



Response to Comments

Rule(s): Sewage Sludge/Biosolids Rules, Chapter 3745-40

Agency Contact for this Package

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This document summarizes the 132 comments and questions received during the interested party review comment period, which ended May 22, 2009.

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 comments are grouped by topic. The names of the commenter(s) follow the comment in parentheses.

(A) Comments without responses:

General Comments

Comment 1:

Thank you for allowing Agri-Sludge, Inc. to submit these comments on behalf of ourselves and the more than 50 Villages and Cities that we service throughout Northeast Ohio that produce more than 35,000,000 million gallons of liquid biosolids and more than 60,000 wet tons of cake biosolids yearly that are either land applied or presently are being landfilled. **(Thomas W. Abraham - Agri-Sludge, Inc.)**

Comment 2:

AOMWA appreciates the opportunity to comment on the Draft Biosolids Rules in this second interested party review. As such, AOMWA supports and reiterates the comments raised on the draft rules by both the City of Columbus and the Ohio Water Environment Association. **(Tatyana Arsh - Association of Ohio Metropolitan Wastewater Agencies)**

Comment 3:

Thank you for allowing Burch Hydro Inc. to submit its comments and concerns. **(Michael R. Burch - Burch Hydro Inc.)**

Comment 4:

The City of Columbus welcomes this second opportunity to comment on a draft of the biosolids rules contained in OAC Chapter 3745-40. **(Dominic J. Hanket - City of Columbus)**

Comment 5:

The Ohio Farm Bureau Federation (OFBF) would like to thank you for the opportunity to once again review and submit comments on the proposed draft Sewage Sludge/Biosolids Rules – Ohio Administrative Code (OAC) Chapter 3745-40. **(John C. Fisher – Ohio Farm Bureau Federation)**

Comment 6:

OFBF is the largest general farm organization in the state of Ohio with members in all of Ohio's 88 counties. Our members produce virtually every kind of agricultural commodity and as a result, OFBF is strongly interested in Ohio's environmental policies and their potential impact to sustaining a viable agbioresource industry. OFBF policies support the development of programs that are scientifically based, economically sound and whenever possible, delivered in a flexible and voluntary manner.

Regarding biosolids specifically, OFBF policies

1. support cooperation among applicators, Ohio EPA, municipalities and SWCDs to assure proper and safe application of biosolids
2. believe that the same nutrient levels that apply in the application of agricultural nutrients to farmland should apply to biosolid application
3. encourage farmers to utilize best management practices for the application and use of biosolids.

As a result of the above policies, it is clear that OFBF and our members' desire consistency between and among all programs related to agricultural nutrient management. There is no justifiable reason to treat commercial fertilizer, animal byproducts and biosolids differently when utilized for agronomic benefit. As written, the proposed draft rules agree in principal with the current OFBF policies.

The inclusion of the "comment" section throughout the proposed draft rules is a novel way to help the reader understand the proposed rules and not have to flip back and forth between multiple documents. Ohio EPA should consider including these in all future rulemakings to make the process more user friendly. **(John C. Fisher – Ohio Farm Bureau Federation)**

Comment 7:

OWEA appreciates the opportunity to provide comments to the OEPA's Biosolids Rule. **(Dianne M. Sumego - Ohio Water Environment Association)**

Comment 8:

OWEA appreciates the opportunity to provide comments on the revised Sludge Rules. **(Dianne M. Sumego - Ohio Water Environment Association)**

Comment 9:

We appreciate the difficulties faced by the Ohio EPA in managing the biosolids program in a manner that balances the end goal of return to agricultural fields against odor and runoff problems that may arise in a few unfortunate circumstances. In addition, we urge the Ohio EPA not to unduly compare the benefits made in this program against problems experienced with concentrated animal feed lot operations. **(Dianne M. Sumego - Ohio Water Environment Association)**

Comment 10:

The City of Sidney appreciates your consideration of our concerns and comments of the draft rules. **(Brian Schultz - City of Sidney)**

Comment 11:

We appreciate the opportunity that Ohio EPA has given us to participate in the development of Ohio's biosolids rules. We believe that biosolids are a valuable resource that can be responsibly and beneficially used. The requirements of this draft rule provide a strong framework to ensure that beneficial use practices will be protective of public health and the environment while any potential nuisance odors are minimized. Many of the requirements of this rule are derived from the enabling federal 503 rule while others are much more stringent state requirements that Ohio EPA considers necessary. **(Bruce MacLeod - Synagro Central, LLC.)**

Comment 12:

I want to express my appreciation for the work done by the Ohio EPA in its efforts to protect and enhance the water environment. It is also TCA's ongoing effort to protect and enhance the water environment and to do so by managing an effective application program. **(David J. Heckler – Tri-Cities North Regional Wastewater Authority)**

Comment 13:

The City supports the OEPA's position of monitoring dioxin at the discretion of the Director. The current requirement is overly burdensome for those programs that can demonstrate past dioxin results that warrant a reduction or elimination of continued monitoring. **(Brian Schultz - City of Sidney)**

Comment 14:

Substantial changes are needed to make these rules better and more supportive of continued beneficial use in Ohio. We look forward to working with OEPA to continuously improve the biosolids beneficial use program. **(Bruce Bailey - Schmack BioEnergy)**

Comment 15:

Ohio has historically had a progressive program on beneficial use that was formed from a good working relationship between the EPA, the Ohio State University, and the regulated community. A major part of making this work is a consistent and constant support from the EPA for the program. This support has been returned in terms of technical and legislative support from the regulated community. With the current draft rule we have major reservations about the direction the OEPA is taking regarding Exceptional Quality Biosolids and urge the agency to carefully evaluate the very negative impacts on beneficial use from this proposed rule. **(Bruce Bailey - Schmack BioEnergy)**

Comment 16:

3745-40-02 Purpose, applicability, general requirements, exclusions and prohibitions. OWEA believes this set of draft rules does not encourage beneficial reuse, but rather have the opposite effect of increasing hauling to landfills. **(Ohio Water Environment Association)**

Comment 17:

In general, we support the Ohio EPA's goal to make these rules easier to read and more understandable. However, OWEA does not support several key proposed rules, specifically those dealing with the definition of "unstabilized solids", restrictions on land application during winter months, restrictions on field storage, monitoring of field tile discharges, and other provisions. We understand that these are additions from the previous draft of the rule. **(Dianne M. Sumego - Ohio Water Environment Association)**

B) Comments with responses:

General Comments

Comment 18:

The City also notes that the definition of the term "bulk biosolids" found at draft OAC 3745-40-01 (N) uses 1000 cubic yards per site as the cut-off while this section uses the test of 1000 cubic yards per year. It is unclear from the rules why these different standards were included in the draft rules in this manner.

The section is unclear as to what is meant by the phrase "generate a product" as well. Does the phrase refer to using biosolids in combination with soils and other blending materials to produce a landscaping product or does it refer to the growing of crops

through land application. Clarification is needed. (**Dominic J. Hasket - City of Columbus**)

Response 18:

In order to provide clarification, the definition of bulk biosolids will be eliminated and Ohio EPA will use the term “bulk exceptional quality biosolids,” which will be defined as:

“Bulk exceptional quality biosolids” means more than 300 dry tons of exceptional quality biosolids beneficially used during a crop year on a beneficial use site that is utilized for the production of:

- (a) Feed crops;
- (b) Fiber crops;
- (c) Food crops; or
- (d) Pasture land.”

In addition, Paragraph (C)(3) of rule 3745-40-03 will be revised as follows to provide for clarification:

“(C)(3) The director may require that any person who receives biosolids from a treatment works to obtain a management plan.”

Comment 19:

Discussion on issues of odors occurring during or after a site has been brought up and how Ohio EPA should or can regulate odor controls. Burch Hydro Inc. feels that odor cannot be addressed in the rules of beneficial reuse of biosolids, first of all the division of surface water of the Ohio EPA does not have authority at this time to regulate odor, as that is a air issue not a water issue. Second of all, there isn't any proven form of measuring amounts of odor in the air or where the source of odor maybe coming from. Penn State University has performed some testing on odor measurements to no avail. If the Ohio EPA can prove that a site is causing a nuisance do to odor, the air division of Ohio EPA can enforce the nuisance law, granted under the Ohio Revised Code. (**Michael R. Burch - Burch Hydro Inc.**)

Response 19:

Section 6111.03 (Water pollution control powers of director of environmental protection) of the Ohio Revised Code states:

“The director of environmental protection may do any of the following:

(S)(1) Administer and enforce a program for the regulation of sludge management in this state. In administering the program, the director, in addition to exercising the authority provided in any other applicable sections of this chapter, may do any of the following:

(e) Adopt and enforce, modify, or rescind rules necessary for the implementation of division (S) of this section. The rules reasonably shall protect public health and the environment, encourage the beneficial reuse of sludge and sludge materials, and minimize the creation of nuisance odors.”

In addition, the definition for “nuisance odor” has remained unchanged from the current rule, except to replace the term “sewage sludge” with the term “biosolids”. It is not Ohio EPA’s intent to revoke a beneficial use site merely on the receipt of an odor complaint. As in the past, a complaint will be investigated and validated before any action regarding the authorization of the beneficial use site is taken. The interpretation and enforcement of the portion of the revised rules that regulate odors will remain unchanged from current staff investigative procedures.

Comment 20:

Burch Hydro Inc. feels that the Ohio EPA needs to put more efforts toward improving the quality of biosolids, by looking into new technologies, so that the biosolids can be beneficially used practically, instead of making rules that are impossible to meet to beneficially reuse. The number of violations directly related to beneficial reuse of biosolids in Ohio as a point source of water pollution is a drop in the bucket, compared to the water pollution that occurs from the permitted bypasses of raw sewage sludge from our waste water treatment plants. If we truly want to preserve our environment and water quality in the State of Ohio, Ohio EPA should take measures to eliminate plants bypassing millions of gallons of raw sewage into our state waters. **(Michael R. Burch - Burch Hydro Inc.)**

Response 20:

In addition to NPDES permits and sewage sludge/biosolids management plans, Ohio EPA issues indirect discharge permits, construction storm water permits, industrial storm water permits, municipal separate storm sewer system permits, 401 water quality certifications, permits to install, negotiates combined sewer overflow long term control plans, and pursues enforcement to preserve Ohio’s environment and water quality. As it relates to the quality of biosolids, Ohio EPA feels that maintaining adequate treatment standards, as well as the proper operation and maintenance and the utilization of best management practices are essential towards Ohio maintaining a beneficial use program that is successful and protective of human health and the environment. Please note that Ohio EPA would prefer that biosolids are beneficially used in lieu of landfilling.

Comment 21:

We are what we eat. This stuff is toxic. It's degrading the health of, not only our soil and environment, but the health of our people and animals. Those living in close proximity to sludged fields take the biggest hit. The odor makes them sick and sludge/biosolids puts them at risk for experiencing nausea, vomiting, stomach cramps, migraine headaches, fever, flu-like symptoms, asthma attacks, sudden illness caused by viruses, bacteria and fungi, abscesses, tumors, cysts and allergies. And who's to say what the longterm health issues are for the rest of us who consume the foods grown in this toxic stuff?

PLEASE, PLEASE look into the 503 Sludge Rule. Let's invest in the research of how to handle our sludge. As a member of the EPA, you are in a unique position to speak out to the EPA to reverse their policy from supporting the 503 Sludge Rule to hiring people of integrity. . . people who will put their heads and their hearts together to figure out how to move forward in a manner that is responsible and ethical to all of life and our beautiful planet. Rather than firing the Dr. Lewis's of this world, we need more of them! We need to find them and put them to work on our behalf.

Please do your part within the chain of command. Speak out to the EPA as mentioned above.

1. The 503 Sludge Rule failed an extensive peer-review by EPA's ORD scientists. How could this happen??
2. Develop an adequate program to ensure compliance with 503.
3. Update the technical basis for EPA's 503. (**Shirley A. Carpenter**)

Response 21:

Ohio EPA has been delegated by the U.S. Environmental Protection Agency (U.S. EPA) to assume the authority of the sewage sludge/biosolids land application regulations and, therefore, provides direct oversight of this program. In addition, although Ohio EPA bases state rules on Title 40 Part 503 of Code of Federal Regulations (40 CFR Part 503), Ohio EPA has the authority to, and has chosen to be more restrictive in some instances. The sewage sludge/biosolids rules are located in Chapter 3745-40 of the Ohio Administrative Code (OAC).

The revised draft rules were not only designed to protect public health and the environment, but happen to specifically address your concerns. The draft rules:

- include setback requirements for occupied buildings, drinking water sources, waters of the state and bedrock;
- contain language prohibiting the generation of nuisance odors, and, if an agricultural field is generating a nuisance odor, require that corrective actions be taken immediately;
- require that biosolids meet the most stringent treatment requirements for pathogens and metal pollutant limits prior to being distributed or applied to food crops. In addition, many publicly owned wastewater treatment works have

- pretreatment programs that regulate the discharge of toxic chemicals into the sewer system, so that these chemicals are removed prior to the wastewater reaching the wastewater treatment plant; and
- include additional stockpiling restrictions to guard against impacts to human health and the environment.

Ohio EPA continually works to ensure that a POTW is in compliance with Ohio's environmental rules and laws. Since March 1, 2005, Ohio EPA's sewage sludge/biosolids program has conducted over 220 sewage sludge inspections at municipal wastewater treatment plants where sewage sludge/biosolids are generated and treated. This inspection total does not reflect the inspections also performed to address complaints received or to observe the land application sites where sewage sludge/biosolids are beneficially used.

Biosolids are an unavoidable product of our wastewater treatment systems and must be disposed of in a landfill or by incineration if it cannot be beneficially used. The proper land application of biosolids is considered a beneficial use and is an important alternative to disposal for the following reasons:

- biosolids are a good source of nutrients, and with the cost of fertilizer continuing to increase many farmers depend on biosolids to provide nutrients at lower costs in order to keep costs to consumers down;
- it is important to conserve as much landfill space as possible, and this means beneficially using as many organic materials as possible; and
- incineration leads to further air pollution and still leaves residual ash that must be disposed of.

Comment 22:

In general, MCWS believes the proposed draft rule restricts biosolids treatment and disposal operations that may encourage or increase the beneficial reuse of biosolids. If adopted, the proposed rules will increase the volume of biosolids disposed in landfills by mandating same-day incorporation or injection practices. Furthermore, MCWS does not support the definition of "unstabilized solids", restriction on land application during winter months, restrictions on field storage, monitoring of field tile discharges, and other proposals listed on the following pages. **(Greg Merrill – Montgomery County Water Services)**

Response 22:

Ohio EPA would prefer that biosolids are beneficially used in lieu of landfilling. Ohio EPA strives to write regulations that are user friendly, that limit impacts to the environment and that ensure the biosolids are of a better quality, all of which promote the continued success of beneficial use in Ohio.

Comment 23:

MCWS' biosolids operations comply with all current Ohio EPA rules and regulations. In recent years, local odor complaints that have been asserted to be caused by our biosolids disposal activities have been proven to be the responsibility of other area POTWs. Ohio EPA should enforce current regulations on those biosolids producers and appliers that create environmental risks and problematic odors. **(Greg Merrill – Montgomery County Water Services)**

Response 23:

Ohio's rules and laws regarding the beneficial use of biosolids are equally applicable to all permittees and are uniformly enforced by Ohio EPA.

Comment 24:

MCWS urges Ohio EPA to regulate biosolids no more stringently than required by USEPA and focus attention on operators that create documented field run-off conditions rather than severely limit land application activities during one-third of the year. MCWS urges Ohio EPA to only propose changes to align Ohio's rules with current federal requirements where required. **(Greg Merrill – Montgomery County Water Services)**

Response 24:

U.S. EPA's 503 regulations were written to act as a template for each state, and include the flexibility for each state to be more stringent to ensure the protection of human health and the environment. The current rules under Chapter 3745-40 include restrictions to prevent pollutant impacts to waters of the state via runoff. For example, maintaining proper setbacks, using proper application rates and considering the weather are all important towards achieving this goal. Finally, Ohio's rules and laws regarding the beneficial use of biosolids are equally applicable to all permittees and are uniformly enforced by Ohio EPA.

Comment 25:

As a matter of history, when the Ohio EPA sought primacy of the 503 program, it began to collect annual fees based on dry tons of biosolids disposed of in landfills or which was land applied for beneficial use. The Ohio EPA's goal is to increase the beneficial use of biosolids. Due to the proposed restrictions sought, we believe that these draft rules, if adopted, will only increase the rate of landfill disposal, and this will occur with a portion of landfill tipping fees returning to the Ohio EPA for other program operations. **(Dianne M. Sumego - Ohio Water Environment Association)**

Response 25:

Ohio EPA would prefer that biosolids are beneficially used in lieu of landfilling. The responsible beneficial use of biosolids will ensure that the beneficial use program continues to be successful in Ohio. Ohio EPA feels that when biosolids are used in an environmentally responsible and neighbor friendly manner, the true benefits of biosolids will be realized and the demand for biosolids will increase.

Comment 26:

Prohibition of Alkaline Stabilization of Undigested Sludge

One of the chief reasons why alkaline stabilization is popular with many of our utilities is that it allows them to dedicate more of its existing tanks—many of them former digesters that are now too small—to the storage of undigested sludge to comply with the 120 day requirement for storage pursuant to this Rule. In this era of “unfunded mandates” and “doing more with less,” utilities struggle every day to make ends meet, particular in this severe economic recession where layoffs, staff reductions, pay freezes/cuts, and furloughs are the norm.

OWEA shares the concern of many of our utilities over additional measures that are being proposed to restrict application of unstabilized sludge with alkaline material. While we are sympathetic to the Ohio EPA in its plight to regulate biosolids and contend with possible odor issues that may arise from field storage in some instances, we believe that further regulation will create a hardship to many utilities during these difficult economic times by finding the manpower and equipment to provide extra hauling and incorporation. For those utilities that contract out hauling and application of biosolids, this proposed modification has the potential to increase contract costs significantly. **(Ohio Water Environment Association)**

Response 26:

The references and restrictions related to alkaline stabilized unstabilized biosolids will be removed.

Comment 27:

Factors Impacting Design of Facilities

Based on the response provided by the Ohio EPA to our original comment, we wish to make a clarification.

The implementation, of the new Biosolids Rules will result in a continued evolution of requirements placed on regulated utilities with additional requirements that one could argue enter the sphere of “design.” At the same time, the Ohio EPA upholds *Ten States Standards* as the “governing document” of design.

Ohio EPA leadership states that *Ten States Standards* are design guidelines. However, some of our members have experienced, during the review process, a more strict enforcement of the standards in lieu of a guiding document. While we appreciate the Ohio EPA’s position of not wanting to address “design issues” with this Rule, we contend that the Rule is reflective of design requirements. Therefore, we respectfully request that the Ohio EPA provide clarification that information in *Ten State Standards* shall be superseded by information provided in this Rule. **(Ohio Water Environment Association)**

Response 27:

Chapter 3745-40 of the Administrative Code is not meant to supersede *Ten States Standards*. Rather, the purpose of this chapter is:

- (a) To establish standards applicable to the treatment, disposal, transfer to another NPDES permitted treatment works or the storage of sewage sludge or biosolids;
- (b) To establish standards applicable to the beneficial use of biosolids;
- (c) To reasonably protect public health and the environment;
- (d) To encourage the beneficial reuse of biosolids; and
- (e) To minimize the creation of nuisance odors.

Currently, the rules in Chapter 3745-42 of the Administrative Code would govern the requirements for a permit to install, including any design standards. For those situations where a particular design standard is not explicit in rule, Ohio EPA does often refer to accepted design standards, including *Ten States Standards*.

Eventually, Ohio EPA would like to write rules that reflect specific design standards for sewage sludge/biosolids treatment works, which would, at that time, supersede *Ten States Standards*.

Comment 28:

It appears that the OEPA has abandoned the stated purpose of “encouraging the beneficial reuse of biosolids...” The revisions, if implemented, do nothing to encourage the beneficial reuse of biosolids. Many of the requirements further restrict land application and beneficial reuse. **(Brian Schultz - City of Sidney)**

Response 28:

Ohio EPA would prefer that biosolids are beneficially used in lieu of landfilling. The responsible beneficial use of biosolids will ensure that the beneficial use program continues to be successful in Ohio. Ohio EPA feels that when biosolids are used in an environmentally responsible and neighbor friendly manner, the true benefits of biosolids will be realized and the demand for biosolids will increase. An example of this is the new screening requirement to remove inert materials from the biosolids, which creates a better product and promotes beneficial use.

3745-40-01: Definitions

(D) Agronomic Rate

Comment 29:

The definition as written should be modified to base the application rate of biosolids on: (1) the nutrient content of the biosolids being applied, (2) the nutrient needs of the current or planned crops and (3) the nutrient holding capacity of the soil. The most limiting crop

nutrient should serve as the basis for determining the application rate thereby reducing the risk of nutrients being transported to waters of the state. **(John C. Fisher – Ohio Farm Bureau Federation)**

Response 29:

Ohio EPA will revise the definition as requested.

(N) Bulk Biosolids

Comment 30:

Presently, chapter provisions apply to “bulk sewage sludge” which is defined to mean sewage sludge that is not sold or given away in a bag or other container for land application. In addition, current OAC 3745-40-05 provides that no person may land apply biosolids onto a home lawn or garden or land apply sewage sludge that is sold or given away in a bag or other container unless it is exceptional quality sewage sludge. It is clear from the current chapter if and when land application agronomic standards, minimum distance standards, and other management standards apply to these classes of biosolids.

However, the latest draft definition of “bulk biosolids” changes this outcome by including exceptional quality biosolids within the definition of “bulk biosolids” while at the same time including a land application rate test as a determining factor for applying the definition.

Specifically, the definition of “bulk biosolids” in OAC 3745-40-01 includes the beneficial use of EQB at rates equal to or greater than 10 dry tons per acre at a beneficial use site. This rate level could include many residential applications [appliers will typically cover a site with Comtil greater than ½ inches deep which works out to exceed the EQB rate stated above]. This inclusion within the definition potentially subjects private individuals using EQB to numerous requirements such as contained in OAC 3745-40-07 (minimum distances, usage and storage) and OAC 3745-40-08 (agronomic rate requirements/precipitation event restrictions, etc).

The City questions whether it was the Agency’s intent to include residential users within the requirements of Chapter 3745. The definition of bulk biosolids should delete (N) (3) or adopt an approach that clearly excludes residential users of EQB from the requirements of the Chapter. **(Dominic J. Hanket - City of Columbus)**

Response 30:

It is not Ohio EPA’s intent to subject residential users of exceptional quality biosolids to the requirements established within OAC 3745-40-07 and 08. In order to provide clarification, the definition of bulk biosolids will be eliminated and Ohio EPA will use the term “bulk exceptional quality biosolids,” which will be defined as:

“Bulk exceptional quality biosolids” means more than 300 dry tons of exceptional quality biosolids beneficially used during a crop year on a beneficial use site that is utilized for the production of:

- (a) Feed crops;
- (b) Fiber crops;
- (c) Food crops; or
- (d) Pasture land.”

Comment 31:

Regulating exceptional quality biosolids to this degree takes away the incentive to go to the level of expense processing equipment, laboratory testing, and managerial oversight to produce EQ product.

How is this going to be enforced? A more realistic quantity to regulate is 2,000 cubic yards/year. At >2,000 cubic yards/year you will be into the significant consumers of EQ biosolids.

EQ is sold. It has value. The customer will not waste a valuable product.

10 dry tons per acre is 0.5% of the volume of an acre furrow slice (6” deep) or <1/10”. A nurseryman rejuvenating production ground will easily apply 1 to 2” of compost to a site. Placing flower beds, new turf, and/or wildflowers calls for a similar 2” application rate. Container mixes, bed mixes, and tree backfill calls for 10 to 40% by volume. Such a uses are perfectly reasonable. Regulating by requiring a Sludge Management Plan for uses of an EQ product is not. **(Bruce Bailey - Schmack BioEnergy)**

Response 31:

The beneficial use of biosolids is an important option to Ohio and is preferred over landfilling these materials. Ohio EPA feels that the structure of these rules will provide for the beneficial use of biosolids in a responsible and environmentally friendly manner. We have revised the definition of bulk biosolids to more clearly define the uses of this material that we feel should be regulated. The definition of bulk biosolids will be eliminated and Ohio EPA will use the term “bulk exceptional quality biosolids,” which will be defined as:

“Bulk exceptional quality biosolids” means more than 300 dry tons of exceptional quality biosolids beneficially used during a crop year on a beneficial use site that is utilized for the production of:

- (a) Feed crops;

- (b) Fiber crops;
- (c) Food crops; or
- (d) Pasture land.”

Ohio EPA feels that the uses included in the above definition will capture the significant consumers of EQ biosolids, while exempting small scale nursery operations and landscaping businesses that use biosolids for such uses as container mixes, bed mixes, and tree backfill. Enforcement of Ohio’s biosolids regulations will continue as it has historically.

Comment 32:

The definition for “Bulk Biosolids” (N) needs clarification regarding line item (1). I believe the intent of this definition is to classify any amount of Class B biosolids as “Bulk Biosolids.” The way the definition is stated leads the reader to believe that Class B can be exception quality. For example the Bulk Biosolids definition could read:

1. Any quantity of Class B biosolids
2. Any quantity of Class A biosolids that are:
 - a) greater than ...
 - b) the beneficial use of exceptional quality...(Brian Schultz - City of Sidney)

Response 32:

OAC 3745-40 has been structured to include two classifications of biosolids: Class B, and exceptional quality. In order to provide clarification, the definition of bulk biosolids will be eliminated and Ohio EPA will use the term “bulk exceptional quality biosolids,” which will be defined as:

“Bulk exceptional quality biosolids” means more than 300 dry tons of exceptional quality biosolids beneficially used during a crop year on a beneficial use site that is utilized for the production of:

- (a) Feed crops;
- (b) Fiber crops;
- (c) Food crops; or
- (d) Pasture land.”

In addition, the Class A biosolids classification has been removed from the revised rules.

(DDD) Land Reclamation

Comment 33:

There are sites in Ohio such as wastewater treatment impoundments that hold industrial or mining wastes that will greatly benefit from reclamation with biosolids.

Such sites will require greater application rates than the standard 65 dry tons/acre used for coal and mineral strip mine reclamation. This application rate was established through research performed by Dr. Bill Sopper, Pennsylvania State University, and is specific to coal and mineral strip mine reclamation work.

Wastewater impoundments require higher rates. OEPA has an on-going project at the PPG Lime Lakes and has established 300 dry tons/acre as the acceptable reclamation rate. The definition should be amended to acknowledge the higher rate for this type of application. **(Bruce Bailey - Schmack BioEnergy)**

Response 33:

To address this comment, the rule will be revised to eliminate the “pre-determined” application rate. The rule will be revised, as follows:

- (1) The definition of land reclamation will be revised to:

"Land reclamation" means the returning of lands disturbed through mining operations or industrial activity to productive uses;" and

- (2) Paragraph (B) of Rule 3745-40-03 will be revised as follows:

“(B) Special requirements for land reclamation sites. The beneficial use at a land reclamation site shall:

- (1) Be in accordance with an approved management plan as described in paragraph (C) of this rule; and
- (2) For any land reclamation site that is under the jurisdiction of the Ohio department of natural resources, division of mineral resources management, have a land reclamation plan, approved by the Ohio department of natural resources, division of mineral resources management, where this approval is obtained by the applicant and submitted to the director prior to the delivery of the biosolids to any land reclamation site.” and

- (3) And paragraph (C)(4)(b)(iii) will be revised as follows:

“(iii) The intended beneficial use, including the documented rationale for the rate at which the biosolids will be beneficially used.”

(LLL) Nuisance Odor

Comment 34:

“Nuisance Odor” is extremely vague and it is unclear how the determination of the “...unreasonable interference with the comfortable enjoyment of life or property.” will be made. It appears to be very subjective and will likely result in the decrease of available land for land application. Urban sprawl exposes more people to farming activity that is typically associated with unpleasant odors. The OEPA should provide guidance in how this requirement will be enforced or rescind it from the final draft. The City of Sidney has expended significant resources to obtain approval for land application sites. The decision to abandon a land application event or site due to a nuisance odor complaint should not be made lightly. **(Brian Schultz - City of Sidney)**

Response 34:

The definition for “nuisance odor” has remained unchanged from the current rule, except to replace the term “sewage sludge” with the term “biosolids”. As currently practiced, it is not Ohio EPA’s intent to revoke a beneficial use site merely on the receipt of an odor complaint. As in the past, a complaint will be investigated and validated before any action regarding the authorization of the beneficial use site is taken. The interpretation and enforcement of the portion of the revised rules that regulate odors will remain unchanged from current staff investigative procedures.

(UUU) Phosphorus Index

Comment 35:

The draft definition of the term "phosphorous index" refers to the United States Department of Agriculture ("USDA") National Resources Conservation Service ("NRCS") index. This reference should be deleted since it is an outdated (1994) and generic version and should not be applied to Ohio. While the Ohio Natural Resources Conservation Service has developed a phosphorous index, this index too is deficient in that it does not include an organic phosphorous source coefficient (PSC) which accounts for the differential solubility of phosphorous in various organic soil amendments and does not distinguish between different sources of organic phosphorous.

The City recommends that the Agency develop a definition for the term "phosphorous index" specifically for the land application of biosolids that includes a PSC patterned after the approach adopted by the Commonwealth of Pennsylvania and considers factors such as proximity to waters of the state, slope, soil and weather conditions, soil type, buffer strips, soil surface condition, surface and sub-surface drainage, and application method. Information on the Pennsylvania phosphorous index and its use can be found at http://panutrientmgmt.cas.psu.edu/pdf/phosphorous_index_factsheet.pdf.

In the event that the Agency chooses not to develop a specific definition of the term for these rules, it should reference the Ohio NRCS assessment technique with the adjustment for PSC and other stated factors. The PSC should be referenced in a separate rule. **(Dominic J. Hanket - City of Columbus)**

Response 35:

The definition of phosphorus index will be revised as follows:

"Phosphorus index" the Ohio natural resources conservation service (NRCS) assessment technique, as adjusted using an organic phosphorus source coefficient, for determining the relative risk of phosphorus movement from various landforms to waters of the state. Factors assessed include, but are not limited to, proximity to waters of the state, slope, soil and weather conditions, soil type, buffer strips, soil surface condition, surface and sub-surface drainage, phosphate source application rate and application method, and organic phosphorus Source Coefficient (accounting for environmentally relevant phosphorus). The Ohio NRCS phosphorus index can be found on the internet at: <http://www.agri.ohio.gov/Lepp/Regs/Appx/901-10-2-14%20appx%2024.pdf> ”

Comment 36:

The current definition of “phosphorus index” should be changed to reflect the Ohio Natural Resources Conservation Service (NRCS) phosphorus index. The reference in the revised regulations is to the United States NRCS phosphorus index, which is an outdated (1994) and generic version that should not be used for Ohio. It also does not include a factor relating to the distance to receiving stream. Also, the link to the United States NRCS website should be changed to the appropriate Ohio NRCS website. In addition, the Ohio phosphorus index does not include an organic phosphorus source coefficient (PSC), which accounts for the differential solubility of phosphorus in various organic soil amendments. The current Ohio index does not distinguish between different sources of organic phosphorus. Plant available phosphorus behaves differently in the environment than more soluble phosphorus that may be available for offsite export. This issue is addressed in comment 2.

Also note that newly passed regulations Ohio EPA 3745-42-13 [section F (2)(b)(ii)] reference the “the phosphorus index method, as developed by the natural resource conservation service in Ohio”. <http://www.epa.ohio.gov/portals/35/rules/42-13.pdf>

Suggested replacement - "Phosphorus index" means the Ohio natural resources conservation service (NRCS) assessment technique, as adjusted using an organic phosphorus source coefficient described in 3745-40-08-D5(a), for determining the relative risk of phosphorus movement from various landforms to waters of the state. Factors assessed include, but are not limited to, proximity to waters of the state, slope, soil and weather conditions, soil type, buffer strips, soil surface condition, surface and

sub-surface drainage, P source application rate and application method, and organic P Source Coefficient (accounting for environmentally relevant P). The Ohio NRCS phosphorus index can be found on the internet at:

<http://www.agri.ohio.gov/Lepp/Regs/Appx/901-10-2-14%20appx%2024.pdf>

(Trudy Johnston -Material Matters, Inc.)

Response 36:

The definition of phosphorus index will be revised as follows:

"Phosphorus index" the Ohio natural resources conservation service (NRCS) assessment technique, as adjusted using an organic phosphorus source coefficient, for determining the relative risk of phosphorus movement from various landforms to waters of the state. Factors assessed include, but are not limited to, proximity to waters of the state, slope, soil and weather conditions, soil type, buffer strips, soil surface condition, surface and sub-surface drainage, phosphate source application rate and application method, and organic phosphorus Source Coefficient (accounting for environmentally relevant phosphorus). The Ohio NRCS phosphorus index can be found on the internet at:
<http://www.agri.ohio.gov/Lepp/Regs/Appx/901-10-2-14%20appx%2024.pdf> ”

(TTTT) Unstabilized solids

Comment 37:

This proposed definition appears to be overly conservative versus accepted alternatives in 40 CFR 503, which includes limed biosolids, providing high temperature over a specific time, heat drying, beta ray irradiation and high alkaline biosolids. We respectfully request the Ohio EPA to not adopt this proposed definition. We do not believe a “re-write” of this current rule will encourage the beneficial reuse of biosolids. (Ohio Water Environment Association)

Response 37:

Ohio EPA will remove this definition, as requested.

Comment 38:

The proposed definition for “unstabilized solids” is overly conservative versus accepted alternatives in 40 CFR 503, which includes alternatives to stabilize solids that do not require the need for aerobic or anaerobic digestion. If adopted, this proposed rule will require MCWS to incur substantial capital expense to change the existing Eastern Regional biosolids treatment process. (Greg Merrill – Montgomery County Water Services)

Response 38:

Ohio EPA will remove this definition.

(XXXX) Waters of the state

Comment 39:

The agreement to change the isolation distance to exclude groundwater could not be located. As written the hundred feet for waters of the state includes groundwater. **(Bruce MacLeod - Synagro Central, LLC.)**

Response 39:

The following definition for “surface waters of the state” will be added to this rule:

"Surface waters of the state" means surface waters of the state, as defined in rule 3745-1-02 of the Administrative Code."

In addition, “surface waters of the state” will be utilized in the following locations:

Paragraph (C)(1) of Rule 3745-40-02
Table C-1: Rule 3745-40-07
Table C-1: Rule 3745-40-08
Paragraph (D)(2)(b)(iii) of Rule 3745-40-08
Paragraph (D)(3) of Rule 3745-40-08
Paragraph (D)(6)(a) of Rule 3745-40-08

3745-40-02: Purpose, applicability, general requirements, exclusions and prohibitions

Comment 40:

Having included exceptional quality biosolids within the definition of “bulk biosolids”, it is unclear if the rule requirements of OAC Chapter 3745-40 apply to users of exceptional quality biosolids applying less than 1000 cubic yards per year. OAC 3745-40-02 (B) (1) (b) states that unless excepted in subparagraph (B) (2), the rules apply to the beneficial use of biosolids. OAC 3745-40-02 (B) (2) provides for a director’s waiver only –there is no language to limit applicability to the amount of biosolids applied. **(Dominic J. Hanket - City of Columbus)**

Response 40:

The chapter is applicable to all biosolids; however, the term “bulk biosolids” is utilized to specify the requirements for the beneficial use of quantities of exceptional quality biosolids greater than 300 dry tons.

In order to provide clarification, the definition of bulk biosolids will be eliminated and Ohio EPA will use the term “bulk exceptional quality biosolids,” which will be defined as:

“Bulk exceptional quality biosolids” means more than 300 dry tons of exceptional quality biosolids beneficially used during a crop year on a beneficial use site that is utilized for the production of:

- (a) Feed crops;
- (b) Fiber crops;
- (c) Food crops; or
- (d) Pasture land.”

(C)(3)(a) Frozen, Snow-Covered Ground

Comment 41:

OWEA believe this rule will result in increased disposal program costs. Often, soils in Southern Ohio remain unfrozen until mid to late December versus regions in Northern Ohio where freezing occurs earlier. The 120-day period is very restrictive. A possible option would be to allow the applicator to disc the top 4-inches of soil if only the top inch is frozen (frosted) to allow applied product to enter an unfrozen zone. Would the Ohio EPA accept actual soil temperature tracking versus prohibiting land application based on possible soil temperatures? **(Ohio Water Environment Association)**

Response 41:

The 120-day period between November 15th and March 15th was meant to correlate with the requirement that a wastewater treatment works provide 120 days of facility storage for sewage sludge and biosolids. Upon review of soil temperature data, the potential for frozen ground is much greater between December 15 and March 1. As such, in order to provide greater flexibility, the timeframe for when incorporation or injection will be required for beneficial use will be revised to a period from December 15 to March 1 of consecutive calendar years. Ohio EPA does not feel that tracking soil temperatures will be sufficient to mitigate the greater potential for runoff that can occur on frozen or snow covered ground.

Comment 42:

The proposed rule that would require same-day incorporation or injection of biosolids from November 15 to March 15 is unreasonable. In southwest Ohio, the general annual weather pattern does not create seasonally-permanent frozen field conditions until late December or later. Seasonal weather and ambient air and soil temperatures differ significantly across Ohio. An alternate method Ohio EPA may consider would be to allow the POTW/applicator to measure and document the actual soil temperature, and allow land application without same-day incorporation or injection if the soil temperature is greater than 0°C one inch below the surface at the time of land application. The

application activities will thaw the top one-inch of soil if it is “frosted” or otherwise less than 0°C. **(Greg Merrill – Montgomery County Water Services)**

Response 42:

The 120-day period between November 15th and March 15th was meant to correlate with the requirement that a wastewater treatment works provide 120 days of facility storage for sewage sludge and biosolids. Upon review of soil temperature data, the potential for frozen ground is much greater between December 15 and March 1. As such, in order to provide greater flexibility, the timeframe for when incorporation or injection will be required for beneficial use will be revised to a period from December 15 to March 1 of consecutive calendar years. Ohio EPA does not feel that tracking soil temperatures will be sufficient to mitigate the greater potential for runoff that can occur on frozen or snow covered ground. In addition, the “thawing” could increase the potential for runoff, which is what we would like to prevent.

Comment 43:

Land application on no-till fields and pastures should be allowed during this time frame. The vegetation and/or crop residue acts to contain biosolids on-site. **(Bruce Bailey - Schmack BioEnergy)**

Response 43:

Although the vegetation and/or crop residue may help to contain biosolids, the potential for runoff is still elevated during periods when the ground is frozen or snow covered. Upon review of soil temperature data, the potential for frozen ground is much greater between December 15 and March 1. As such, in order to provide greater flexibility, the timeframe for when incorporation or injection will be required for beneficial use will be revised to a period from December 15 to March 1 of subsequent calendar years.

(C)(3)(b) Night Time Beneficial Use

Comment 44:

Oftentimes in the winter the ground is only frozen enough to support equipment late at night or early in the morning. Requiring prior Director authorization essentially closes off this option. **(Bruce Bailey - Schmack BioEnergy)**

Response 44:

As written, this paragraph does not prohibit the beneficial use of biosolids one half hour before sunrise and one half hour after sunset. This paragraph was written to allow the Director or an authorized representative some flexibility in evaluating beneficial use times. For example, in a situation where a beneficial use site is far removed from surface

waters of the state, the need to ensure that adequate isolation distances are maintained is not compromised by the lack of sufficient daylight. In addition, Ohio EPA has received citizen complaints regarding large equipment operating in the middle of the night.

(C)(3)(c) Screening Requirements

Comment 45:

Draft OAC 3745-40-02 (C) (3) (c) introduces a new physical screening standard achieved through use of a bar screen with a maximum aperture of three-eighths inch (0.0095 m) to be in effect by July 1, 2012. This standard was recommended by Synagro in its comments to the first draft rules.

The City has two concerns. First, one of its plants utilizes a screen that is five-eighths inch and in conjunction with use of a grinder has proven effective in reducing inert material in biosolids. Requiring a certain size of screen will unnecessarily require replacement of such type of screens.

In addition, the word “remove” in the standard calls into question the acceptable practice of using grinding as a follow-up process to screening. The term should be changed to “reduce” to reflect the fact that plants use both screening and grinding to produce an acceptable quality of biosolids. **(Dominic J. Hanket - City of Columbus)**

Response 45:

After further consideration, screening to five-eighths (1.59 cm) of an inch will be sufficient for the purposes of this requirement.

Ohio EPA will revise Paragraph (C)(3)(c) of rule 3745-40-02 as follows:

“By July 1, 2014, prior to the beneficial use of biosolids, all influent wastewater and septage, or all sewage sludge at a treatment works must be treated by a process such as physical screening or another method to significantly remove manufactured inerts. Meeting this requirement may occur at any point in the wastewater treatment process or biosolids manufacturing process, such as at the headworks or at some point downstream at the treatment works, and may be accomplished by either of the following:

- (i) Screening through a bar screen with a maximum aperture of five-eighths inch (1.59 cm); or
- (ii) Obtaining approval from the director for an alternative method that achieves a removal rate equal to or greater than that achieved by the screening standard in paragraph (C)(3)(c)(i) of this rule.

[Comment: Manufactured inerts are considered solid waste and should not be part of a beneficial use application. Manufactured inerts should be disposed of within a landfill. When a treatment works is cleaning out a digester or other sewage sludge treatment unit that contains sewage sludge from a time period when influent wastewater or septage was not screened, the treatment works should inspect the biosolids to determine if screening to remove manufactured inerts is needed.]”

Comment 46:

The City does not specifically object to the goal of this requirement. The OEPA should clarify this rule and provide sufficient time within the rule for generators to budget, design, purchase, and install necessary equipment. The current rule already prohibits trash and debris from land application. It is not feasible for the City of Sidney to screen the biosolids through the solids handling process. Instead, screening of all incoming flows will be necessary. Is it the intent of the OEPA to require that all flows be screened? The City of Sidney is designed for an average daily flow of 7.0 MGD with a peak design flow of 13.5 MGD. The current screen is designed for 10.0 MGD. What does OEPA require of Sidney when flows exceed the 10.0 MGD rating of the screen? If the OEPA requires 100% screening of all flows the City of Sidney will be required to install an additional \$500,000 of equipment in addition to the design and installation costs. The City of Sidney recommends that the OEPA require screening for average or design average daily flows. **(Brian Schultz - City of Sidney)**

Response 46:

Ohio EPA expects that all influent wastewater and septage will be screened per this requirement. Ohio EPA will be providing an extended timeframe for treatment works to come into compliance with this requirement. As an alternative to increasing the capacity of the influent screening, the city may want to investigate the potential utilization of flow equalization or inflow and infiltration (I/I) removal in the collection system.

Ohio EPA will revise Paragraph (C)(3)(c) of rule 3745-40-02 as follows:

“By July 1, 2014, prior to the beneficial use of biosolids, all influent wastewater and septage, or all sewage sludge at a treatment works must be treated by a process such as physical screening or another method to significantly remove manufactured inerts. Meeting this requirement may occur at any point in the wastewater treatment process or biosolids manufacturing process, such as at the headworks or at some point downstream at the treatment works, and may be accomplished by either of the following:

- (i) Screening through a bar screen with a maximum aperture of five-eighths inch (1.59 cm); or

- (ii) Obtaining approval from the director for an alternative method that achieves a removal rate equal to or greater than that achieved by the screening standard in paragraph (C)(3)(c)(i) of this rule.

[Comment: Manufactured inerts are considered solid waste and should not be part of a beneficial use application. Manufactured inerts should be disposed of within a landfill. When a treatment works is cleaning out a digester or other sewage sludge treatment unit that contains sewage sludge from a time period when influent wastewater or septage was not screened, the treatment works should inspect the biosolids to determine if screening to remove manufactured inerts is needed.]”

Comment 47:

The removal of inerts from biosolids is important. However, our experience has proven a half-inch screen will remove these materials. Requiring a screen no larger than three-eighth inch opening is too conservative. We do not see a technical basis for this change that would provide increase benefit. **(Ohio Water Environment Association)**

Response 47:

Ohio EPA will revise Paragraph (C)(3)(c) of rule 3745-40-02 as follows:

“By July 1, 2014, prior to the beneficial use of biosolids, all influent wastewater and septage, or all sewage sludge at a treatment works must be treated by a process such as physical screening or another method to significantly remove manufactured inerts. Meeting this requirement may occur at any point in the wastewater treatment process or biosolids manufacturing process, such as at the headworks or at some point downstream at the treatment works, and may be accomplished by either of the following:

- (i) Screening through a bar screen with a maximum aperture of five-eighths inch (1.59 cm); or
- (ii) Obtaining approval from the director for an alternative method that achieves a removal rate equal to or greater than that achieved by the screening standard in paragraph (C)(3)(c)(i) of this rule.

[Comment: Manufactured inerts are considered solid waste and should not be part of a beneficial use application. Manufactured inerts should be disposed of within a landfill. When a treatment works is cleaning out a digester or other sewage sludge treatment unit that contains sewage sludge from a time period when influent wastewater or septage was not screened, the treatment works should inspect the biosolids to determine if screening to remove manufactured inerts is needed.]”

Comment 48:

Major wastewater treatment facilities in Ohio have screeners and grinders at the headworks of the facilities. As such there is not a need to screen the biosolids products to remove manufactured inerts. Requiring screening adds unnecessary cost to the management of biosolids. An appropriate rule would require that facilities that don't have screening and grinding at the headworks assess the biosolids through a hand screen to define if a problem exists. If a problem exists, then appropriate screening should occur. Also, if a facility is cleaning out materials from old digesters or other facilities that have been in place prior to establishing screening and grinding at the headworks, then they should assess that material for inerts as well. The DSIWM/Composting rules for yardwaste establish a screening method and limits that the DSW should consider using for manufactured inerts. We suggest that only plastics be counted as inerts in biosolids. The DSIWM rule is available at: http://www.epa.ohio.gov/portals/34/document/currentrule/3745-27-46_current.pdf

Table 4 lists the foreign matter limits and sieve sizing. (**Bruce Bailey - Schmack BioEnergy**)

Response 48:

The biosolids will most likely not need to be screened if the influent wastewater and septage to the treatment works was already screened appropriately.

Paragraph (C)(3)(c) of Rule 3745-40-02 will be revised as follows:

“By July 1, 2014, prior to the beneficial use of biosolids, all influent wastewater and septage, or all sewage sludge at a treatment works must be treated by a process such as physical screening or another method to significantly remove manufactured inerts. Meeting this requirement may occur at any point in the wastewater treatment process or biosolids manufacturing process, such as at the headworks or at some point downstream at the treatment works, and may be accomplished by either of the following:

- (i) Screening through a bar screen with a maximum aperture of five-eighths inch (1.59 cm); or
- (ii) Obtaining approval from the director for an alternative method that achieves a removal rate equal to or greater than that achieved by the screening standard in paragraph (C)(3)(c)(i) of this rule.

[Comment: Manufactured inerts are considered solid waste and should not be part of a beneficial use application. Manufactured inerts should be disposed of within a landfill. When a treatment works is cleaning out a digester or other sewage sludge treatment unit that contains sewage sludge from a time period when influent wastewater or septage was not screened, the treatment works

should inspect the biosolids to determine if screening to remove manufactured inerts is needed.]”

(D)(5) Sewage sludge or biosolids, where:

Comment 49:

The PCB number is too low. A value of 2 will be in line with Toxic Substances Control Act (15U.S.C. 2605). **(Bruce Bailey - Schmack BioEnergy)**

Response 49:

In the first draft of the revised rules for sewage sludge released in July, 2008, Ohio EPA included a limit for PCB in sewage sludge or biosolids of 50 mg/kg (ppm). In follow-up to those draft rules being released, the following comment was received:

“Comment 58:

3745-40-02(D)(4)(a) - The PCB number is too high and in conflict with other OEPA programs. OEPA should put a number in place that is lower than that of 40 CFR 503. Per OAC 3745-27-46, Table 2, yard waste compost rules, the limit for PCB is 1 ppm. Neighboring states have similar PCB limits. DSW should discuss with DSIWM (for all their programs, e.g., VAP) their basis for this limit. Test methodology should be clearly defined since there are many isomers of PCB. (Bruce Bailey, Schmack BioEnergy and Kurtz Brothers)”

Following the receipt of the above comment, per your request, Ohio EPA incorporated a lower limit for PCB content in sewage sludge or biosolids of 1 mg/kg (ppm), which agrees with the limit provided in Table 2 of rule 3745-27-46 of the OAC and the comment provided above.

In order to maintain consistency within the Agency, the limit of 1 mg/kg (ppm) will remain in rule.

3745-40-03: NPDES permit requirements and management plan requirements

(C)(3) Requirements for Management Plans

Comment 50:

Further OAC 3745-40-03 (A) (2) states that the beneficial use of biosolids shall be in compliance with the chapter and the conditions of an effective NPDES permit except as provided in (C). The exception language in (C) states that an NPDES permit is not required if the Director has issued an approved management plan. The section also states that the Director may require a management plan to one using more than 1000 cubic yards of biosolids per year to generate a product. Notably, while the section authorizes

the Director to require a management plan for greater than 1000 cubic yards, it says nothing about the status of one using less in a year's time. Without clear exception language in subparagraph (C), applying the language of subparagraph A suggests that an NPDES permit may be required for land application of EQB less than 1000 cubic yards per year. **(Dominic J. Hanket - City of Columbus)**

Response 50:

Paragraphs (A)(1), (A)(2) and (C)(3) will be revised as follows:

“(A)(1) Except as provided in paragraph (C) of this rule, the treatment, storage, transfer, or disposal of sewage sludge or biosolids shall be in compliance with this chapter and, as applicable, the conditions of an NPDES permit. Unless otherwise determined by the director, any person who receives exceptional quality biosolids for beneficial use is not required to obtain an NPDES permit;”

“(A)(2) Except as provided in paragraph (C) of this rule, the beneficial use of biosolids shall be in compliance with this chapter and, as applicable, the conditions of an NPDES permit. Unless otherwise determined by the director, any person who receives exceptional quality biosolids for beneficial use is not required to obtain an NPDES permit;” and

“(C)(3) The director may require that any person who is not a permittee obtain a management plan prior to the beneficial use of biosolids.”

Comment 51:

To enable the establishment and continuation of a sustainable beneficial use of biosolids in the State of Ohio we need rules that are protective of the environment, while not being cumbersome and burdensome. Requiring a Sludge Management Plan for such an insignificant volume of biosolids is expensive in our time and yours, cumbersome and burdensome.

Requiring a management plan from non-permittees is both cumbersome and burdensome. There is not an immediate and significant danger to public health from EQ products being made into other products. If particular types of EQ, such as those stabilized with lime/kiln dust materials, are problematic, then key in on them.

Regulating a non-permitted entity will be problematic for the EPA. This rule is regulating nonpermittees. They only way this can happen is to make the permittee responsible for the actions of their non-permittee customers. This will have a chilling effect on EQ sales, marketing, and utilization.

10 dry tons per acre is 0.5% of the volume of an acre furrow slice (6” deep) or <1/10”. A nurseryman rejuvenating production ground will easily apply 1 to 2” of compost to a site.

Placing flower beds, new turf, and/or wildflowers calls for a similar 2” application rate. Container mixes, bed mixes, and tree backfill calls for 10 to 40% by volume. Such a uses are perfectly reasonable. Regulating by requiring a Sludge Management Plan for uses of an EQ product is not.

The density of biosolids varies widely, depending on the chemical (lime, kiln dust, etc.) or organic (sawdust, wood chips, bark, etc.) used in the process to stabilize the material to EQ status. Flipping back and forth between cubic yards and tons like this rule does beg the question as to how the agency calculates the conversion from tons to cubic yards.

If the agency insists on a Sludge Management Plan, then a model plan should be in an appendix since such plans are no longer customarily used. **(Bruce Bailey - Schmack BioEnergy)**

Response 51:

This is not a requirement for all nonpermitted entities that handle bulk biosolids. This provision has been placed in rule to give the director the authority to require a management plan **if** Ohio EPA finds that it is necessary to protect public health and the environment.

To respond to the issue of Ohio EPA’s authority to regulate “nonpermittees,” per Ohio Revised Code section 6111.03(S)(1) Ohio EPA has the following authority:

“(S)(1) Administer and enforce a program for the regulation of sludge management in this state. In administering the program, the director, in addition to exercising the authority provided in any other applicable sections of this chapter, may do any of the following:

(a) Develop plans and programs for the disposal and utilization of sludge and sludge materials;”

As such, Ohio EPA has the authority to regulate sewage sludge and biosolids management and deposition in the State of Ohio. Ohio EPA may require permits or management plans for the beneficial use of biosolids. Ohio EPA has chosen to incorporate the flexibility to require a management plan should the agency determine that impacts to public health or the environment have occurred. A management plan would be utilized to ensure that those impacts are mitigated in the future.

At this time, Ohio EPA does not plan to develop a “model” sludge management plan due to variability of site conditions, operations, treatment processes, etc., which would make each management plan unique. Should Ohio EPA determine in the future that a “model” sludge management plan would be effective for review of these plans, Ohio EPA will develop a “model” at that time.

To resolve the issue of conversion between “dry tons” and “cubic yards,” Ohio EPA has revised the rule to eliminate the use of the term “cubic yards.”

3745-40-04: Biosolids classifications

Comment 52:

40 CFR 503 and the current OAC 3745-40-05 (N)(3) and (4) allows two opportunities for seeking approval of PFRP processes. Such approvals have to go through the USEPA Pathogen Equivalency process and are assessed and approved by USEPA experts. The new OEPA rule should have the same allowance.

If the USEPA chooses to discontinue their evaluation of alternative PFRP processes in the future, then the OEPA rule could be changed in the future. (**Bruce Bailey - Schmack BioEnergy**)

Response 52:

The rules, as drafted, continue to allow an entity to seek approval through the U.S. EPA Pathogen Equivalency Committee for a treatment process.

Per 3745-40-04(B)(7):

“(7) Pathogen reduction alternative P-7: equivalent process to significantly reduce pathogens.

- (a) Requirements for achieving pathogen reduction alternative P-7: equivalent process to significantly reduce pathogens. To achieve alternative P-7, a permittee shall apply for and obtain an equivalency recommendation from the pathogen equivalency committee of the United States environmental protection agency.
- (b) Recordkeeping requirements for pathogen reduction alternative P-7: equivalent process to significantly reduce pathogens. The records of the operating parameters or pathogen levels, as necessary to demonstrate the process equivalent to a process to significantly reduce pathogens, shall be maintained and submitted to the director or an authorized representative with the annual report.”

And per 3745-40-04(B)(16):

“(16) Pathogen reduction alternative P-16: equivalent process to further reduce pathogens. Requirements for achieving pathogen reduction alternative P-16:

- (a) Requirements for achieving pathogen reduction alternative P-16. To achieve alternative P-16, a permittee shall apply for and obtain an

equivalency recommendation from the pathogen equivalency committee of the United States environmental protection agency.

- (b) Recordkeeping requirement for pathogen reduction alternative P-16: equivalent process to further reduce pathogens. The following records shall be maintained and submitted to the director or an authorized representative with the annual report:
- (i) Analytical results for density of fecal coliform bacteria expressed as the most probable number (mpn) per gram of total solids in dry weight basis, or the density of Salmonella sp. bacteria expressed as mpn per four grams of total solids in dry weight basis; and
 - (ii) Operating parameters or pathogen levels, as necessary, to demonstrate that the process equivalent to a process to further reduce pathogens has been achieved.”

(A)(1) Biosolids Classifications Table

Comment 53:

Corrections needed in OAC 3745-40-04 regarding requirements for metals concentration limits

40 CFR Section 503.13 of the federal standards for the use or disposal of biosolids states that bulk sewage sludge meeting EQB standards when applied to the land, forest, a public contact site, or a reclamation site must meet the metals ceiling concentrations stated in either what OEPA includes in its Table D-2 or D-3. The federal rule also provides that EQB sewage sludge sold or given away in a bag or container must meet the requirements of what OEPA includes in its Table D-3.

OAC 3745-40-04 (A) (1), Table A-1, omits reference to Table D-3 when listing the requirements for metal concentration limits for exceptional quality sewage sludge. This reference should be included. USEPA requires that both table D-1 and D-3 are met for EQB. **(Dominic J. Hanket - City of Columbus)**

Response 53:

Ohio EPA will make the change as requested.

(B)(1)(b) Monitoring Frequency for Fecal Coliform Monitoring

Comment 54:

MCWS does not support the requirement for performing at least one monitoring event for pathogen reduction alternative P-1 even if no biosolids product is hauled from the facility

in a reporting period. In MCWS Western Regional's case, if for some reason no aerobic digesters have completed their digestion in a reporting period (month), or no digested biosolids were hauled, why should fecal coliform sampling be required? The analytical results would not be used for any required compliance measurement purpose since the product tested would not be hauled or land applied. MCWS does support the minimum monitoring required if an when biosolids are hauled and land applied from the facility.
(Greg Merrill – Montgomery County Water Services)

Response 54:

Ohio EPA received the following comment on the first draft of the revised rules released in July 2008 regarding monitoring frequency. In the first draft of these revised rules, Ohio EPA was not going to require monitoring during reporting periods when biosolids were not removed from the treatment works:

“Comment 182:

3745-40-09(B)(2)(a) - states that monitoring is not required if a hauling event does not occur during the reporting period. Part 503 sets minimum monitoring based on how much sewage sludge is land applied in a 365 day period. The minimum must be met whether land application occurs year round or all at one time. Therefore, this section should still require the minimum monitoring be required. (John Colletti, USEPA Region 5)”

In accordance with the above comment, Ohio EPA will require monitoring each reporting period.

Comment 55:

OWEA believe operators should not be required to monitor the fecal concentration during the monthly reporting timeframe if no biosolids have been applied. We respectfully request the Ohio EPA to only require fecal testing if product is land applied during a defined reporting period. **(Ohio Water Environment Association)**

Response 55:

Ohio EPA received the following comment on the first draft of the revised rules released in July 2008 regarding monitoring frequency. In the first draft of these revised rules, Ohio EPA was not going to require monitoring during reporting periods when biosolids were not removed from the treatment works:

“Comment 182:

3745-40-09(B)(2)(a) - states that monitoring is not required if a hauling event does not occur during the reporting period. Part 503 sets minimum monitoring based on how much sewage sludge is land applied in a 365 day period. The minimum must be met whether land application occurs year round or all at one time. Therefore, this section should still require the minimum monitoring be required. (John Colletti, USEPA Region 5)”

In accordance with the above comment, Ohio EPA will require monitoring each reporting period.

(B)(2) Aerobic Digestion

Comment 56:

Positive Dissolved Oxygen in Aerobic Digesters

Based on the response provided by the Ohio EPA to our original comment in October 2008, we wish to make one clarification on measurements that will ensure adequate dissolved oxygen is present in aerobic digestion.

The science of aerobic digestion is evolving where plants are practicing long intermittent cycles of aeration followed by similar long cycles of anoxic mixing. Therefore, at any given time, tank contents may have positive dissolved oxygen (DO), while other times measurable DO will be absent. Such a method of digestion provides the following benefits:

1. Recruits facultative bacteria, which will reduce sludge yield and ultimately the amount of material to be managed in the field
2. Saves energy, with no sacrifice in process performance
3. Prevents suppression of pH due to the consumption of alkalinity with the conversion of ammonia-nitrogen, which will hinder the effectiveness of the aerobic digestion process

As a result, we would respectfully request the Ohio EPA require the regulated utility to measure, DO, pH, VS destruction, alkalinity, and ammonia-N as a family of parameters and not rely on DO alone. **(Ohio Water Environment Association)**

Response 56:

Based on the variability of aerobic digestion processes and the advancement of this technology, Ohio EPA will remove the requirement to maintain “positive” dissolved oxygen in the digesters at all times. Ohio EPA will only require records of the mean cell residence time and temperature to be maintained for this pathogen reduction alternative, as required by 40 CFR Part 503.

(B)(4) Anaerobic Digestion

Comment 57:

Add the same language found in 3745-40-04 (B)(5)(a)(i)(b) and(c), to allow the use of appropriate solid wastes at anaerobic digesters interested in energy recovery. Add the same language found in 3745-40-04 (B)(5)(b)(ii) for record keeping of the amount and county of origin for the solid wastes accepted. **(DSIWM)**

Response 57:

Ohio EPA DSW will make the change as requested to the anaerobic digestion alternative.

(B)(5)(a)(i)(b) Composting

Comment 58:

Add the word “feedstocks” to the list of materials that can be co-composted. The rule would read as follows:

“The owner or operator of the treatment works co-composts sewage sludge or biosolids exclusively with feedstocks, bulking agents or additives, as defined in rules 3745-27-01 and 3745-27-40 of the Administrative Code.” **(DSIWM)**

Response 58:

Ohio EPA DSW will make the change as requested.

(B)(10)(a)(i)(c) Composting

Comment 59:

OAC 3745-40-04 (B) (10) (a) (i) (c) requires that at a minimum the compost mixture must be 50% biosolids by volume in order to maintain an exempt status from 3745-27-40 and 3745-27-47.

First the language of (i) excepting certain operations from the solid waste rules should include rules 3745-27-40 *through* 3745-27-47, not *and*.

Second, the language of 3745-40-04 (B) (10) (a) (i) (c) is problematic. The proper mixture of bulking agent and biosolids is based upon desired moisture of 60% initially. To achieve this result, yard waste (bulking agent) and biosolids ratio on a volume basis is typically 3.5:1. A mixture with 50% biosolids in the bulking agents as required by the draft language would cause failure of the composting process.

The City recommends removal of the reference to “yard waste” in the list of feedstock. Yard waste and wood chips when used as “bulking agents” counteract the characteristics commonly found in manure, biosolids, food waste, and animal wastes. **(Dominic J. Hanket - City of Columbus)**

Response 59:

Ohio EPA will make the change in the language in paragraph (B)(10)(a)(i) as suggested. Ohio EPA will also remove the requirement for biosolids to make up fifty percent of the mixture.

(B)(10)(b)(iii) Composting

Comment 60:

Draft OAC 3745-40-04 (B) (10) (b) (iii) requires that when composting, records must be kept of the weight or volume and county of origin of all feedstocks, bulking agents, and additives used in the composting process. While information on the type and quantity of the above materials is readily obtainable, the county of origin of these materials is not. A compost facility may receive these materials from any number of sources that may be collected into one delivery. There is no readily available means of identifying the county of origin for each portion of a load.

The requirement to report on county of origin is also a concern because the City's compost facility also receives small quantities of yard waste from many residential customers. All yard waste is processed to achieve pathogen reduction and vector attraction reduction before distribution of biosolids compost. It is unclear what benefit is achieved by recording the county of every load of yard waste delivered.

Chapter 3745 implements a surface water program – identifying the source of the material to be used in the composting process does not appear pertinent to the goals to be achieved under the chapter. The City requests elimination of this reporting requirement. **(Dominic J. Hanket - City of Columbus)**

Response 60:

The following is an excerpt from a December 5, 2008 memo from the Ohio EPA Division of Solid and Infectious Waste to the Division of Surface Water regarding coordination between solid waste regulations and biosolids regulations:

“Goal: Ensure that both rules continue to provide an “even playing field” for treatment works and composting facility operators that accept and manage the same solid waste, as requested by these stakeholders during past rule revisions.

Strategies for sewage sludge rules:

- *Add language requiring treatment works to record and report the amount and county of origin of yardwaste, bulking agents and food scraps, and other solid wastes accepted per year. This information is critical for tracking the amount of wastes diverted from landfills and determining how the goals of the state solid waste plan are being met.”*

In order to maintain consistency within the Agency, Ohio EPA will not remove the requirement to track the county of origin of materials added to the composting process.

(C)(10)(a)(iii) Immediate Incorporation for Class A Biosolids

Comment 61:

We respectfully request a science based explanation on this requirement. (**Ohio Water Environment Association**)

Response 61:

Ohio EPA has not performed any research with regards to this requirement, rather, as part of Ohio EPA's federally delegated authority to regulate biosolids in the State of Ohio, Ohio EPA has included this requirement to ensure that our regulations are at least as stringent as the federal regulations.

The following is from 40 CFR Part 503, the federal sewage sludge regulations:

- “(10)(i) Sewage sludge applied to the land surface or placed on an active sewage sludge unit shall be incorporated into the soil within six hours after application to or placement on the land, unless otherwise specified by the permitting authority.*

- (ii) When sewage sludge that is incorporated into the soil is Class A with respect to pathogens, the sewage sludge shall be applied to or placed on the land within eight hours after being discharged from the pathogen treatment process.”*

In addition, Ohio EPA has revised the rules to only include two classifications (i.e. Class B and exceptional quality) of biosolids. The Class A biosolids classification has been removed from the revised rules.

Comment 62:

MCWS does not support the proposal that Class A biosolids must be beneficially used within eight hours of being discharged from the pathogen treatment process. This eight hour time limit is unattainable unless small haul volume loads are planned and fields where application activities are to take place are within very short driving distances from the facility. (**Greg Merrill – Montgomery County Water Services**)

Response 62:

As part of Ohio EPA's federally delegated authority to regulate biosolids in the State of Ohio, Ohio EPA has included this requirement to ensure that our regulations are at least as stringent as the federal regulations.

The following excerpt is from 40 CFR Part 503, the federal sewage sludge regulations:

- “(10)(i) Sewage sludge applied to the land surface or placed on an active sewage sludge unit shall be incorporated into the soil within six hours after application to or placement on the land, unless otherwise specified by the permitting authority.*

- (ii) *When sewage sludge that is incorporated into the soil is Class A with respect to pathogens, the sewage sludge shall be applied to or placed on the land within eight hours after being discharged from the pathogen treatment process.”*

In addition, Ohio EPA has revised the rules to only include two classifications (i.e. Class B and exceptional quality) of biosolids. The Class A biosolids classification has been removed from the revised rules.

3745-40-05: Notice and necessary information requirements for biosolids and other notification requirements

Comment 63:

Page 1, paragraphs (A), (B), and (C) describes the notification requirements for permittees and individuals providing biosolids to others for beneficial use. Because biosolids are being utilized for agronomic benefits and applied at agronomic rates, it would be important for the producer utilizing biosolids to receive a certificate documenting the amount of material applied on a ton per acre or a pound of nutrients per acre basis. In addition, a complete agronomic analysis of the biosolids composition should be attached to the certificate. Having these records will allow the producer to make informed decisions regarding the implementation of their nutrient management plan. **(John C. Fisher – Ohio Farm Bureau Federation)**

Response 63:

Ohio EPA agrees and will add this requirement to rule 3745-40-05.

Comment 64:

I am writing to you regarding the 503 Sludge Rule. It is a personal issue for me, for you, and for our children. When we reach for a bottle of ketchup or an orange or any other food product at the store, do we really want to have to wonder if that food was grown with "biosolids" (a.k.a. sewage sludge)? (There is a lack of requirements for labeling of products made from or grown in sludge/"biosolids.") "Biosolids" offered free of charge to the farmer, unbeknownst to him of the hidden toxicities? "Biosolids" reaping huge profits to those willing to tote it away for the asking? **(Shirley A. Carpenter)**

Response 64:

As currently drafted, regulations for biosolids in the State of Ohio require a notification to be given when a product contains biosolids (such as mulch, soil blends, fertilizer, etc.). This requirement can be found in draft rule 3745-40-05 of the OAC.

Also, Ohio EPA requires that biosolids meet the most stringent treatment requirements for pathogens and metal pollutant limits prior to being distributed or applied to food crops. In addition, many publicly owned wastewater treatment works (POTW) have

pretreatment programs that regulate the discharge of toxic chemicals into the sewer system, so that these chemicals are removed prior to the wastewater reaching the POTW.

To view these regulations, please follow this link:

http://www.epa.ohio.gov/dsw/rules/draft_sludge_apr09.aspx

(B) and (C) Requirement to Pass NANI Along to Customers

Comment 65:

Once biosolids is exceptional quality it becomes a marketable commodity and part of commerce. This is the basic premise of 40 CFR 503 and OEPA rules up to this point. This premise has provided the motivation for taking on the major capital expenditures necessary to generate Exceptional Quality Biosolids.

Many recycled materials are in commerce, but they are not identified as such unless it is specifically beneficial in marketing the products. Examples of recycled content products include flyash in bowling balls, FGD in dry wall, dried whey in many foods, wood in mulches, many metal products, many paper products, many plastic products, and car batteries. These are regularly and customarily accepted as new products. Soils or mulches with biosolids content are also regularly and customarily accepted as new products because they perform as well or better than new products. Some manufacturers choose to advertise this fact, while others don't. It is problematic that the OEPA is choosing to make this business decision for commerce with NANI past the initial sale. This rule also is regulating non-permittees. We thought it was the goal of the government to foster safe and reliable sustainability through recycling.

Product liability insurance is a normal and customary part of commerce, including soil blending with EQ biosolids. Product liability insurance protects the consumer from issues such as products tainted with bacteria at levels that could cause disease. We are unaware of any documented cases of diseases caused by EQ biosolids in soil and mulch products. Our affiliated companies have managed over 1,000,000 cubic yards of EQ biosolids compost over the past 15 years from the Akron Compost Facility as product without paying any claims on the product liability insurance. Additionally, we've managed additional large volumes of EQ biosolids from numerous other sources, including from out-of-state, without any problems as well.

The OEPA is creating a problem here by their own failure to buy into a widely accepted, well respected program. If this portion of the rule remains as written we will contest through the JCARR process. **(Bruce Bailey - Schmack BioEnergy)**

Response 65:

Ohio EPA believes that beneficial use of biosolids is the best alternative for final deposition of these materials, especially as landfill space continues to decrease. Ohio EPA agrees that soils or mulches with biosolids content are regularly and customarily

accepted as new products because they perform as well or better than new products. Ohio EPA will revise Paragraph (A) of rule 3745-40-05 as follows:

“Notice and necessary information requirements. Any person who is a permittee shall provide the initial person who receives biosolids information including, but not limited to:

- (1) The name, address, telephone number, and NPDES permit number of the permittee;
- (2) The following statement: "The material you are receiving in this bag or in bulk is or contains biosolids that have been treated to meet the requirements in Chapter 3745-40 of the Administrative Code.";
- (3) The concentration of total Kjeldahl nitrogen, ammonia nitrogen, total phosphorus and total potassium of the biosolids in milligram per kilogram, dry weight basis; and
- (4) A statement that the biosolids shall be further treated, stored, transferred, disposed of or beneficially used in accordance with Chapter 3745-40 of the Administrative Code.”

Comment 66:

OAC 3745-40-05 (C) states that the director may require additional notification information from any person who distributes biosolids or material containing biosolids to an initial person. There are no descriptions of what situations would prompt the director to require these additional notifications or indeed what the additional notices would entail. This section should either include criteria and examples for the director in implementing the provision or be eliminated from the rule package. **(Dominic J. Hanket - City of Columbus)**

Response 66:

Ohio EPA will revise rule 3745-40-05(C) as follows:

“(C) In order to protect public health or the environment, the director may require any person who distributes biosolids or material containing biosolids to provide the initial person receiving the biosolids or material containing biosolids with additional information concerning the constituents of the biosolids.”

The term “additional information” refers to the results of analysis completed on the biosolids and may include metal concentrations, pathogens, and nutrients.

3745-40-06: Authorization for a land application site, site transfer requirements and site amendment requirements for class B biosolids; and requirements for bulk quantities of biosolids to be stored in rail cars or other mobile storage units

No comments received.

3745-40-07: Requirements for the storage of biosolids: isolation distance requirements and requirements for field storage and regional facility storage

Comment 67:

This is additional unnecessary regulation of bulk EQ. If the actions of certain biosolids managers and/or biosolids stabilization processes have created problems in the past through inappropriate actions, inactions, or biosolids characteristics, then key in on the known problem. In blunt terms, punish the offenders, not the entire regulated community. **(Bruce Bailey - Schmack BioEnergy)**

Response 67:

Exceptional quality (EQ) biosolids still contain nutrients that may impair water quality if transported offsite, therefore Ohio EPA finds it necessary to regulate the location of field storage areas for bulk EQ biosolids. Maintaining specific isolation distances is a best management practice (BMP). Ohio EPA feels that including this BMP into rule is more practical than requiring site specific authorizations for bulk EQ biosolids when seeking to accomplish Ohio's water quality goals.

(B)(2) Prohibition of Field Storage for Class A Biosolids

Comment 68:

MCWS does not support the proposal of prohibiting field storage of Class A biosolids. MCWS believes an acceptable alternative to allow field storage of no longer than 30-days should be considered. **(Greg Merrill – Montgomery County Water Services)**

Response 68:

Ohio EPA has revised the rules to only include two classifications (i.e. Class B and exceptional quality) of biosolids. The Class A biosolids classification has been removed from the revised rules.

In addition, paragraph (B) of Rule 3745-40-07 states:

“Prohibitions. If utilizing vector attraction reduction options nine (VAR-9) or ten (VAR-10) , the field storage of class B biosolids is prohibited.”

Comment 69:

In draft OAC 3740-07 (B) the field storage of Class A biosolids is prohibited. Apparently, in classifying Class A biosolids and EQB biosolids separately, unlike the federal approach which includes EQB and non-EQB in Class A biosolids, the OEPA assumes that its Class A must meet the vector attraction reduction option (VAR) number 9 (injection) or VAR No. 10 (immediate incorporation) (See draft OAC 3740-50-08 (C) (9) and (10)). The use of the term Class A for only non EQB creates confusion with federal 503 requirements. The agency should not use a federal term in a different fashion when classifying the types of biosolids eligible for land application. **(Dominic J. Hanket - City of Columbus)**

Response 69:

Ohio EPA does not understand your comment regarding the “federal approach” as the term “exceptional quality” has not been defined within 40 CFR Part 503. The term, as found in Chapter 3745-40 of the OAC, was first defined in Ohio Revised Code 3745.11(Y). Ohio EPA will remove the Class A biosolids classification for clarification.

Comment 70:

The City understands the OEPA’s issues with controlling odors and mismanagement at land application sites; however the implementation of these proposed rules will cripple our biosolids management program. For example: 3745-40-07 B(2), B(4) and 3745-40-08 A(2).

All three of these proposed changes would cause Barberton and other communities that utilize alkaline stabilization/Pasteurization to cease land application operations all together. This would necessitate hauling biosolids to landfills (Our backup option). The end result would be the loss of millions of dollars that have been invested into alkaline stabilization/Pasteurization as recently as 2004 (with OEPA approval), the loss of a highly successful beneficial reuse program and additional burden on limited space in landfills. We are also concerned that millions more will need to be spent on a new process putting additional burden on our customers that are still paying for the bonds that funded construction of the RDP system.

Barberton, along with Agri-Sludge, proposes the following:

1. Rescind all proposed rules that pertain to limiting field storage, isolation distances, same day application and incorporation of alkali stabilized biosolids.
2. Insert a new rule to enable the OEPA to regulate odors and biosolids management such as:

The Director or an authorized representative may, at his discretion, apply restrictions or prohibit the field application or storage of class B, A or EQS biosolids at any site, or to any distribution program where repeated complaints are filed for mismanagement of biosolids or if significant odors are a public nuisance. The revocation of this area will be by letter and will include the EPA SWIMS ID# if applicable and the GPS coordinates of the sites in question. (Dennis R Weaver and Robert J Burkhard – Barberton WWTP)

Response 70:

Ohio EPA will remove paragraphs 3745-40-07(B)(2), 3745-40-07(B)(4), and 3745-40-08(A)(2) as requested.

Comment 71:

We understand the prohibition of stockpiling large amounts of Class A Biosolids , but would respectfully request an explanation on the prohibition against the field storage of Class A Biosolids. The requirements for Class A Biosolids require the material to be “pure” and have many of the same benefits as a rich organic soil. **(Ohio Water Environment Association)**

Response 71:

Ohio EPA has revised the rules to only include two classifications (i.e. Class B and exceptional quality) of biosolids. The Class A biosolids classification has been removed from the revised rules.

In addition, paragraph (B) of Rule 3745-40-07 states:

“Prohibitions. If utilizing vector attraction reduction options nine (VAR-9) or ten (VAR-10) , the field storage of class B biosolids is prohibited.”

(B)(4) Prohibition on Stockpiling of Alkaline Stabilized Biosolids

Comment 72:

MCWS does not support the proposal of prohibiting field storage of alkaline stabilized biosolids that contain unstabilized solids. MCWS believes lime stabilized undigested sludge is indeed stabilized enough to allow field storage for no longer than 30-days. Our experience with Eastern Regional product handled in this manner has shown odors are controllable and can be addressed by each applicer if they occur. **(Greg Merrill – Montgomery County Water Services)**

Response 72:

The prohibition of field storage of alkaline stabilized biosolids that contain unstabilized solids will be removed from this rule.

Comment 73:

Rule 3745-40-07 Item (B) (4) and a host of other spots where alkali stabilized biosolids that contain unstabilized solids were mentioned. This includes field storage, isolation distances, same day application and incorporation and any other place the rules were changed to affect this product. These changes were essentially added since the comment period last fall in a number of spots in the rules.

We understand the dilemma facing the EPA regarding this issue. However, this would adversely affect the program of many Generators in Ohio, including the City of Barberton, who we service.

We are requesting that all the rules pertaining to this issue be rescinded and that a rule allowing for revocation of sites being used by Class A and EQS distributors be allowed to happen. We know that site inspections are not done for these entities, however, there is no reason why revocation by letter from the EPA cannot be allowed. Therefore, we are offering the following statement.

The Director or an authorized representative:

May, at his discretion, apply restrictions or prohibit the field storage or application of Class A, B or EQS biosolids at ANY site, or to ANY distribution program where repeated complaints are filed for mismanagement of biosolids or if significant odors are a public nuisance. The revocation of this area will be by letter and will include the EPA SWIMS ID # if applicable and the GPS coordinates of the site(s) in question.

This rule could be introduced into a variety of places in the rules text, however, section 3745-40-12, compliance and enforcement seems like the candidate for this rules change.
(Thomas W. Abraham - Agri-Sludge, Inc.)

Response 73:

The prohibition of field storage of alkaline stabilized biosolids that contain unstabilized solids will be removed from this rule.

Comment 74:

The City understands the OEPA's issues with controlling odors and mismanagement at land application sites; however the implementation of these proposed rules will cripple our biosolids management program. For example: 3745-40-07 B(2), B(4) and 3745-40-08 A(2).

All three of these proposed changes would cause Barberton and other communities that utilize alkaline stabilization/Pasteurization to cease land application operations all together. This would necessitate hauling biosolids to landfills (Our backup option). The

end result would be the loss of millions of dollars that have been invested into alkaline stabilization/Pasteurization as recently as 2004 (with OEPA approval), the loss of a highly successful beneficial reuse program and additional burden on limited space in landfills. We are also concerned that millions more will need to be spent on a new process putting additional burden on our customers that are still paying for the bonds that funded construction of the RDP system.

Barberton, along with Agri-Sludge, proposes the following:

1. Rescind all proposed rules that pertain to limiting field storage, isolation distances, same day application and incorporation of alkali stabilized biosolids.
2. Insert a new rule to enable the OEPA to regulate odors and biosolids management such as:

The Director or an authorized representative may, at his discretion, apply restrictions or prohibit the field application or storage of class B, A or EQS biosolids at any site, or to any distribution program where repeated complaints are filed for mismanagement of biosolids or if significant odors are a public nuisance. The revocation of this area will be by letter and will include the EPA SWIMS ID# if applicable and the GPS coordinates of the sites in question. (Dennis R Weaver and Robert J Burkhard – Barberton WWTP)

Response 74:

Ohio EPA will remove paragraphs 3745-40-07(B)(2), 3745-40-07(B)(4), and 3745-40-08(A)(2) as requested.

Comment 75:

Based on experience by many utilities, OWEA believes lime stabilized undigested sludge is adequately stabilized to allow field storage for a period of time up to 30-days. We believe odor complaints are typically minimal and can be addressed by each applier when they occur, and in particular if biosolids are aerated to impart oxygen to the sludge and provide some volatile solids destruction prior to being treated with lime or other alkaline material. **(Ohio Water Environment Association)**

Response 75:

The prohibition of field storage of alkaline stabilized biosolids that contain unstabilized solids will be removed from this rule.

Comment 76:

Rule 3745-40-07 Item (B) (4) and anything that pertains to beneficially using alkali stabilized and unstabilized biosolids. First of all there isn't any scientific data or studies to support this change in the rule for storage and beneficial reuse. Our company services

many wastewater facilities that uses alkali to stabilize biosolids, and not one of them has ever had a violation for polluting the waters of the state, nor have they had any odor complaints during the term of Burch Hydro Inc. contract. Burch Hydro Inc. request that this rule be removed as good management practices for beneficial reuse will prevent any need for a restrictive rule like this. This rule does not support beneficial reuse of biosolids. **(Michael R. Burch - Burch Hydro Inc.)**

Response 76:

The prohibition of field storage of alkaline stabilized biosolids that contain unstabilized solids will be removed from this rule.

(C) Isolation distance requirements

Comment 77:

MCWS believes the proposed isolation distances severely limit the acres that will receive improved soil conditioning. MCWS supports the existing rule's isolation distances. The Director of Ohio EPA can require more restrictive isolation distances on a case-by-case basis. **(Greg Merrill – Montgomery County Water Services)**

Response 77:

The isolation distances in Paragraph (C) of Rule 3745-40-07 are applicable to the field storage of Class B and bulk exceptional quality biosolids, not the beneficial use of Class B and bulk exceptional quality biosolids. The isolation distances for the field storage of Class B and bulk exceptional quality biosolids will not severely limit the actual acres that will receive soil conditioning.

Comment 78:

The proposed isolation distances severely limit the actual acres that will receive soil conditioning. We support the existing rule's isolation distances and recommend the Director require more restrictive isolation limits on a case-by-case basis. Many fields are not square shaped, but many have long, narrow shapes that may be eliminated by the proposed isolation distances. **(Ohio Water Environment Association)**

Response 78:

The isolation distances in Paragraph (C) of Rule 3745-40-07 are applicable to the field storage of Class B and bulk exceptional quality (EQ) biosolids, not the beneficial use of Class B and bulk EQ biosolids. The isolation distances for the field storage of Class B and bulk EQ biosolids will not severely limit the actual acres that will receive soil conditioning.

Comment 79:

The agreement to change the isolation distance to exclude groundwater could not be located. As written the hundred feet for waters of the state includes groundwater. **(Bruce MacLeod - Synagro Central, LLC.)**

Response 79:

A new definition will be added for “surface waters of the state”, as follows:

"Surface waters of the state" means surface waters of the state, as defined in rule 3745-1-02 of the Administrative Code.

In addition, “surface waters of the state” will be utilized in the following locations:

Paragraph (C)(1) of Rule 3745-40-02
Table C-1: Rule 3745-40-07
Table C-1: Rule 3745-40-08
Paragraph (D)(2)(b)(iii) of Rule 3745-40-08
Paragraph (D)(3) of Rule 3745-40-08
Paragraph (D)(6)(a) of Rule 3745-40-08

(Table C-1) Isolation Distance Table for Field Storage

Comment 80:

Page 1, Table C-1 lists the isolation distance requirements that shall be maintained for the bulk field storage of class B and exceptional quality biosolids. The table indicates that a 100 foot isolation distance is to be maintained from waters of the state for the field storage of class B and EQ biosolids. Because groundwater is included in the definition of waters of the state (ORC 6111.01) and is usually located at a depth less than 100 feet, it would be virtually impossible to field store biosolids anywhere in the state and be in compliance with the stated isolated distance. Wording in the table should be modified to read “waters of the state (excluding ground waters)” as it does in Table C-1 on page 4 of rule 3745-40-08. (**John C. Fisher – Ohio Farm Bureau Federation**)

Response 80:

A new definition will be added for “surface waters of the state”, as follows:

"Surface waters of the state" means surface waters of the state, as defined in rule 3745-1-02 of the Administrative Code.

In addition, “surface waters of the state” will be utilized in the following locations:

Paragraph (C)(1) of Rule 3745-40-02
Table C-1: Rule 3745-40-07
Table C-1: Rule 3745-40-08
Paragraph (D)(2)(b)(iii) of Rule 3745-40-08
Paragraph (D)(3) of Rule 3745-40-08
Paragraph (D)(6)(a) of Rule 3745-40-08

Comment 81:

The new Table C-1 should be removed as no scientific data or studies support or constitute change for the beneficial reuse of biosolids. Item number (6), Medical Care Facilities should be change to 300 feet for surface application, and 100 feet for injection. There isn't any scientific data to support the difference between an occupied building verses a medical care facility. This table does not support or promote beneficial reuse of biosolids. **(Michael R. Burch - Burch Hydro Inc.)**

Response 81:

The isolation distances in Paragraph (C) of Rule 3745-40-07 are applicable to the field storage of Class B and bulk exceptional quality (EQ) biosolids, not the beneficial use of Class B and bulk EQ biosolids.

(E)(1) Field Storage Limitations

Comment 82:

The proposed isolation distances severely limit the actual acres that will receive soil conditioning. We support the existing rule's isolation distances and recommend the Director require more restrictive isolation limits on a case-by-case basis. Many fields are not square shaped, but many have long, narrow shapes that may be eliminated by the proposed isolation distances. **(Ohio Water Environment Association)**

Response 82:

The isolation distances in Table C-1 and the days of field storage in Table E-1 in OAC Chapter 3745-40-07 are applicable to the field storage of Class B and bulk exceptional quality (EQ) biosolids, not the beneficial use of Class B and bulk EQ biosolids. The isolation distances for the field storage of Class B and bulk EQ biosolids and the days of field storage limitation will not severely limit the actual acres that will receive soil conditioning.

Comment 83:

MCWS believes the proposed isolation distances severely limit the acres that will receive improved soil conditioning. MCWS supports the existing rule's isolation distances. The Director of Ohio EPA can require more restrictive isolation distances on a case-by-case basis. **(Greg Merrill – Montgomery County Water Services)**

Response 83:

The isolation distances in Table C-1 and the days of field storage in Table E-1 in OAC Chapter 3745-40-07 are applicable to the field storage of Class B and bulk exceptional quality (EQ) biosolids, not the beneficial use of Class B and bulk EQ biosolids. The isolation distances for the field storage of Class B and bulk EQ biosolids and the days of field storage limitation will not severely limit the actual acres that will receive soil conditioning.

Comment 84:

Draft OAC 3740-40-07 (E) (1) states that non-alkaline stabilized biosolids or alkaline stabilized biosolids that do not contain “unstabilized solids” may be stored or stockpiled in the beneficial use site in accord with specific field storage requirements set forth in Table 1. The provision appears to contain an internal contradiction in referencing stabilized biosolids that contain unstabilized solids.

The City recommends an alternate approach that would define what biosolids are deemed “biologically stable”. The use of what is referred to as a “sour test” on a monthly basis may be one way the agency could determine whether biosolids are stable and eligible for storage at the beneficial use site and thus accomplish its goal of preventing unstable or desiccating biosolids from such storage. **(Dominic J. Hanket - City of Columbus)**

Response 84:

In order to provide clarification, the reference to unstablized solids will be removed. In addition, this prohibition will be removed from this rule.

Comment 85:

Isolation requirements for bulk biosolids (including EQ) from bedrock (3’); Waters of the State (100’); occupied building (300’); private, potable water source (300’); sinkhole or UIC class V drainage well; medical care facility (1,000’); and/or community public water well ... (1,000’) create a compliance minefield for the purchaser of bulk EQ biosolids. We won’t have anywhere to sell bulk EQ biosolids if these rules are put into place. EQ compost facilities in Ohio have sold in excess of 2,500,000 cubic yards of compost without a single documented incidence of pollution and the compost is an accepted, valued commercial product. Application of this isolation criterion will not protect the environment but will end beneficial use. **(Bruce Bailey - Schmack BioEnergy)**

Response 85:

The definition of bulk biosolids will be eliminated and Ohio EPA will use the term “bulk exceptional quality biosolids,” which will be defined as:

“Bulk exceptional quality biosolids” means more than 300 dry tons of exceptional quality biosolids beneficially used during a crop year on a beneficial use site that is utilized for the production of:

- (a) Feed crops;
- (b) Fiber crops;
- (c) Food crops; or
- (d) Pasture land.”

In addition, the isolation distances in Table C-1 and the days of field storage in Table E-1 in OAC Chapter 3745-40-07 are applicable to the field storage of Class B and bulk exceptional quality (EQ) biosolids, not the beneficial use of Class B and bulk EQ biosolids. The isolation distances for the field storage of Class B and bulk EQ biosolids and the days of field storage limitation will not severely limit the actual acres that will receive soil conditioning.

Comment 86:

The proposed rule allows storage from 45-90 days with weekly submittal of soil moisture content and precipitation data. What is the purpose of such tests? The primary reason for field storage is to limit applications on frozen or snow-covered ground. When the ground is frozen, such that incorporation cannot be achieved, material will be stored. How will precipitation data and soil moisture content demonstrate the ground is frozen? Second storage may occur in anticipation of the soil incorporation requirement ending. How will precipitation data and soil moisture content demonstrate that material can be surface applied during parts of the calendar year? Thirdly, storage may occur in advance of crop removal. How will measuring precipitation data and soil moisture content indicate that crops have been removed? The weekly monitoring of precipitation data and soil moisture monitoring for 45-90 day storage should be removed and a requirement to track storage added as discussed below. **(Bruce MacLeod - Synagro Central, LLC.)**

Response 86:

The requirements found in Note 2 of Table E-1 of OAC Chapter 3745-40-07 will be removed.

Comment 87:

The Ohio EPA has clearly stated it intends to limit field storage to 90 days without exception. How does Ohio EPA intend to monitor the storage time? The draft rules do not contain any requirement to record the date of delivery of biosolids to a field storage area or the date it is removed. The date of delivery and the date of application of biosolids to a field site should be included in the recordkeeping requirements and reported to Ohio EPA in the annual report. **(Bruce MacLeod - Synagro Central, LLC.)**

Response 87:

A requirement will be added in Rule 3745-40-07 to record the date of delivery and the date of application. In addition, specific record retention requirements regarding field storage have been added to paragraphs (C)(2)(a), (C)(4)(b), (C)(4)(f), and (C)(6)(j) of OAC Rule 3745-40-09.

(Table E-1 & Notes) Field Storage Limitations

Comment 88:

Rule 3745-40-07 Item (E) (1) NOTE 2: Field Storage and sampling after 45 days. We would like to see this rule eliminated. We have 2 reasons for this request. Crop rotation and double handling of product. Many crop rotations are 60 to 90 day rotations. For instance, we could start putting product in a wheat field in May when corn and beans go in so that we would have enough product by mid July to start applying on the wheat field that is going to corn the following year.

Double handling is another issue. If a facility has storage for cake, but we can put it on the ground that it will be applied to when we move it the first time, it eliminates moving it to the storage facility when we can go to the fields. Many plants do not discharge their cake product directly onto their cake storage facility/pad, but truck it to the facility. In that case, the product must be dumped and reloaded later, causing double handling that could be reserved for inclement weather reasons instead. **(Thomas W. Abraham - Agri-Sludge, Inc.)**

Response 88:

The requirements found in Note 2 of Table E-1 of OAC Chapter 3745-40-07 will be removed.

Comment 89:

The Table E-1: Field Storage Requirements outlines specific requirements for the field storage of biosolids based on the number of days. Ohio EPA indicated that the longer the biosolids are in storage the greater chance they may contain something undesirable. We question the scientific validity of that statement. Where do the undesirables come from? What is the undesirable of concern? This belief seems to contradict the minimum storage time of 90 days to meet pathogen destruction by air drying. **(Bruce MacLeod - Synagro Central, LLC.)**

Response 89:

Ohio EPA's concern is that there will be a greater potential for the generation of leachate. While the leachate at a treatment works is contained, circulated back to the headworks and treated, the leachate from a field storage pile is not treated and could result in an unpermitted discharge. In addition, the longer the biosolids are stored, the greater likelihood that the nutrients dissipate, providing less agronomic benefit.

Comment 90:

Note 2 contradicts Note 1, which states best management practices for storage of biosolids. If best management practices are utilized, then it should not be necessary to have to monitor field storage by means of a soil sample. Ohio EPA already requires a written statement to be submitted for extended storage time over 30 days. Note 2 needs to be removed from the rules as it does not support or promote beneficial reuse of biosolids. **(Michael R. Burch - Burch Hydro Inc.)**

Response 90:

The requirements found in Note 2 of Table E-1 of OAC Chapter 3745-40-07 will be removed.

(E)(2) Prohibition on Field Storage of Alkaline Stabilized Biosolids

Comment 91:

MCWS believes the prohibition against field storage of Class B or bulk exceptional quality biosolids treated using alkaline stabilization if the biosolids contain unstabilized solids is unacceptable. Similar to 3745-40-07(B)(4), MCWS would support a maximum storage period of no longer than 30 days. **(Greg Merrill – Montgomery County Water Services)**

Response 91:

This prohibition will be removed from Rule 3745-40-07.

Comment 92:

OWEA believes this rule is too restrictive, and would support permitting field storage for 30-days as reasonable. This would allow utilities to manage their labor, equipment, and contracts in a more efficient manner, while being protective of the water environment. **(Ohio Water Environment Association)**

Response 92:

This prohibition will be removed from Rule 3745-40-07.

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

(A)(2) Application Restrictions on Alkaline Stabilized Biosolids

Comment 93:

The isolation distance of 1,500 feet is unreasonable. Application sites have unique qualities that should be taken into consideration that may allow application closer than 1,500 feet from an occupied building. MCWS believes this proposed rule is overly broad and restrictive. If adopted, many current application sites will be dropped simply due to the actual acres available for land application become too few for cost-effective operations. MCWS supports the existing isolation distances. The Director can require more restrictive isolation limits on a case-by-case basis. **(Greg Merrill – Montgomery County Water Services)**

Response 93:

This requirement will be removed from Rule 3745-40-08.

Comment 94:

This rule change could possibly eliminate 2/3rds of my operation from the biosolids program. I realize you have put a provision in for neighbors to wave the setback. But by creating a rule in this way will make most people question waving this right, there must be a safety reason for this rule. There is no science behind the setback. Since there is the option of neighbors to wave the distance it can not be a public health issue. There is no reason to punish the good actors in this program to solve your problems in another area of the state. I am asking you to remove this provision from the rules change. I would much prefer to deal with issues that arise on a case by case situation such application timing. The loss of these products will dramatically affect the profitability of my operation. It is my experience that the addition of biosolids has made great steps towards improving the health of the soil and water in this area as we have increased the % ground cover through the addition of organic mater and nutrients biosolids contain, therefore reducing the amount of soil and nutrients that are able to leave the fields in weather events. Please take these comments into consideration as you review these rules. If necessary I can contact my legislators and organize a group to address this issue from that side of the isle. But I believe we can handle this issue in a scientific manner and resolve this issue much simple by not imposing rule that are not scientifically founded. **(Robert Morrison – Land of Hills Farms)**

Response 94:

This requirement will be removed from Rule 3745-40-08.

Comment 95:

We would like to request that this rule be rescinded.

However, if the reduced isolation distance for biosolids users were to go into effect, that all land application approvals previous to a certain date be “grandfathered” into the system without having to request potentially thousands of new director-authorized site isolation reduction forms. The rule could read as follows:

- (2) The director or an authorized representative may allow the reduction in isolation distances for those occupied buildings that are owned by the person beneficially using biosolids. A request for an isolation distance reduction shall be made on forms approved by the director. Any site approval issued before (date) shall be allowed to keep a 100 foot isolation distance from an occupied building or private potable water source if they belong to the person beneficially using the biosolids, provided the product be either injected or immediately incorporated. **Thomas W. Abraham - Agri-Sludge, Inc.)**

Response 95:

This requirement will be removed from Rule 3745-40-08.

Comment 96:

This paragraph needs to be removed as there isn't any scientific data or studies to support this type of isolation restriction and does not support or promote beneficial reuse of biosolids. If 1500 foot isolation would be allowed it would take away a very large portion of farm ground in Ohio for beneficial reuse of biosolids. For example; if a resident was located in the middle of a 100 acre field, with this rule the field would not be able to receive biosolids. "VERY RESTRICTIVE & VERY IMPRACTICAL" (**Michael R. Burch - Burch Hydro Inc.**)

Response 96:

This requirement will be removed from Rule 3745-40-08.

Comment 97:

The isolation distances severely limit the actual acres that will receive soil conditioning. OWEA supports the existing isolation distances and recommends the Director require more restrictive isolation limits on a case-by-case basis. Many fields are not square shaped; many have long and narrow shapes that may be eliminated by the proposed isolation distances. (**Ohio Water Environment Association**)

Response 97:

This requirement will be removed from Rule 3745-40-08.

Comment 98:

We are unclear as to how this requirement would be implemented. Particularly, how the definition of unstabilized solids will be used in this requirement. If a generator has the infrastructure required to produce aerobically digested or anaerobically digested biosolids then there would be no need to alkaline stabilize. Alkaline stabilization is a recognized method of stabilizing wastewater solids that is recognized in this rule. By regulation, prior to proving stabilization via alkaline stabilization all the solids are considered unstabilized. (**Bruce MacLeod - Synagro Central, LLC.**)

Response 98:

In order to provide clarification, the reference to unstabilized solids will be removed. In addition, this prohibition will be removed from this rule.

Comment 99:

The City understands the OEPA's issues with controlling odors and mismanagement at land application sites; however the implementation of these proposed rules will cripple our biosolids management program. For example: 3745-40-07 B(2), B(4) and 3745-40-08 A(2).

All three of these proposed changes would cause Barberton and other communities that utilize alkaline stabilization/Pasteurization to cease land application operations all together. This would necessitate hauling biosolids to landfills (Our backup option). The end result would be the loss of millions of dollars that have been invested into alkaline stabilization/Pasteurization as recently as 2004 (with OEPA approval), the loss of a highly successful beneficial reuse program and additional burden on limited space in landfills. We are also concerned that millions more will need to be spent on a new process putting additional burden on our customers that are still paying for the bonds that funded construction of the RDP system.

Barberton, along with Agri-Sludge, proposes the following:

1. Rescind all proposed rules that pertain to limiting field storage, isolation distances, same day application and incorporation of alkali stabilized biosolids.
2. Insert a new rule to enable the OEPA to regulate odors and biosolids management such as:

The Director or an authorized representative may, at his discretion, apply restrictions or prohibit the field application or storage of class B, A or EQS biosolids at any site, or to any distribution program where repeated complaints are filed for mismanagement of biosolids or if significant odors are a public nuisance. The revocation of this area will be by letter and will include the EPA SWIMS ID# if applicable and the GPS coordinates of the sites in question. (Dennis R Weaver and Robert J Burkhard – Barberton WWTP)

Response 99:

Paragraphs (B)(4) of Rule 3745-40-07 and (A)(2) of Rule 3745-40-08 will be deleted.

40 CFR Part 503 requires that Class A be immediately incorporated. As such, stockpiling is not allowed. In order to be consistent with 40 CFR Part 503, Paragraph (B)(2) of Chapter 3745-40-07 states that “if utilizing vector attraction reduction options nine (VAR-9) or ten (VAR-10) , the field storage of class B biosolids is prohibited.”

(A)(3) Agronomic Rate Requirements

Comment 100:

The requirement for determining the agronomic rate is unclear in that it appears that (3)(a) and (3)(b) are stating the same thing in different ways. We think that maybe item (3)(b) is addressing the issue of application of biosolids on a cover crop or followed by the planting of a cover crop. In this case it, the normal practice would be to apply for the nitrogen rate or the nitrogen removal rate of the next crop to be grown. For example, if application occurs in the summer, followed by establishment of a cover crop, the nitrogen

requirement would be for the corn crop to be grown the following growing season. We recommend the following language to clarify this requirement:

(3) Except as provided in paragraphs (A)(4) to (A)(6) of this rule, when bulk biosolids are beneficially used they shall be beneficially used at an agronomic rate at any beneficial use site. In determining the agronomic rate for nitrogen, the permittee shall determine the nitrogen requirements or nitrogen removal rates for a realistic yield goal of planned crops. In doing this, the permittee shall:

- (a) Subtract the nitrogen credit to be given to the next crop, in accordance with values for previous crops;*
- (b) Subtract the nitrogen that will be added in other forms.*

Note 1: When applying nitrogen to a grass or legume cover crop that is growing or being established immediately after biosolids beneficial use, biosolids can be beneficially used at the nitrogen requirements or the nitrogen removal rate for the next crop.

(Bruce MacLeod - Synagro Central, LLC.)

Response 100:

To provide additional clarification, paragraph (A)(2) of Rule 3745-40-08 of the Ohio Administrative Code will be revised as follows:

“(2) Except as provided in paragraphs (A)(3) to (A)(4) of this rule, when bulk biosolids are beneficially used they shall be beneficially used at an agronomic rate at any beneficial use site. The agronomic rate shall be the most limiting factor derived from the following for the purpose of protecting waters of the state:

- (a) For soils with soil phosphorous test results less than or equal to one hundred parts per million Bray-Kurtz P1 extraction or one hundred fifteen parts per million Mehlich III extraction:

- (i) The nitrogen agronomic rate; or
- (ii) The multi-year phosphorous agronomic rate;

[Comment: If a beneficial user applies bulk biosolids at a multi-year rate, a new application of bulk biosolids can not be made until the multi-year period is over.]

- (b) For soils with soil phosphorous test results greater than one hundred parts per million Bray-Kurtz P1 extraction or one hundred fifteen parts per million

Mehlich III extraction and less than or equal to one hundred fifty parts per million Bray-Kurtz P1 extraction or one hundred seventy parts per million Mehlich III extraction:

- (i) The nitrogen agronomic rate;
 - (ii) The single-year phosphorous agronomic rate, unless the beneficial use site has greater than fifty percent ground cover at the time of beneficial use or the biosolids are incorporated into the beneficial use site within seven days after beneficial use, in which case a multi-year phosphorous agronomic rate may be used; or
 - (iii) Beneficial use shall be completed in accordance with the phosphorus index; or
- (c) For soils with soil phosphorous test results greater than one hundred fifty parts per million Bray-Kurtz P1 extraction or one hundred seventy parts per million Mehlich III extraction:
- (i) Beneficial use shall be completed in accordance with the phosphorus index; or
 - (ii) Beneficial use is not permitted at the beneficial use site.”

In addition, the following terms have been defined within paragraphs (NNN), (OOO), and (MMMM) of Rule 3745-40-01 of the Ohio Administrative Code:

“(NNN) “Multi-year phosphorus agronomic rate” means the beneficial use rate of biosolids that will provide the phosphorous needs for a realistic yield goal of multiple crops to be grown at the beneficial use site, but not to exceed three calendar years of planned crops.” and

“(OOO) “Nitrogen agronomic rate” means the beneficial use rate of biosolids that will provide the nitrogen requirements or nitrogen removal rates for a realistic yield goal of the succeeding crop to be planted at the beneficial use site. In calculating the nitrogen agronomic rate, the permittee shall:

- (1) Subtract the nitrogen credit to be given to the next crop, in accordance with values for previous crops; and
- (2) Subtract the nitrogen that will be added in other forms.

[Comment: For beneficial use sites where a grass or legume cover crop is established or will be established after beneficial use of biosolids, the biosolids may still be beneficially used at the rates to provide the nitrogen

requirements or nitrogen removal rates for the succeeding crop to be planted after the grass or legume cover crop.]” and

“(MMMM) "Single-year phosphorous agronomic rate" means the beneficial use rate of biosolids that will provide the phosphorous needs for a realistic yield goal of the succeeding crop to be planted at the beneficial use site.

[Comment: For beneficial use sites where a grass or legume cover crop is established or will be established after beneficial use of biosolids, the biosolids may still be beneficially used at the rates to provide the phosphorous needs for the succeeding crop to be planted after the grass or legume cover crop.]”

(A)(4) Application Restrictions for Soil Phosphorus Above 100 ppm

Comment 101:

Draft OAC 3745-40-08 (A) (4) restricts the use of biosolids in general on beneficial use sites where soil test results show greater than 100 parts per million Bray-Kurtz P1 extraction or 120 parts per million Mehlich 3 extraction. If these levels are exceeded, applying biosolids at the beneficial use site will be limited to the amount of biosolids that will provide the amount of phosphate necessary to satisfy the one year phosphate needs of the crop as provided in the 14th Edition of the Ohio Agronomy Guide.

The City of Columbus recommends that the more restrictive 100 mg/kg Bray P1 be stricken from the draft rule in favor of the 150 mg/kg Bray P used by Ohio USDA NRCS for other guidance. The current draft provides no opportunity to use the phosphorous index to demonstrate that there is little risk of phosphorous movement to waters of the state, thus potentially eliminating many otherwise qualifying fields for land application in these soil concentration ranges.

As discussed in subparagraph 12 (b) above, draft OAC 3745-40-08 (A) (4) does not include the use of the phosphorous index in restricting the use of biosolids on beneficial use sites where soil test results show greater than 100 parts per million Bray-Kurtz P1 extraction or 120 parts per million Mehlich 3 extraction. The City is puzzled by this omission in that the phosphorous index may be used under draft rule OAC 3745-40-08 (D) (5) to demonstrate that land application presents little risk for sites with soil test results that are greater than 150 parts per million Bray-Kurtz P1 extraction or 170 parts per million Mehlich 3 extraction.

If the standard of 100 parts per million is retained in the rule, the City requests that language similar to that contained in subparagraph (D) (5) be inserted into subparagraph (A) (4) so that there is an opportunity to make the demonstration that there is a low risk

of phosphorous movement if land application at a site were to continue. (**Dominic J. Hanket - City of Columbus**)

Response 101:

Ohio EPA will allow for the phosphorus index to be used in accordance with paragraph (A)(2) of Rule 3745-40-08 of the Ohio Administrative Code, which states:

“(b) For soils with soil phosphorous test results greater than one hundred parts per million Bray-Kurtz P1 extraction or one hundred fifteen parts per million Mehlich III extraction and less than or equal to one hundred fifty parts per million Bray-Kurtz P1 extraction or one hundred seventy parts per million Mehlich III extraction:

(i) The nitrogen agronomic rate;

(ii) The single-year phosphorous agronomic rate, unless the beneficial use site has greater than fifty percent ground cover at the time of beneficial use or the biosolids are incorporated into the beneficial use site within seven days after beneficial use, in which case a multi-year phosphorous agronomic rate may be used; or

(iii) Beneficial use shall be completed in accordance with the phosphorus index;
or

(c) For soils with soil phosphorous test results greater than one hundred fifty parts per million Bray-Kurtz P1 extraction or one hundred seventy parts per million Mehlich III extraction:

(i) Beneficial use shall be completed in accordance with the phosphorus index; or

(ii) Beneficial use is not permitted at the beneficial use site.”

Comment 102:

We would also like to point out that the draft rule proposed by Ohio EPA mandates phosphorus based nutrient management for all Ohio biosolids. We estimate that the amount of phosphorus provided by biosolids land application in Ohio is less than 3 percent of the total phosphorus applied for crop production. The majority of phosphorus for crop production comes from either manure or commercial fertilizers. The small scale of this issue is even more evident when the water solubility of the phosphorus sources is considered. We estimate that the land applied biosolids provide less than one percent of the water soluble phosphorus that is land applied in Ohio annually. We question Ohio EPA’s regulatory approach to adopting a P based nutrient management approach to land application of this minor P source. The net effect of this high level of regulation on biosolids will result in greater use of highly water soluble commercial fertilizers applied

without an isolation distance from waters of the state. Has the agency calculated the net effect of this regulation on water quality in the state? **(Bruce MacLeod – Synagro Central, LLC.)**

Response 102:

Ohio EPA will revise the draft rules to align more with the current regulations for the land application of manure. Although the quantity of biosolids land applied may be less than the quantity of manure land applied, biosolids still contain phosphorus loads that should be managed properly to protect waters of the state.

Comment 103:

The language in this paragraph with respect to phosphorus is out of place and should be kept with the existing soil phosphorus testing requirements in 3745-40-08 (D)(5)(A). The language in this paragraph refers to the phosphorus transport risk assessments developed by the United States Department of Agriculture Natural Resources Conservation Service (NRCS). These phosphorus transport risk assessments are published by the NRCS in the document Nitrogen and Phosphorus Risk Assessment Procedures, NRCS-Ohio, January 2001. The NRCS provides for the phosphorus transport risk to be assessed in one of two ways; (1) Phosphorus Index (P-Index) Risk Assessment Procedure; or (2) Phosphorus Soil Test Risk Assessment Procedure. The 3745-40-08 (D)(5)(A) language establishes soil phosphorus regulation based on the Phosphorus Soil Test Risk Assessment Procedure (150 ppm) or use of the P-Index. This regulatory framework should be continued with this more stringent language that is being added. We suggest the following language:

(5)(D) For soils with soil phosphorus test results greater than one hundred parts per million (two hundred pounds per acre) Bray-Kurtz P1 extraction or one hundred twenty parts per million (two hundred forty pounds per acre) Mehlich -3 extraction, the amount of biosolids that may be beneficially used at the beneficial use site shall either:

- (i) be limited to the amount of biosolids that will provide the estimated plant uptake of phosphate by the crop as provided within "Ohio Agronomy Guide, 14th edition, 2005 OSU Bulletin 472-05, that will be grown on the beneficial use site; or*
- (ii) continue application at the rates determined using a phosphorus index as approved by the director or an authorized representative.*

(Bruce MacLeod – Synagro Central, LLC.)

Response 103:

Paragraph (A)(2) of Rule 3745-40-08 of the Ohio Administrative Code will be revised as follows:

“(2) Except as provided in paragraphs (A)(3) to (A)(4) of this rule, when bulk biosolids are beneficially used they shall be beneficially used at an

agronomic rate at any beneficial use site. The agronomic rate shall be the most limiting factor derived from the following for the purpose of protecting waters of the state:

(a) For soils with soil phosphorous test results less than or equal to one hundred parts per million Bray-Kurtz P1 extraction or one hundred fifteen parts per million Mehlich III extraction:

(i) The nitrogen agronomic rate; or

(ii) The multi-year phosphorous agronomic rate;

[Comment: If a beneficial user applies bulk biosolids at a multi-year rate, a new application of bulk biosolids can not be made until the multi-year period is over.]

(b) For soils with soil phosphorous test results greater than one hundred parts per million Bray-Kurtz P1 extraction or one hundred fifteen parts per million Mehlich III extraction and less than or equal to one hundred fifty parts per million Bray-Kurtz P1 extraction or one hundred seventy parts per million Mehlich III extraction:

(i) The nitrogen agronomic rate;

(ii) The single-year phosphorous agronomic rate, unless the beneficial use site has greater than fifty percent ground cover at the time of beneficial use or the biosolids are incorporated into the beneficial use site within seven days after beneficial use, in which case a multi-year phosphorous agronomic rate may be used; or

(iii) Beneficial use shall be completed in accordance with the phosphorus index; or

(c) For soils with soil phosphorous test results greater than one hundred fifty parts per million Bray-Kurtz P1 extraction or one hundred seventy parts per million Mehlich III extraction:

(i) Beneficial use shall be completed in accordance with the phosphorus index; or

(ii) Beneficial use is not permitted at the beneficial use site.”

In addition, the following terms have been defined within paragraphs (NNN), (OOO), and (MMMM) of Rule 3745-40-01 of the Ohio Administrative Code:

“(NNN) “Multi-year phosphorus agronomic rate” means the beneficial use rate of biosolids that will provide the phosphorous needs for a realistic yield goal of multiple crops to be grown at the beneficial use site, but not to exceed three calendar years of planned crops.” and

“(OOO) “Nitrogen agronomic rate” means the beneficial use rate of biosolids that will provide the nitrogen requirements or nitrogen removal rates for a realistic yield goal of the succeeding crop to be planted at the beneficial use site. In calculating the nitrogen agronomic rate, the permittee shall:

(1) Subtract the nitrogen credit to be given to the next crop, in accordance with values for previous crops; and

(2) Subtract the nitrogen that will be added in other forms.

[Comment: For beneficial use sites where a grass or legume cover crop is established or will be established after beneficial use of biosolids, the biosolids may still be beneficially used at the rates to provide the nitrogen requirements or nitrogen removal rates for the succeeding crop to be planted after the grass or legume cover crop.]” and

“(MMMM) “Single-year phosphorous agronomic rate” means the beneficial use rate of biosolids that will provide the phosphorous needs for a realistic yield goal of the succeeding crop to be planted at the beneficial use site.

[Comment: For beneficial use sites where a grass or legume cover crop is established or will be established after beneficial use of biosolids, the biosolids may still be beneficially used at the rates to provide the phosphorous needs for the succeeding crop to be planted after the grass or legume cover crop.]”

Comment 104:

For soils in this concentration range (100 ppm to 150 ppm Bray-Kurtz), application of biosolids at phosphorus based rates essentially assures that no biosolids will be applied to these fields. This level of soil phosphorus is very low and in a many cases does not present increased environmental risk for P export to local waters. Additionally, this range of soil test P (STP) phosphorus does not allow use of a phosphorus index in the current wording, so that STP levels between 100 ppm and 150 ppm Bray-Kurtz extraction have limitations more restrictive than those levels over 150 ppm Bray STP. We suggest that this section be removed. If not removed, then the same considerations for use of a phosphorus index should be allowed.

Also note that newly passed regulations Ohio EPA 3745-42-13 [section F (2)(b)(ii)] reference “For soils with soil phosphorus test results greater than one hundred fifty parts per million (three hundred pounds per acre) Bray-Kurtz P1 extraction or one hundred seventy parts per million (three hundred forty pounds per acre) Mehlich 3 extraction, the director shall not approve land application of treated sewage unless the permit to install demonstrates to the director, using a phosphorus index, that there is a low relative risk of phosphorus movement to waters of the state at the land application site;” To be consistent, the biosolids regulations should be no more restrictive than the land application systems rules, especially since influent wastewater has phosphorus in various forms that are more susceptible to offsite migration than processed biosolids.
<http://www.epa.state.oh.us/dsw/rules/42-13.pdf>

Suggested replacement – Remove this section entirely. (**Trudy Johnston – Material Matters, Inc.**)

Response 104:

Paragraph (A)(2) of Rule 3745-40-08 of the Ohio Administrative Code will be revised as follows:

“(2) Except as provided in paragraphs (A)(3) to (A)(4) of this rule, when bulk biosolids are beneficially used they shall be beneficially used at an agronomic rate at any beneficial use site. The agronomic rate shall be the most limiting factor derived from the following for the purpose of protecting waters of the state:

(a) For soils with soil phosphorous test results less than or equal to one hundred parts per million Bray-Kurtz P1 extraction or one hundred fifteen parts per million Mehlich III extraction:

(i) The nitrogen agronomic rate; or

(ii) The multi-year phosphorous agronomic rate;

[Comment: If a beneficial user applies bulk biosolids at a multi-year rate, a new application of bulk biosolids can not be made until the multi-year period is over.]

(b) For soils with soil phosphorous test results greater than one hundred parts per million Bray-Kurtz P1 extraction or one hundred fifteen parts per million Mehlich III extraction and less than or equal to one hundred fifty parts per million Bray-Kurtz P1 extraction or one hundred seventy parts per million Mehlich III extraction:

(i) The nitrogen agronomic rate;

- (ii) The single-year phosphorous agronomic rate, unless the beneficial use site has greater than fifty percent ground cover at the time of beneficial use or the biosolids are incorporated into the beneficial use site within seven days after beneficial use, in which case a multi-year phosphorous agronomic rate may be used; or
- (iii) Beneficial use shall be completed in accordance with the phosphorus index; or
- (c) For soils with soil phosphorous test results greater than one hundred fifty parts per million Bray-Kurtz P1 extraction or one hundred seventy parts per million Mehlich III extraction:
 - (i) Beneficial use shall be completed in accordance with the phosphorus index; or
 - (ii) Beneficial use is not permitted at the beneficial use site.”

In addition, the following terms have been defined within paragraphs (NNN), (OOO), and (MMMM) of Rule 3745-40-01 of the Ohio Administrative Code:

- “(NNN) “Multi-year phosphorus agronomic rate” means the beneficial use rate of biosolids that will provide the phosphorous needs for a realistic yield goal of multiple crops to be grown at the beneficial use site, but not to exceed three calendar years of planned crops.” and
- “(OOO) “Nitrogen agronomic rate” means the beneficial use rate of biosolids that will provide the nitrogen requirements or nitrogen removal rates for a realistic yield goal of the succeeding crop to be planted at the beneficial use site. In calculating the nitrogen agronomic rate, the permittee shall:
 - (1) Subtract the nitrogen credit to be given to the next crop, in accordance with values for previous crops; and
 - (2) Subtract the nitrogen that will be added in other forms.

[Comment: For beneficial use sites where a grass or legume cover crop is established or will be established after beneficial use of biosolids, the biosolids may still be beneficially used at the rates to provide the nitrogen requirements or nitrogen removal rates for the succeeding crop to be planted after the grass or legume cover crop.]” and

- “(MMMM) “Single-year phosphorous agronomic rate” means the beneficial use rate of biosolids that will provide the phosphorous needs for a

realistic yield goal of the succeeding crop to be planted at the beneficial use site.

[Comment: For beneficial use sites where a grass or legume cover crop is established or will be established after beneficial use of biosolids, the biosolids may still be beneficially used at the rates to provide the phosphorous needs for the succeeding crop to be planted after the grass or legume cover crop.]”

(B)(1) Precipitation Event Restrictions

Comment 105:

MCWS wishes to ask: “What will happen to a biosolids applicator that has followed the precipitation forecast documentation where there is <50% chance that a <0.5 inches of precipitation within 24 hours after land application will occur, but it actually does rain more than 0.5 inches?” If there is no documented runoff, will enforcement still occur? **(Greg Merrill – Montgomery County Water Services)**

Response 105:

As long as all rules and laws have been followed, enforcement will not be pursued.

Comment 106:

While weather predictions should be relied up as one decision making tool, they are frequently wrong. We believe that applicators be afforded some judgment in the issue of when to apply. **(Ohio Water Environment Association)**

Response 106:

The intent behind this requirement is to prevent impacts due to runoff. Ohio EPA feels that this requirement will be a proactive approach towards promoting the responsible beneficial use of biosolids. Applicators who decide to “take a chance” do run the risk of violations. Paragraphs (B)(1) and (B)(2) of this rule will be revised as follows:

“(B) Prohibitions and restrictions.

(1) Precipitation prohibitions and restrictions for hydrologic soil group A, B, and C soils.

(a) Except as provided in paragraph (B)(1)(b) to (B)(1)(b)(iii) of this rule, no person shall beneficially use class B or bulk exceptional quality biosolids during a precipitation event, or when the forecast indicates that there is at least a fifty per cent chance that one half inch of rain will occur within twenty-four hours after beneficial use. The forecast consulted shall be for the zip code where the beneficial use site is located and shall be printed out or otherwise recorded and kept on file for each beneficial use event.

- (b) Class B or bulk exceptional quality biosolids may be beneficially used during a precipitation event, or when the forecast indicates that there is at least a fifty per cent chance that one half inch of rain will occur within twenty-four hours after beneficial use if:
 - (i) The biosolids are injected;
 - (ii) The biosolids are immediately incorporated; or
 - (iii) The beneficial user can provide records of actual rainfall data indicating that less than 1/2-inch of rain occurred within the twenty-four hours following the beneficial use of biosolids.
- (2) Precipitation prohibitions and restrictions for hydrologic soil group D soils.
- (a) Except as provided in paragraph (B)(2)(b) to (B)(2)(b)(iii) of this rule, no person shall beneficially use class B or bulk exceptional quality biosolids during a precipitation event or when the forecast indicates that there is at least a fifty per cent chance that one quarter inch of rain will occur within twenty-four hours after beneficial use. The forecast consulted shall be for the zip code where the beneficial use site is located and shall be printed out or otherwise recorded and kept on file for each beneficial use event.
 - (b) Class B or bulk exceptional quality biosolids may be beneficially used during a precipitation event or when the forecast indicates that there is at least a fifty per cent chance that 1/4-inch of rain will occur within twenty-four hours after beneficial use for any hydrologic soil group (HSG) D soils if:
 - (i) The biosolids are injected;
 - (ii) The biosolids are immediately incorporated; or
 - (iii) The beneficial user can provide records of actual rainfall data indicating that less than 1/4-inch of rain occurred within the twenty-four hours following the beneficial use of biosolids.”

Comment 107:

The word forecast has the same meaning as estimated. First of all most forecast in Ohio are wrong 50% of the time. No weather station can accurately forecast whether a rain event will be 1/4” or 1/2”. This rule is impractical to expect someone that is not a certified weather person, to determine what the weather is going to do in 24 hours or 1 hour. This

rule needs removed, as it does not support or promote beneficial reuse of biosolids.
(Michael R. Burch - Burch Hydro Inc.)

Response 107:

This requirement is consistent with Ohio Administrative Code Rule 901:10-2-14 “Contents of manure management plan: land application methods.” The intent behind this requirement is to prevent impacts due to runoff. Ohio EPA feels that this requirement will promote the responsible beneficial use of biosolids.

(B)(2) Additional Precipitation Event Restrictions

Comment 108:

The word forecast has the same meaning as estimated. First of all most forecast in Ohio are wrong 50% of the time. No weather station can accurately forecast whether a rain event will be ¼” or ½”. This rule is impractical to expect someone that is not a certified weather person, to determine what the weather is going to do in 24 hours or 1 hour. This rule needs removed, as it does not support or promote beneficial reuse of biosolids.
(Michael R. Burch - Burch Hydro Inc.)

Response 108:

This requirement is consistent with Ohio Administrative Code Rule 901:10-2-14 “Contents of manure management plan: land application methods.” The intent behind this requirement is to prevent impacts due to runoff. Ohio EPA feels that this requirement will promote the responsible beneficial use of biosolids.

(B)(5) Karst Area Application Restrictions

Comment 109:

The agreement by Ohio EPA to delete the karst map reference of Ohio Environmental Protection Agency Division of Drinking and Groundwater could not be found. **(Bruce MacLeod - Synagro Central, LLC.)**

Response 109:

Paragraph (B)(5) of Rule 3745-40-08 will be deleted.

Comment 110:

Part 3745-40-08(B)(5) prohibits land application of biosolids within a karst area. Again, I find myself in agreement with the spirit of the regulation; however, I am at odds with the implementation since there are not clearly defined karst areas. The map provided at the

website link (<http://www.dnr.state.oh.us/Portals/10/pdf/karstmap.pdf>) shows red shaded areas as “probable” karst areas. The term “probable” suggests that no definitive determination has been established and therefore, I believe it would be unreasonable to impose and/or enforce a prohibition for a condition that may or may not be present. Further, the map provides no specific boundaries of these “probable” areas. Since there are no distinct boundaries this regulation again seems difficult to implement and enforce. I suggest the regulation be revised to require that a detailed, site specific, investigation be performed to determine whether a specific biosolids land application site lies within/without a karst area. Further, OEPA should not prohibit biosolids application until OEPA assesses the outcome of the site specific investigation and determines whether the prohibition of biosolids application on the subject site is applicable or not. **(David J. Heckler – Tri-Cities North Regional Wastewater Authority)**

Response 110:

Paragraph (B)(5) of Rule 3745-40-08 will be deleted.

(B)(6)(b) Application in an Emergency Management Zone

Comment 111:

The isolation distances severely limit the actual acres that will receive soil conditioning. We support the existing isolation distances and recommend the Director require more restrictive isolation limits on a case-by-case basis. **(Ohio Water Environment Association)**

Response 111:

The proposed rule was revised to be in accordance with the current guidance document “*Recommended Setbacks for Human and Animal Waste Management near Drinking Water Wells and Intakes*”. The proposed isolation distances will not severely limit the actual acres that will receive soil conditioning.

(C)(1) Isolation Distances for Application

Comment 112:

Draft OAC 3745-40-08 (C) states that in general, no person shall beneficially use biosolids within certain isolation distances listed in Table C-1 of the rule. Table C-1 provides, in part, that Class B biosolids should not be applied within 300 feet of an occupied building or 1000 feet of a medical facility. Current OAC 3745-40-04 (N), Table N-1, establishes separate minimum distances for these structures based on whether the biosolids are land applied or surface injected. Thus, for an occupied building, the minimum distance for land application is 300 feet, but for surface injection, it is 100 feet. For medical care facilities, the minimum distance for land application is 1000 feet, but for occupied buildings, it is 300 feet.

Current minimum distances for these two structures are sufficiently protective and reasonably distinguish between biosolids that are land applied or surface injected. The City requests that current minimum distance restrictions as they apply to Class B biosolids be retained. **(Dominic J. Hanket - City of Columbus)**

Response 112:

The rule will be revised, as requested.

(Table C-1) Isolation Distances

Comment 113:

1. We would like to see the rule for injected isolation distances amended to include immediate incorporation. This allows for the inclusion of cake land application as well.
2. We would also like to see the EPA stay with the 100 foot buffer for occupied buildings and private potable water source instead of now moving it to 300 feet if injected or immediately incorporated.
3. We would also like to see the EPA keep the medical care facility distance at 300 feet if injected or immediately incorporated as has been done in the past, or just eliminate the Medical Facility isolation distance requirement all together.
4. We are therefore requesting consideration of the following changes so the chart could look like this one:

| Table C-1 Isolation Distance Requirements | | | | |
|---|--|--|--|--------------------|
| | Surface Application Isolation Distance Requirements (Feet) | Injected / Incorporated Isolation Distance Requirements (Feet) | Applicable Biosolids Classification and Quantity | |
| | | | Biosolids Classification | Biosolids Quantity |
| 1. Bedrock | 3 | 3 | B | Any |
| | | | A | Any |
| | | | EQ | Bulk |
| 2. Waters of the | 33 | 33 | B | Any |

| State (excluding ground waters) | | | A | Any |
|--|---|---|----|------|
| | | | EQ | Bulk |
| 3. Occupied buildings | 300 | 100. | B | Any |
| 4. Private potable water source | 300 | 100 | B | Any |
| 5. Sinkhole or IUC Class V drainage | 300 without a grass buffer; 100 with a grass buffer | 300 without a grass buffer; 100 with a grass buffer | B | Any |
| | | | A | Any |
| | | | EQ | Bulk |
| 6. Medical Care Facility | 1,000 | 300 | B | Any |

The reasons for these three changes are as follows:

1. Incorporation is equal in status to injection for the following rules: frequently flooded ground, a VAR requirement option, and 15 % slope restrictions. It makes no sense that immediate incorporation cannot be equal to injection in the isolation distance chart for a much less impactable rule that flooded ground, VAR requirements or 15 % slope applications, especially since the incorporated product is usually cake and not liquid.
2. It seems as though science is not the reason for this decision as trying to eliminate a nuisance call from a neighbor, especially since the EPA is offering 3745-40-08 (C) 2. We ask that the isolation distance rules stay the same for the farmers benefit and that rule 3745-40-08 (C) 2 be rescinded. The less ground uniformly applied upon, the less attractive the beneficial reuse program becomes to them.
3. The isolation distance for medical care facilities was introduced into the program many years ago by a disgruntled neighbor of an Agri-Sludge, Inc. farmer/biosolids beneficiary who happened to own a medical facility named Mr. Ted DeHass. This particular individual whom lobbied through the State Congress for this rule is no longer an employee of the nursing care facility. He also has recently stated that he has no problem with the way we perform the service presently with injection. The reason we asked him about this is because he still lives next door to the nursing home and we wanted to know if he was still complaining. Lastly, the facility he used to run (Castle Nursing Homes) sold in 2007, and the new owners have had

no complaints for the two years with us utilizing the farmer across the street from the medical care facility.

4. Our other concern would be if the State were to change the definition of a medical care facility to include a household that might be taking care of somebody with a terminal illness or even having a family member in a wheelchair. This could happen. (**Thomas W. Abraham - Agri-Sludge, Inc.**)

Response 113:

The rule will be revised as requested, except that paragraph (C)(2) will be retained.

Comment 114:

Page 4, Table C-1 lists the isolation distance requirements for the beneficial use of biosolids. The table indicates that no matter how biosolids are applied (surface application or injected) the isolation distances are the same. The isolated distance requirements for injected biosolids should be lowered (especially for occupied buildings and private water sources). The values should be modified to be consistent with Table 2 in Appendix A to OAC 901: 10-2-14. It is also recommended that the column title be revised to include incorporation in addition to injection. (**John C. Fisher – Ohio Farm Bureau Federation**)

Response 114:

Ohio EPA will restore the isolation distances for occupied buildings, private water sources and medical care facilities as noted in the currently effective rule for injection. Ohio EPA will also add immediate incorporation to the reduced isolation distance column.

(D)(2) Frozen or Snow Covered Ground Application

Comment 115:

MCWS does not support the requirement of having to same-day incorporate (or inject) bulk biosolids from November 15 to March 15. MCWS has previously commented on considering allowing actual soil temperature monitoring and record keeping. The 120-day period is overly stringent and too broad. (**Greg Merrill – Montgomery County Water Services**)

Response 115:

The 120-day period between November 15th and March 15th was meant to correlate with the requirement that a wastewater treatment works provide 120 days of facility storage for sewage sludge and biosolids. Upon review of soil temperature data, the potential for frozen ground is much greater between December 15 and March 1. As such, to provide greater flexibility, the timeframe for when incorporation or injection will be required for beneficial use will be revised to a period from December 15 to March 1 of two

consecutive calendar years. Ohio EPA does not feel that tracking soil temperatures will be sufficient to mitigate the greater potential for runoff that can occur on frozen or snow covered ground.

Comment 116:

Page 4 paragraph (D)(2) Frozen or snow covered ground. The language, as presented in the draft rule sections (D)(2)(b)(i) to (D)(2)(b)(iv), is consistent with the Ohio Department of Agriculture Livestock Environmental Permitting Rules (OAC 901:10) and NRCS Standard 633 Waste Utilization. It is important that there is consistency across all nutrient management programs.

The proposed draft rule could be improved by adding language that establishes a clear distinction between surface and subsurface (injection or incorporation) application of biosolids to frozen ground. The following language is suggested, "If biosolids can be injected or incorporated then the land application site is not frozen or snow covered and therefore not subject to paragraph (D)(2) of this rule. (**John C. Fisher – Ohio Farm Bureau Federation**)

Response 116:

Ohio EPA specifies the requirements for surface application when the ground is frozen or snow covered. If the biosolids are incorporated or injected, Ohio EPA would agree that the ground is not frozen. However, because the ground can be snow covered, while not being frozen, Ohio EPA feels the suggested language should not be added. Ohio EPA feels the suggested language could lead to an interpretation that if the ground is not frozen, but is snow covered, surface application would be allowed without following the NRCS standards.

(D)(2)(a) Frozen/Snow-Covered Ground Time Restrictions

Comment 117:

OWEA believe this rule will result in increased disposal program costs. Often, soils in Southern Ohio remain unfrozen until mid to late December versus regions in Northern Ohio where freezing occurs earlier. The 120-day period is very restrictive. A possible option would be to allow the applicator to disc the top 4-inches of soil if only the top inch is frozen (frosted) to allow applied product to enter an unfrozen zone. Would the Ohio EPA accept actual soil temperature tracking versus prohibiting land application based on possible soil temperatures as [noted in paragraph (D)(6)]

(6) Beneficial use sites with subsurface tile drainage. (a) For beneficial use sites with subsurface tile drainage, all field outlets shall be visually monitored before, during and after beneficial use of biosolids at the site and the results of that monitoring shall be recorded. (**Ohio Water Environment Association**)

Response 117:

The 120-day period between November 15th and March 15th was meant to correlate with the requirement that a wastewater treatment works provide 120 days of facility storage for sewage sludge and biosolids. Upon review of soil temperature data, the potential for frozen ground is much greater between December 15 and March 1. As such, to provide greater flexibility, the timeframe for when incorporation or injection will be required for beneficial use will be revised to a period from December 15 to March 1 of two consecutive calendar years. Ohio EPA does not feel that tracking soil temperatures will be sufficient to mitigate the greater potential for runoff that can occur on frozen or snow covered ground.

Comment 118:

This proposal requires that all soils receiving applications of biosolids between November 15 and March 15 inclusive be incorporated. The specified time frame is not in agreement with NRCS Standard 633 and Ohio State University Extension Bulletin 604, which recognizes the months of November and December as appropriate periods of time for manure application. I recommend that the date restriction be modified to be more in line with the referenced documents and the likelihood of actually having snow-covered or frozen ground. The restriction should be changed from December 15 to March 1 and the frozen or snow-covered ground restriction should be changed to March 1 to December 15. This change will reduce the impacts to farms that implement best management practices such as no-till, or reduced tillage operations and further limit the amount of application to frozen or snow-covered ground. Requiring tillage on sites that have significant ground cover when frozen could actually lead to increased soil loss in the spring or during snow melt. **(Bruce MacLeod - Synagro Central, LLC.)**

Response 118:

The rule will be revised, as requested.

(D)(2)(b) Frozen or snow covered ground

Comment 119:

OWEA believe this rule will result in increased disposal program costs. Often, soils in Southern Ohio remain unfrozen until mid to late December versus regions in Northern Ohio where freezing occurs earlier. The 120-day period is very restrictive. A possible option would be to allow the applicator to disc the top 4-inches of soil if only the top inch is frozen (frosted) to allow applied product to enter an unfrozen zone. Would the Ohio EPA accept actual soil temperature tracking versus prohibiting land application based on possible soil temperatures as **(Ohio Water Environment Association)**

Response 119:

The 120-day period between November 15th and March 15th was meant to correlate with the requirement that a treatment works provide 120 days of facility storage for sewage sludge and biosolids. Upon review of soil temperature data, the potential for frozen ground is much greater between December 15 and March 1. As such, to provide greater flexibility, the timeframe for when incorporation or injection will be required for beneficial use will be revised to a period from December 15 to March 1 of two consecutive calendar years. Ohio EPA does not feel that tracking soil temperatures will be sufficient to mitigate the greater potential for runoff that can occur on frozen or snow covered ground.

(D)(5)(a) Soil Phosphorus Levels

Comment 120:

It is agreed that use of sites with soil test P (STP) phosphorus levels greater than 150 ppm Bray should be managed differently unless it can be shown, using a clear and easily defined technique, that elevated (high) risk for off-site phosphorus loss is avoided. Therefore, we suggest that an “adjusted” phosphorus index be allowed here instead of limiting applications. This suggested technique is simple and easily understood, and codifies the approach in the regulations. The adjusted phosphorus index technique is included in the suggested replacement language below.

The most sensible solution to the P Index dilemma for biosolids recycling in Ohio is to include a PSC line item in the Ohio P Index. Inclusion of a PSC factor, based on actual water extractable phosphorus measured in each organic by-product proposed for land application, is widely acknowledged by phosphorus researchers (Kleinman et al., 2006 and 2007; Elliott et al., 2005, and 2006; Brandt et al., 2003, 2004, and 2005), and is incorporated in neighboring state phosphorus indices (e.g. PA, VA, MD, DE). Inclusion of a PSC is NOT viewed as a relaxation of agricultural phosphorus management standards, but rather acknowledges that all organic phosphorus sources do NOT pose the same risk for off-site phosphorus export.

Suggested language – Soil phosphorus. For authorized beneficial use sites, the frequency of monitoring for soil phosphorus level (Bray-Kurtz P1 extraction or Mehlich 3 extraction) shall be such that the most recent results are not more than two years old at the time the bulk biosolids are delivered to the site. For soils with soil phosphorus test results greater than one hundred fifty (150) parts per million (three hundred pounds per acre) Bray-Kurtz P1 extraction or one hundred seventy (170) parts per million (three hundred forty pounds per acre) Mehlich 3 extraction, beneficial use of bulk biosolids shall either:

- (i) Cease until such time that soil phosphorus test results are less than or equal to one hundred fifty (150) parts per million (three hundred pounds

per acre) Bray-Kurtz P1 extraction or one hundred seventy (170) parts per million (three hundred forty pounds per acre) Mehlich 3 extraction; or

- (ii) Continue when it has been demonstrated to the director or an authorized representative, using the adjusted phosphorus index, that avoids elevated (high) relative risk of phosphorus movement to waters of the state at the authorized beneficial use site.
- (iii) The adjusted phosphorus index shall allow for replacement of the “organic phosphorus source application rate” with biosolids phosphorus application rates adjusted using a phosphorus source coefficient factor, based on actual water extractable phosphorus measured in each organic by-product proposed for land application OR the factors listed in Table 3745-40-08-D5.

Table 3745-40-08-D5 Phosphorus Source Coefficients (PSC)

| <i>Source of Organic Phosphorus (1)</i> | <i>PSC</i> |
|---|------------|
| <i>Swine Manure</i> | <i>1.0</i> |
| <i>Broiler</i> | <i>0.8</i> |
| <i>Layer</i> | <i>0.8</i> |
| <i>Turkey</i> | <i>0.8</i> |
| <i>Duck</i> | <i>0.8</i> |
| <i>Dairy– Liquid</i> | <i>0.8</i> |
| <i>Dairy – Bedding</i> | <i>0.8</i> |
| <i>Beef</i> | <i>0.8</i> |
| <i>Horse</i> | <i>0.8</i> |
| <i>BPR Biosolids</i> | <i>0.8</i> |
| <i>All Other Biosolids</i> | <i>0.4</i> |

(1) Source: The Pennsylvania Phosphorus Index, Version 2. Pennsylvania State University 2007, Code # UC180, Rev5M1/07mpc4591.

For more information about the Pennsylvania phosphorus index, and use of the PSC, see the fact sheet found at: http://panutrientmgmt.cas.psu.edu/pdf/phosphorus_index_factsheet.pdf (Trudy Johnston - Material Matters, Inc.)

Response 120:

Paragraph (A)(2) of Rule 3745-40-08 of the Ohio Administrative Code will be revised as follows:

- (b) For soils with soil phosphorous test results greater than one hundred parts per million Bray-Kurtz P1 extraction or one hundred fifteen parts per million

Mehlich III extraction and less than or equal to one hundred fifty parts per million Bray-Kurtz P1 extraction or one hundred seventy parts per million Mehlich III extraction:

- (i) The nitrogen agronomic rate;
- (ii) The single-year phosphorous agronomic rate, unless the beneficial use site has greater than fifty percent ground cover at the time of beneficial use or the biosolids are incorporated into the beneficial use site within seven days after beneficial use, in which case a multi-year phosphorous agronomic rate may be used; or
- (iii) Beneficial use shall be completed in accordance with the phosphorus index; or
- (c) For soils with soil phosphorous test results greater than one hundred fifty parts per million Bray-Kurtz P1 extraction or one hundred seventy parts per million Mehlich III extraction:
 - (i) Beneficial use shall be completed in accordance with the phosphorus index; or
 - (ii) Beneficial use is not permitted at the beneficial use site.”

In addition, the following terms have been defined within paragraphs (NNN), (OOO), and (MMMM) of Rule 3745-40-01 of the Ohio Administrative Code:

“(NNN) “Multi-year phosphorus agronomic rate” means the beneficial use rate of biosolids that will provide the phosphorous needs for a realistic yield goal of multiple crops to be grown at the beneficial use site, but not to exceed three calendar years of planned crops.” and

“(OOO) “Nitrogen agronomic rate” means the beneficial use rate of biosolids that will provide the nitrogen requirements or nitrogen removal rates for a realistic yield goal of the succeeding crop to be planted at the beneficial use site. In calculating the nitrogen agronomic rate, the permittee shall:

- (1) Subtract the nitrogen credit to be given to the next crop, in accordance with values for previous crops; and
- (2) Subtract the nitrogen that will be added in other forms.

[Comment: For beneficial use sites where a grass or legume cover crop is established or will be established after beneficial use of biosolids, the biosolids may still be beneficially used at the rates to provide the nitrogen

requirements or nitrogen removal rates for the succeeding crop to be planted after the grass or legume cover crop.]” and

“(MMMM) "Single-year phosphorous agronomic rate" means the beneficial use rate of biosolids that will provide the phosphorous needs for a realistic yield goal of the succeeding crop to be planted at the beneficial use site.

[Comment: For beneficial use sites where a grass or legume cover crop is established or will be established after beneficial use of biosolids, the biosolids may still be beneficially used at the rates to provide the phosphorous needs for the succeeding crop to be planted after the grass or legume cover crop.]”

Comment 121:

Page 6 paragraph (5) Soil monitoring requirements. Section (a) of this rule discusses utilizing soil phosphorus level to guide the land application of biosolids. The current definition of beneficial use, agronomic benefit and agronomic rate refer to nitrogen concentration serving as the basis for the determination of biosolids land application rates. As stated in an earlier comment, a modification of the agronomic rate definition to remove the reference to nitrogen would make these sections more consistent. **(John C. Fisher – Ohio Farm Bureau Federation)**

Response 121:

Ohio EPA will revise the rules as suggested.

(D)(6)(a) Fields with Tile Drainage

Comment 122:

In non-liquid biosolids (> 10% solids) are applied, do subsurface tile drains need monitoring? The non-liquid product should not change into a liquid that could enter a subsurface tile. **(Greg Merrill – Montgomery County Water Services)**

Response 122:

The subsurface tile drains do not need to be monitored when non-liquid biosolids are beneficially used. Ohio EPA will clarify this in rule.

(E)(9) Mixing of Biosolids from Different Generators

Comment 123:

MCWS does not support the prohibition that restricts a beneficial use site from receiving Class B biosolids from different POTWs. If the same field has an area which is low in pH, it could benefit by receiving an alkaline biosolids product. A different area of the same field could benefit from a more nitrogen-containing aerobically digested biosolids.

Therefore, the proposed prohibition should not be considered. **(Greg Merrill – Montgomery County Water Services)**

Response 123:

Unless in accordance with an NPDES permit, the mixing of biosolids from two different treatment works to create a new material would constitute the actions of a treatment works and is prohibited at a beneficial use site. The beneficial use of biosolids from two different treatment works to a single site is not prohibited, as long as the biosolids are from the same governing authority or a transfer of the site has been completed.

Comment 124:

OAC 3745-40-08 (E) (9) states that “mixing” of class B biosolids from different wastewater treatment works at a beneficial use site is prohibited. The term “mixing” is unclear. Is OEPA prohibiting mixing up front and then land applying the biosolids or is it also prohibiting the use of two sources of class B on the same property, even if land application of both can be readily identifiable.

While the City is not concerned about the first scenario, on occasion, Class B biosolids from the City’s two wastewater plants may be transported to one large site for land application on different portions of the property. The City would not want this flexibility removed by this rule. **(Dominic J. Hanket - City of Columbus)**

Response 124:

Unless in accordance with an NPDES permit or an approved sludge management plan, the mixing of biosolids from two different treatment works to create a new material would constitute the actions of a treatment works and is prohibited at a beneficial use site. The beneficial use of biosolids from two different treatment works to a single site is not prohibited, as long as the biosolids are from the same governing authority or a transfer of the site has been completed.

Comment 125:

This proposed rule does not help improve fields that can benefit in different areas by receiving different types of Class B biosolids. One example is a low pH area which would benefit by receiving an alkaline biosolids application, with an adjoining area that may need more nitrogen from aerobically digested biosolids. **(Ohio Water Environment Association)**

Response 125:

Unless in accordance with an NPDES permit or an approved sludge management plan, the mixing of biosolids from two different treatment works to create a new material would constitute the actions of a treatment works and is prohibited at a beneficial use site. The beneficial use of biosolids from two different treatment works to a single site is not prohibited, as long as the biosolids are from the same governing authority or a transfer of the site has been completed.

3745-40-09: Approved sampling methods, monitoring frequency requirements, record retention and annual reporting requirements

(B) Monitoring Frequency Requirements

Comment 126:

The City vigorously objects to the monitoring requirements established in this standard. The City requests that the OEPA continue the current monitoring requirements of required analysis and reporting during periods in which beneficial reuse occurred. The City of Sidney allocates significant resources to monitoring of the biosolids for land application events. What is the justification for requiring monitoring of biosolids that may not be land applied in the reporting period? This requirement places an additional burden on already stretched resources of POTWs. **(Brian Schultz - City of Sidney)**

Response 126:

Ohio EPA received the following comment on the first draft of the revised rules released in July 2008 regarding monitoring frequency. In the first draft of these revised rules, Ohio EPA was not going to require monitoring during reporting periods when biosolids were not removed from the treatment works:

“Comment 182:

3745-40-09(B)(2)(a) - states that monitoring is not required if a hauling event does not occur during the reporting period. Part 503 sets minimum monitoring based on how much sewage sludge is land applied in a 365 day period. The minimum must be met whether land application occurs year round or all at one time. Therefore, this section should still require the minimum monitoring be required. (John Colletti, USEPA Region 5)”

In accordance with the above comment, Ohio EPA will require monitoring each reporting period, or the equivalent of monitoring each reporting period.

(B)(4) Dioxin Monitoring Requirements

Comment 127:

The USEPA declared in 2003 that dioxin levels in sewage sludge do not pose a threat to human health. You can see their web-page and accompanying technical support at: <http://yosemite.epa.gov/opa/admpress.nsf/b1ab9f485b098972852562e7004dc686/209dab87e1b0a8b785256dc20050c977?OpenDocument> .

The OEPA should drop all requirements for dioxin testing and eliminate the issue for those opposed to biosolids applications and reuse and eliminate the cost of such a requirement. **(Bruce Bailey - Schmack BioEnergy)**

Response 127:

The following requirement will be removed from this rule:

“(B)(4)(b) For any treatment works that generates more than three hundred and twenty dry tons of sewage sludge per year and that does not have an approved pretreatment program in accordance with Chapters 3745-3 and 3745-36 of the Administrative Code, the treatment works shall, within twelve months of the effective date of this rule, monitor for dioxin in sewage sludge,”

However, this rule will retain the director’s authority to require dioxin monitoring on a case by case basis via an NPDES permit to protect public health or the environment.

Finally, the rule will be revised to reflect a ceiling limit of 300 parts per trillion total toxicity equivalence.

(B)(4)(viii) Additional Dioxin Monitoring

Comment 128:

OWEA believes the dioxin trigger values are too conservative, and suggest that Ohio maintain the same standard used by USEPA. If Ohio chooses to go with a more stringent standard, we request science based justification for this. **(Ohio Water Environment Association)**

Response 128:

The rule will be revised to reflect a ceiling limit of 300 parts per trillion total toxicity equivalence.

3745-40-10: Facility storage requirements

(B) Alternatives to Facility Storage

Comment 129:

We anticipate that this rule will result in additional landfilling of a significant portion of Ohio’s sewage sludge. Does the agency allow sewage sludge generators to cease operation of sewage sludge stabilization process during the times when landfilling is expected? What issues might the general public and landfill operations employees expect with the transport and management of untreated sewage sludge? **(Bruce MacLeod - Synagro Central, LLC.)**

Response 129:

Ohio EPA would prefer that biosolids be beneficially used.

The currently effective and draft rules under OAC Chapter 3745-40 do not require that sewage sludge be stabilized prior to landfilling. In addition, to date, Ohio EPA is unaware of any issues resulting from the landfilling of unstabilized sewage sludge.

3745-40-11: Signage requirements for beneficial use sites receiving class B biosolids

(B) Signage at High Potential Exposure Sites

Comment 130:

OWEA believes the term “Any high potential public exposure site” needs to be defined. We would support requiring a sign to remain posted for 30-days. **(Ohio Water Environment Association)**

Response 130:

Paragraph (VV) of Ohio Administrative Code Rule 3745-40-01 defines a “high potential public exposure site,” as “an authorized beneficial use site that the public uses frequently. This includes, but is not limited to, a public contact site and a reclamation site located in a populated area (e.g., a construction site located in a municipality).”

In accordance with 40 CFR Part 503, public access is restricted for one year after application; therefore, Ohio EPA feels that the signs should remain in place for a year at high potential public exposure sites.

Comment 131:

MCWS suggests the term “Any high potential public exposure site” needs to be defined. Also, MCWS would support requiring a sign to remain posted for 30-days rather than the one year period as proposed. **(Greg Merrill – Montgomery County Water Services)**

Response 131:

Paragraph (VV) of Ohio Administrative Code Rule 3745-40-01 defines a “high potential public exposure site,” as “an authorized beneficial use site that the public uses frequently. This includes, but is not limited to, a public contact site and a reclamation site located in a populated area (e.g., a construction site located in a municipality).”

In accordance with 40 CFR Part 503, public access is restricted for one year after application; therefore, Ohio EPA feels that the signs should remain in place for a year at high potential public exposure sites.

3745-40-12: Compliance and enforcement; and spill notification requirements

(A)(8) Drain Tile Sampling

Comment 132:

Part 3745-40-12(A)(8) indicates that the director or an authorized representative of the director may require sampling and monitoring for pollutants at any drain tile. While I'm in agreement with the spirit of the regulation, I am at odds with the implementation of the regulation due to the typical network of tiles between fields. Field tiling often includes not only the tile on land application sites, but also neighboring upstream and downstream fields not involved in the land application program. Therefore, monitoring at drain tile outfalls does not always provide a clear understanding of what is occurring as a result of land application and the outfall may be some distance downstream or on property farmed by another party. **(David J. Heckler – Tri-Cities North Regional Wastewater Authority)**

Response 132:

This requirement will be removed from this rule.

End of Response to Comments