s intended purpose of protecting public health and the environment.

Comment 5: (O) “‘Occupied structure’ means any house, building, outbuilding, mobile home, recreational vehicle, tent, or other structure or shelter, or any portion thereof, to which any of the following applies:

- (1) Is maintained as a permanent or temporary dwelling, even though the structure is temporarily unoccupied and whether or not any person is actually present.*
- (2) Is occupied as the permanent or temporary habitation of any person, whether or not any person is actually present.*
- (3) Is specially adapted for the overnight accommodation of any person, whether or not any person is actually present.*
- (4) At the time, any person is present or likely to be present in the structure.*
- (5) For mobile items such as mobile homes, recreational vehicles and tents, the mobile item is present within the applicable isolation distances prior to the commencement of beneficial use."*

The Agency's discretion on the limitation of readily mobile items present prior to beneficial use is appreciated. Accordingly, Synagro recommends a revision to the form "Occupied Building Consent for Reduced Isolation Distance: Class B Biosolids Beneficial Use Sites" to read "Occupied Structure Consent for Reduced Isolation Distance: Exceptional Quality and Class B Biosolids Beneficial Use Sites". (Synagro)

Response 5: The Agency intends to set the date that the rules become effective up to a few months out from the date of adoption. This will give the program staff enough time to update forms and other programmatic documents before the rules become effective.

3745-40-04:

Comment 6: The Ohio EPA should require permittees to obtain an equivalency recommendation from the U.S. EPA pathogen equivalency committee or otherwise state the permitting authority, rather than leave the decision up to the discretion of the Director.

In the proposed OAC 3745-40-04, the Ohio EPA has proposed to eliminate the requirement that biosolid program participants receive an equivalency recommendation from the U.S. EPA. The U.S. EPA Biosolids program requires a twelve-step process to provide an equivalency recommendation for permittees. The OEC questions this decision, for it could create an equivalency recommendations process that is less stringent than other states.

If the Ohio EPA chooses to eliminate the use of the U.S. EPA process, the Ohio EPA should ensure that the procedure the Director eventually adopts is as stringent, if not more stringent than the procedure already in place with the U.S. EPA. The OEC looks forward to reviewing the equivalency recommendation process that the director selects or develops. (OEC)

Response 6: The proposed rule change clarifies that the permitting authority, not U.S. EPA's Pathogen Equivalency Committee (PEC), has the final approval for treatment technologies that are equivalent to processes to further reduce pathogens. The proposed language allows increased flexibility while still allowing for continued consultation with the PEC. The review process itself will not change and the PEC will still be utilized for the technical evaluation when Ohio receives such

requests. The proposed language is similar to the rule language used by Michigan and Wisconsin, the other two Region 5 biosolids delegated states. This change was based on a legal evaluation of the biosolids rules, therefore, Ohio EPA does not intend to change the proposed language for pathogen reduction alternative P-16.

3745-40-06:

Comment 7: (F) The Ohio EPA should only permit self re-certification if robust oversight of the self-certification process exists. In the newly proposed OAC 3745-40-06, the Ohio EPA implements a “self-certification” procedure whereby a permittee “shall certify that prior to beneficial use, each authorized beneficial use site was evaluated for changes at or near the authorized beneficial use site.”

The OEC recognizes the intent behind developing a certification process to beneficial use of biosolids; it places the burden on the permittee to ensure that beneficial use sites are in accordance with applicable regulations prior to application.

However, the OEC would like to encourage the Ohio EPA to develop a clear mechanism for oversight of this self-certification program. The only reporting mechanism to the Ohio EPA that “no changes” have occurred to a site comes from a self-certified report from the permittee, which might incentivize under reporting of site changes on such reports. The Ohio EPA should consider implementing its own site certification program or designate a third-party that performs site certifications. Alternatively, the Ohio EPA should ensure that false reporting on these certified reports receives harsh penalties.

The OEC understands that such oversight would require significant resources, but the Ohio EPA has a responsibility to ensure that permittees report changes to beneficial use sites accurately, in order to ensure application of biosolids does not impact water quality more than it already does. (OEC)

Response 7: Ohio EPA understands OEC’s concerns with the proposed self re-certification mechanism; however, the federal regulations that Ohio EPA is delegated to implement (40 CFR Part 503) were intended to be self-implementing regulations, meaning the beneficial users themselves are responsible for complying with the regulations on their own.

The delegation agreement between Ohio EPA and U.S. EPA requires the Agency to conduct inspections of facilities that land apply biosolids at least once every five years. This acts as Ohio EPA’s auditing mechanism for compliance with beneficial use site requirements. We would also like to remind OEC that it is already a requirement for a beneficial user to evaluate each site prior to beneficial use in order to ensure compliance with site restrictions. This added re-certification provision is more of a clarification of what is expected and requires these results to be submitted as part of the facility’s annual sludge report. Beneficial users of biosolids electronically certify in the annual reports that the information provided is correct and that they are aware of the penalties

for false certification. Ohio EPA has the authority under Ohio Revised Code 6111.09(A) to impose civil penalties or other sanctions for failure to comply with these terms. The potential civil penalties are up to \$10,000 per day of violation, and potential criminal penalties for violating rules adopted under Chapter 6111 of the ORC are specified in the ORC as not more than \$25,000 and imprisonment for not more than four years per day of violation. The Agency believes that this authority is more than sufficient to ensure compliance with these provisions.

Comment 8: (F) *"Re-certification of beneficial use site criteria. The permittee shall certify that prior to beneficial use, each authorized beneficial use site was evaluated for changes at or near the authorized beneficial use site."* The Draft Rule's inclusion of self-re-certification indicates that any unused sites will expire. Could the committee please expound upon this by stipulating what happens to sites that go unused? To the best of our knowledge, the OEPA's ARCGIS website is the database where beneficial use sites are stored. If the intention is for sites to be expired Synagro asks that the Agency either provide a copy of the ARCGIS website before any changes are made, or somehow differentiate expired sites on the database instead of removing them. (Synagro)

Response 8: The intent of the proposed beneficial use site re-certification process is to eliminate the need for beneficial use site authorizations to expire. The re-certification process is to ensure that authorized sites where biosolids have not been beneficially used in quite some time are evaluated for any changes prior to being used again. Our current database does distinguish between current sites and sites that may have been retired for other reasons so that sites are never deleted.

Comment 9: (A)(1)(d) *"The location of field tiles on each proposed beneficial use site, if any"*

Some field tile may date back to the late 1800's and have been lost to history as far as location is concerned. The only verifiable and reliable way to know where field tiles are, is the location of a field tile inlet, outlet, or breather. Otherwise, trying to determine sub-terrain field tile location is not practical. Synagro recommends amending this stipulation to read,
"The location of field tile inlet, outlet, or breather on each proposed beneficial use site, if any." (Synagro)

Response 9: Ohio EPA understands that field tile locations may not always be readily known, however, the intent is to ensure that authorized beneficial use sites are inspected prior to beneficial use and tile locations and expected tile locations based on the information in the comment shall be considered as part of the inspection. Field tile inlets, outlets and breathers are indications of tile locations and shall be noted as part of the beneficial use site application. More details regarding tile locations will be detailed in the updated site authorization forms, however the Agency does not anticipate making this change to the proposed rules.

Comment 10: (A)(1)(f) *“The history of beneficial use at each proposed beneficial use site, including past beneficial use of class B and bulk exceptional quality biosolids, manure and commercial fertilizer for the previous five years.”*

Due to lack regulations from the Ohio Department of Agriculture files such as field tile location, as well as, manure and commercial fertilize applications have not been a requirement to maintain. Synagro understands the need to track nutrients and applications; however, the request for this information will most definitely pose a very difficult, if not impossible, task to certify agricultural fields for beneficial use. With updated statewide nutrient management practices, appropriate agronomic rate applications of biosolids and the complex requirements and process for site permitting, Synagro recommends leaving out the inclusion of manure and commercial fertilizer. (Synagro)

Response 10: With updated statewide nutrient management practices, the Agency believes that it is more important than ever to consider all sources of nutrients, including manure and fertilizer. Currently, the beneficial use site authorization form requests the years that biosolids may have been used at a site since 1993. The proposed rule reduces that time frame to the most recent 5 years and include all nutrient sources. Ohio EPA understands that these records may not be available. Therefore, the applicant can note that a review of nutrient management records was performed but the requested information was not available. The Agency does not anticipate making this change to the proposed rules.

3745-40-07:

Comment 11: The changes to OAC 3745-40-07 allow for the Ohio EPA to grant flexibility for field storage areas while maintaining water quality protection requirements. Requiring a permit to install for storage of liquid biosolids at a beneficial use site strengthens these provisions ensuring standards are met to protect against health risks and environmental degradation.

Allowing the isolation distance to be reduced from a field storage area and an occupied structure if both the structure owner and resident (if applicable) request it poses no threat as long as isolation distances for surface water and private potable water sources are not altered or reduced.

The additional ability of the Director to add requirements for additional measures to protect health and the environment to minimize the creation of nuisance odors will strengthen this section when a situation demands it. (OEC)

Response 11: No response required, thank you for your feedback.

3745-40-08:

Comment 12: (A)(2) – (A)(4) In Ohio, Indiana and Michigan, farmers and agronomy professionals utilize the Tri-State Fertilizer Recommendations for Corn,

Soybeans, Wheat and Alfalfa that details fertilizer application rates for key nutrients such as phosphorus². Looking at recommendations for corn and soybeans, the dominant crops grown in Ohio, soil phosphorus levels above 40 ppm are not necessary to achieve optimal yields. In other words, a crop will not grow any better with additional phosphorus input exceeding 40 ppm. Even wheat and alfalfa do not need levels above 50 ppm. It is important to note these recommendations established in 1995 are being revised, and many expect lower numbers in future updates. Furthermore, the OEC conducted a detailed evaluation of all concentrated animal feeding facilities in the state to evaluate manure management, which included reviewing numerous inspection reports. Several of the inspection reports included notations such as the following statement:

Target soil test levels should be maintained as close to agronomic sufficiency levels as possible, which is Bray-P1 15-30 ppm or 30-60 lbs./acre for corn and soybeans and Bray-P1 25-40 ppm or 50-80 lbs./acre for wheat and alfalfa.³ Ohio EPA proposed rules at 3745-40-08 undermine the intent of applying nutrients at agronomic rates by qualifying the definition to allow for excess applications depending on soil test phosphorus results. For example, the proposed rules allow for multiyear applications when soil test phosphorus levels (Bray-Kurtz P1) at or below 40 ppm, as well as when they are 41 ppm and 99 ppm, (see 3745-40-08(A)(2)(a)(iii) & (b)(ii)). When the soil test results show soil phosphorus levels at or above 100 ppm, then biosolids applications can still occur as long as they follow the phosphorus index, (see 3745-40-08(A)(2)(c)). This last reference is in regards to the Phosphorus Risk Index that incorporates multiple factors to assign a score measuring the overall potential of a field to lose phosphorus⁴. Factors specific to manure include soil test results, manure nutrient content, application rate and method. The tool also incorporates erosion and runoff potential by using variables such as soil types, field slope, and connections to waterways. Fields with high soil phosphorus test results could still have low scores due to these other factors. We believe manure applications are not appropriate when soil phosphorus levels exceed what is necessary for optimal crop growth regardless of the Phosphorus Risk Index score. The reason is that crops cannot utilize the excess nutrients in a typical growing season, which can result in a buildup of soil phosphorus levels creating legacy sources that increase the risk of phosphorus pollution, especially from tile drains. The Ohio EPA even allows the choice of basing all biosolids applications on the Phosphorus Risk Index (see 3745-40-08(A)(3)).

In other words, the proposed rule qualifies the agronomic rate in ways that result in phosphorus applications that exceed crop removal rates. We urge Ohio EPA to remove sections 3745-40-08 (A)(2) to (A)(4) entirely and replace with alternate language that requires adherence to meeting the agronomic rate as the OEC defines it. We also urge all other sections of Chapter 3745-40 be

² See [Bulletin E2567](#)

³ See Catalpadale/Bristol Dairies April, 2016 Inspection Report reminder actions by inspector Samuel Mullins.

⁴ Appendix E Table 1 to Rule 901:10-2-04: Phosphorus Index (P Index) Risk Assessment Procedure.

revised to remove references to the Phosphorus Risk Index and allowances for multi-year nutrient applications. (OEC)

Response 12: As Ohio EPA previously stated in the response to comments from the Interested Party Review comment period:

It is important to note that OAC Chapter 3745-40 contains more stringent requirements for determining the agronomic rate for the beneficial use of biosolids than those contained in 40 CFR Part 503. For instance, 40 CFR Part 503 requires biosolids to be applied at a rate equal to or less than the amount of nitrogen needed by crops to minimize the amount of nitrogen that passes below the root zone to groundwater. 40 CFR Part 503 does not require the amount of phosphorus (P) to be considered while OAC Chapter 3745-40 requires all nutrients to be considered when calculating the agronomic rate and places rate restrictions based on soil P levels. Ohio Department of Agriculture's (ODA's) rule, OAC 901:10-2-14 Contents of a manure management plan: land application methods, was used as a guide in developing OAC 3745-40-08(A)(2) to (A)(4). OAC 901:10-2-14(E)(1) requires assessment of land application areas for determining the manure application rate for phosphate using either the phosphorus index (P-Index) risk assessment procedure or the P soil test risk assessment procedure.

The draft of OAC 3745-40-08(A)(2) mirrors ODA's rules except for the reduction of the soil P value at which the P-Index may be utilized from 150 ppm to 100 ppm. Like OAC 901:10-2-14, OAC 3745-40-08(A) allows for multiyear applications when soil test phosphorus levels are at or below 40 ppm Bray-Kurtz P1 extraction, as well as when they are between 41 ppm and 99 ppm if the multi-year rate is determined to be the most limiting.

Regarding utilizing the P-Index for biosolids, the current P-Index used in Ohio does not differentiate between different P sources. It can be argued that using the current P-Index to calculate the agronomic rate for biosolids without a phosphorus source coefficient is a conservative approach. Research has shown that "the solubility in water of phosphate derived from biosolids is lower than that of other P fertilizers" leading to the conclusion that "biosolids are less likely to produce P in runoff or leachate than synthetic fertilizers and animal manures due to differences in P solubility".⁵ The P-Index is accepted nationwide as an environmentally responsible method for managing P application. In addition, The Ohio State University School of Environment and Natural Resources has recommended that Ohio EPA continue to use the P-Index for biosolids P management.

Based on the above, Ohio EPA does not anticipate making changes to the OAC 3745-40-08(A) as proposed or remove the use of the P-Index.

⁵ *Phosphorus in Biosolids: How to Protect Water Quality While Advancing Biosolids*, May 2014. Water Environment Federation and National Biosolids Partnership.

Comment 13: (D)(4)(h) *"Soil samples collected to analyze for soil phosphorus shall be collected prior to spring planting."*

Synagro would like to advise that not all crops are planted in the spring, nor do all land-application contracts start in the beginning of the year. This condition may impede with the beneficial use of biosolids throughout the year, potentially causing more biosolids to be sent to the landfill. For agronomic purposes, the Tri-State Fertilizer Recommendations indicate soil samples should be pulled between harvest and planting. Furthermore, soil sampling in the spring when the soils have a tendency to be more saturated may cause erroneous soil test results. Previously, this language was a recommendation in past rules. Therefore, Synagro recommends the language to read, *"Soil samples collected for soil phosphorus shall be collected prior to beneficial use."* (Synagro)

Response 13: Ohio EPA understands that not all crops are planted in the spring and not all land-application contracts start in the beginning of the year but believes that there is some flexibility regarding soil testing built into the rule: the sampling frequency requirement states that sample results can be up to three years old. Consistently testing the soil around the same month of the year helps to reduce seasonal variations in soil test records. Guidance will be developed to discuss the possibility of sampling at other times of the year if needed.

Comment 14: (D)(5)(a) *"For beneficial use sites with subsurface tile drainage, all field outlets shall be visually monitored before, during and after beneficial use of liquid class B or liquid bulk exceptional quality biosolids at the beneficial use site and the results of that monitoring shall be recorded. Daily visual monitoring shall continue until biosolids are assimilated into the beneficial use site and are no longer likely to discharge to waters of the state. Methods or devices to stop or capture subsurface drain flow shall be accessible. If liquid class B or liquid bulk exceptional quality biosolids reach the subsurface drain outlet to surface waters of the state, the beneficial use of liquid biosolids shall cease and the flow shall be stopped or captured. Use of drain outlet plugs or other devices shall be recorded."*

"Daily visual monitoring" is very subjective. Could you please clarify what this may consist of? Previous rules have stated at the conclusion of beneficial use. Synagro recommends this terminology be included as part of this proposed rule for observable discoloration of subsurface tile or drainage outflow. (Synagro)

Response 14: The rules currently state that field outlets shall be visually monitored before, during and after beneficial use. The proposed language was added to be more consistent with ODA's manure management plan requirements and to ensure that tile outlet monitoring for indications of biosolids in the tile flow continues after beneficial use especially after subsequent rain events.

Comment 15: The proposed changes to 3745-40-08 will play a significant role the amount of land applied nutrients that enter Ohio waterways playing a role in harmful algal

blooms. The prohibition of surface application of biosolids when the top two inches of soil are saturation will help prevent nutrient runoff when the soil is vulnerable and unable to properly bind to the nutrients.

Removal of dates of restriction on frozen ground due to materials being able to be injected or incorporated will allow for flexibility when seasonal temperatures vary. Injecting or incorporating biosolids must be monitored to ensure water quality is considered and nutrient runoff is prevented during vulnerable months.

As previously mentioned, the attached recommendations submitted last year emphasize that nutrient applications need to be limited to the needed agronomic rate without exceptions. Allowing the use of the Phosphorus Risk Index when soil phosphorus levels exceed what is necessary for optimal crop production needs to be removed. Nutrient applications beyond the agronomic rate increase the risk of nutrient loading and harmful algal blooms substantially. (OEC)

Response 15: Please see response 12 above for explanation of why the P Index will continue to be used.

3745-40-12:

Comment 16: The Director's authority that is granted in OAC 3745-40-12 will strengthen this rule. Allowing for the de-authorization of any beneficial use site due to repeated nuisance odor violations or any violations that human health and the safety of the environment will provide needed safeguards. (OEC)

Response 16: No response required, thank you for your feedback.

- End of Response to Comments -