



## Division of Surface Water Response to Comments

**Project: Dovetail Energy LLC Permit-to-Install Application**  
**Ohio EPA #: 1141952**

### Agency Contacts for this Project

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Ohio EPA held a public hearing on March 22, 2018, regarding the Dovetail Energy LLC Permit-to-Install (PTI) application for a new biosolids treatment system. This document summarizes the comments and questions received at the public hearing or submitted during the associated comment period which ended on March 29, 2018.

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. Often, public concerns fall outside the scope of that authority. For example, concerns about zoning issues are addressed at the local level. Ohio EPA may respond to those concerns in this document by identifying another government agency with more direct authority over the issue.

In an effort to help you review this document, the questions are grouped by topic and organized in a consistent format.

- Please Note:** Following the public hearing, the submitted PTI application was modified. The major changes include the following.
- The proposed 1.7 million-gallon digester has been removed from the proposed project.
  - The backup generator has been removed from the proposed project.
  - The current biosolids storage tank was added to this application to address the fact it was constructed with two additional feet of height.
- Comment 1:** **Individuals were concerned about the health effects of land applying biosolids near individual homes. Some land application sites are along property lines.**
- Response 1:** Class B biosolids are strictly regulated in accordance with Ohio's sewage sludge rules. Dovetail is required to monitor pollutants at least monthly. Dovetail also is required to

operate within pollutant limits and to adhere to operational standards. Beneficial use site restrictions include isolation distances from homes and wells that must be maintained when biosolids are applied to fields authorized by Ohio EPA.

More information about what the company must adhere to can be found at the following locations:

Ohio Administrative Code Chapter 3740-40:  
[http://epa.ohio.gov/dsw/rules/3745\\_40.aspx](http://epa.ohio.gov/dsw/rules/3745_40.aspx)

National Pollutant Discharge Elimination System permit  
1IN00305\*AD:  
<http://wwwapp.epa.ohio.gov/dsw/permits/doc/1IN00305.pdf>

*A Guide to the Biosolids Risk Assessment for the EPA Part 503 Rule* (U.S. EPA):  
<https://www.epa.gov/biosolids/guide-biosolids-risk-assessment-epa-part-503-rule>.

Ohio's sewage sludge rules are more stringent than the federal standards for the use or disposal of sewage sludge. These rules were developed using a comprehensive risk assessment process to ensure human health and the environment are protected when biosolids are beneficially used.

Research on contaminants not included in the federal biosolids regulations does not suggest risk levels of concern in land-applied biosolids.  
<https://www.wef.org/globalassets/assets-wef/3---resources/topics/a-n/biosolids/technical-resources/wef-fact-sheet-microconstituents-v25-aug-2017.pdf>

**Comment 2:**

**A long-term study should be conducted on the land application of biosolids before it can continue.**

**Response 2:** A long-term comprehensive risk assessment to study land application of biosolids was conducted by U.S. EPA. (*A Guide to the Biosolids Risk Assessment for the EPA Part 503 Rule*: <https://www.epa.gov/biosolids/guide-biosolids-risk-assessment-epa-part-503-rule>)

Regarding pathogens, which were the focus of the testimony about long-term studies, a 19-year long study performed by

the University of Arizona found that biosolids are “generally free of any pathogenic organisms that might harm humans or the environment.”

<https://uanews.arizona.edu/story/treated-biosolids-safe-for-agricultural-uses>

**Comment 3: Why is the soil and water not tested for pathogens and E. coli in areas where the biosolids are being land applied to ensure public safety?**

**Response 3:** The treatment technologies to reduce pathogens are approved based on extensive research regarding pathogen survival under specific treatment conditions. These technologies sufficiently reduce pathogens in Class B biosolids and, when combined with site restrictions for land application, are protective of human health and the environment. When an approved biosolids treatment technology is used, pathogen testing at Class B land application sites has been shown to be unnecessary.

There also are specific site restrictions to prevent direct contact with any pathogens that may still be present in Class B biosolids that are land applied. Any pathogens that remain are subject to several factors that decrease survivability. These include heat, sunlight, drying and competing microbes. The required isolation distances from surface waters, potable water sources, and occupied buildings also significantly decrease the potential for pathogens to be transported.

Sampling for specific pathogens is difficult, therefore, indicator bacteria such as *E.coli* are sampled. Indicator bacteria suggest the possibility that harmful pathogens may be present but would not provide information regarding the source of the pathogen. The soil and water could contain bacterial contamination from many possible sources such as wildlife, livestock, septic systems or storm water. Testing the soil or adjacent waters for *E.coli* at fields where biosolids have been land applied could indicate the possible presence of contamination, but without further extensive testing, the source could not be determined.

Based on the levels of fecal coliform in the biosolids from Dovetail Energy, the likelihood of contamination from the beneficial use of biosolids is extremely low. The monthly fecal coliform geometric mean average for Dovetail Energy

for the last 18 months is 21,100 Most Probable Number per gram (MPN/g). This is well below the limit of 2,000,000 MPN/g. This confirms that the treatment process more than sufficiently reduces pathogens prior to land application and the use of biosolids would unlikely cause bacterial contamination of the soil or water.

**Comment 4:** **Based on documents received during a public records request, why would Ohio EPA approve feedstocks that the outcome of the health or environment effects are not known?**

**Response 4:** The documents referenced in this comment were Ohio EPA approvals for Dovetail Energy to accept approximately five percent of the digester volume of wastewater from detergent and fabric softener lines. For these feedstocks, a risk assessment performed as part of the feedstock evaluation did not indicate known risks to human health or the environment; however, monitoring of the effluent containing this feedstock was recommended to gather more data. Since the approvals, Renergy, Inc. has indicated that the detergent and fabric softener wastewater has not been accepted as a feedstock at Dovetail Energy, therefore additional monitoring has not been necessary.

In general, Dovetail Energy is permitted to accept the following feedstocks: animal wastes, biosolids, energy crops [i.e. grain, hay, silage, spilled and soiled feed, and stover (leaves and stalks of field crops left over after a harvest)], fats, oils, and greases (FOG), food scraps, food waste, glycerin, sewage sludge, stillage and yard waste. All other feedstocks must be separately approved by Ohio EPA. Ohio EPA's alternative feedstock review follows the procedure outlined in [Ohio Administrative Code \(OAC\)3745-40-02](#), which will be effective December 1, 2018.

**Comment 5:** **How can Ohio EPA approve this application when so many residents are against this?**

**Response 5:** Approval or denial of PTI applications can only be based on specific criteria established in Ohio's PTI regulations. A PTI application cannot be legally denied if all the required criteria are met. Local opinion is not one of the review criteria that Ohio EPA has the legal authority to evaluate when reviewing a PTI application.

However, Ohio EPA does develop regulations and requirements as new issues emerge or as technology develops. Ohio EPA currently is developing requirements to reduce odors associated with anaerobically digested biosolids.

**Comment 6: The high ground water table makes the land application sites unsuitable.**

**Response 6:** Ohio EPA's Division of Drinking and Ground Waters has reviewed the hydrogeology of the area and found that permitted application is protective of human health and the environment. No additional restrictions are required.

**Comment 7: In the 2001, Ohio EPA cited the Pitstick hog farm for a manure spill that caused a fish kill downstream in Hebble Creek. Why does Ohio EPA find it acceptable to land apply biosolids in an area which already is known to impact these downstream areas?**

**Response 7:** The manure spill referenced in the comment was an isolated incident of a direct discharge of untreated hog manure to Hebble Creek. Appropriate land application of manure is routinely done statewide without impact to aquatic life.

Land application of treated biosolids in this area is permitted because, when done in accordance with federal and state regulations, it is protective of surface waters and aquatic life. If an accidental spill of biosolids occurred and Ohio EPA's spill hotline is notified, Ohio EPA's Division of Environmental Response, Investigation and Enforcement and Division of Surface Water would mobilize to address any unauthorized discharge of biosolids to waters of the state.

**Comment 8: If the runoff from the Wright Patterson Air Force Base is a problem with fire retardant materials (PFAs), why is it not also an issue for runoff from these biosolids land application sites?**

**Response 8:** The biosolids proposed to be land applied predominately consist of nutrients that can be taken up by the crops being grown on these farm fields. With a properly operated biosolids land application program that includes immediate incorporation, the runoff of any of the biosolids is expected to be minimal and not be a threat to public health. If Ohio EPA

determines that a pollutant is in the biosolids that posed a public health threat, we will address it.

**Comment 9: Why is the air not tested for pollutants and noise as part of the biosolids land application program?**

**Response 9:** Please see comment 31 regarding noise.

The biosolids land application regulations do not require air monitoring. Studies have indicated that air monitoring during or after land application is not required based on the following:

- Overall risk of infection from bioaerosols resulting from land application is low.
- Duration of exposure during land application is very discrete.
- Occupational risk is greater than community risk due to enhanced exposure, but still low.

This study is located at <http://biosolidsresources.org/OE/>.

Unrelated to the biosolids land application program, Dovetail is required to test their treatment system flare annually for emissions destruction efficiency.

**Comment 10: What happens to crops harvested from these biosolids land application sites?**

**Response 10:** Crops grown at fields authorized for the beneficial use of Class B biosolids from Dovetail Energy include corn and soybeans that are harvested for animal feed. Feed crops cannot be harvested for 30 days after the beneficial use of Class B biosolids.

**Comment 11: An individual's drinking water well has not passed testing the last three time, and the Greene County Health Department has not been able to give any possible ideas on how to get it to pass this testing other than to do the testing when it is not raining. As such, why wouldn't the biosolids also seep into this drinking water well?**

**Response 11:** Ohio EPA biosolids land application rules have been developed to be protective of human health and the environment. These rules include an isolation distance of 100 feet from private potable water sources when biosolids are injected or immediately incorporated and land applying

at the appropriate application rates. Application rates are based on the crop nutrient needs, the amount of nutrients in the biosolids, and soil conditions. By complying with the biosolids land application rules it would be unlikely to see impacts to an area drinking water well from biosolids land application.

**Comment 12: Studies have shown that emerging pollutants can infiltrate the land application sites. Why are these new pollutants not of any concern to Ohio EPA?**

**Response 12:** Ohio EPA does not have legal authority to regulate these pollutants.

Microconstituents in biosolids are unlikely to pose a risk to human health or the environment for the following reasons:

- Synthetic organic compounds that survive wastewater treatment are degraded or strongly bound to organic matter in soil.
- Plant roots do not take up significant amounts of these compounds.
- Site management practices for biosolids (such as buffer zones and restrictions on application timing) reduce the opportunity for these compounds to move to water bodies.

This study can be found at:

[https://catalog.extension.oregonstate.edu/sites/catalog/files/project/pdf/pnw508\\_0.pdf](https://catalog.extension.oregonstate.edu/sites/catalog/files/project/pdf/pnw508_0.pdf)

Ohio EPA continually monitors the research of microconstituents in biosolids and will update the regulations as needed. Ohio EPA believes that the beneficial use of biosolids are protective of human health and the environment when biosolids are treated and managed in accordance with regulations.

**Comment 13: An individual complained that biosolids being land applied just before a storm resulted in the biosolids being sprayed on her and her visitors.**

**Response 13:** Ohio EPA's understanding from testimony at the hearing is that the event described occurred in October 2017. The field in question was not approved for the beneficial use of biosolids until Nov. 29, 2017. Dovetail Energy's 2017 Annual Sludge Report indicates that biosolids were beneficially used

(injected) at the site on Dec. 4, 2017. Biosolids were not beneficially used at other nearby sites in 2017. Ohio EPA recommends that the commenter contact the farmer and/or owner of the field to determine the activity that was taking place on the night in question.

**Comment 14: Individuals complained of odors from hog farm, treatment facility and land application sites.**

**Response 14:** Ohio EPA does not regulate the hog farm operation located adjacent to the Dovetail Energy facility. Ohio EPA recommends that commenters address questions regarding the hog farm to the Ohio Department of Agriculture.

Based on complaints received by Ohio EPA, odors from the treatment facility appear to be related to the biosolids storage tank. The facility has submitted a National Pollutant Discharge Elimination System (NPDES) permit modification request form that will include new monitoring requirements for the biosolids storage tank. The permit modification will also include more stringent treatment requirements for Class B biosolids and submission of an odor management plan. The odor management plan will address the minimization of nuisance odors from the facility and beneficial use sites.

Finally, the proposed treatment system will provide a higher level of treatment, capable of producing Class A biosolids that should be less foul-smelling.

**Comment 15: What are the allowable times of operations for this facility and when are the trucks allowed to haul material into this facility?**

**Response 15:** Ohio EPA does not have the legal authority to regulate the hours of operation or truck traffic associated with this facility.

**Comment 16: Siting the proposed biosolids treatment system within 500 feet of residential homes and in a karst area subject to sinkholes does not seem like a good idea.**

**Response 16:** Other than the farmhouse located at the Dovetail Energy facility, all other residential homes are at least 1,000 feet from the proposed biosolids treatment system, which complies with the Ohio EPA isolation distance requirement to maintain at least 200 feet from these residences. The farmhouse is more than 450 feet from the proposed

treatment system. The proposed biosolids treatment tanks are all proposed to be constructed on the ground with concrete bases. Wastewater leaking through these concrete bases is expected to be negligible and not to pose any threats to the underlying ground water.

**Comment 17: Why would Ohio EPA allow this type of treatment facility around residential properties?**

**Response 17:** Ohio requires that the proposed treatment tanks be constructed at least 200 feet from any occupied residence. This proposal complies with the required isolation distance requirements.

**Comment 18: Several people made references that a lagoon was being used for the biosolids storage.**

**Response 18:** The existing biosolids storage tank is a constructed concrete tank. It is not an earthen lagoon that was proposed as part of the original treatment system.

**Comment 19: Did Ohio EPA consider the blasting being done at a local quarry and the effects on the existing and proposed treatment tanks? If local blasting caused issues with the biosolids storage tank and resulted in impacts to the local ground water, who would be liable?**

**Response 19:** Ohio EPA did not consider the blasting being done at a local quarry facility. A building permit for the treatment tanks may be required from either the local building department or the state building department. The building department would consider what design conditions the structure should be built with consideration of wind loads, snow loads, seismic issues, etc. Spills are the responsibility of the facility owner/operator.

**Comment 20: Did Ohio EPA consider the effects on local property values?**

**Response 20:** PTI applications are evaluated for compliance with specific criteria established in Ohio's rules and regulations and can only be approved if those criteria are met. The potential impact on local property values is not a criterion that Ohio EPA has the legal authority to evaluate when reviewing a PTI application.

**Comment 21:** Did Ohio EPA consider the truck traffic associated with this new treatment system?

**Response 21:** Truck traffic is not a criterion that Ohio EPA has the legal authority to evaluate when reviewing a PTI application.

**Comment 22:** The facility is not zoned correctly for this type of operation.

**Response 22:** Local zoning is not a criterion that Ohio EPA has the legal authority to evaluate when reviewing a PTI application.

**Comment 23:** Should the biosolids storage tank have soil placed around it to protect the tank and should the tank have a fence around it to keep animals and people from falling into the storage tank?

**Response 23:** The existing biosolids storage tank was previously approved. However, the storage tank was determined to be constructed taller than what was previously approved by Ohio EPA. To formally approve this modification, as-built plans for the storage tank have been included in this PTI application.

The allowable freeboard has also been proposed to be reduced to one foot. The construction of this storage tank was found to be acceptable. Placing an earthen embankment around this storage tank was not required because the concrete tank walls are designed for this situation. Finally, in most areas, the tank walls extend several feet above the ground. Fencing has been provided in areas where the top of the tank is close to the ground surface.

**Comment 24:** How was the existing treatment facility allowed to be built without presentation and input from the surrounding residents? The residents should have had an opportunity to have a public hearing on the original facility.

**Response 24:** The existing treatment system was constructed under two past PTI approvals. Ohio EPA is not required to have a public hearing on the receipt of these applications. For one application, several people did request a public hearing. However, the director of Ohio EPA did not think a public hearing was necessary at the time. For the current PTI application, Ohio EPA considered the number of people

requesting a public hearing to be significant public interest and the director deemed a public hearing was necessary.

**Comment 25: What funding sources were used to build the existing facility (i.e. public, private, etc.)?**

**Response 25:** PTI applications are evaluated for compliance with specific criteria established in Ohio's rules and regulations and can only be approved if those criteria are met. Funding source is not a criterion that Ohio EPA has the legal authority to evaluate when reviewing a PTI application. However, it is Ohio EPA's understanding that the funding for the existing treatment system was both private funding and a grant from the US Department of Agriculture Rural Energy for America Program.

**Comment 26: How will spills from this facility be prevented? Concerns were also raised about spills occurring from hauling materials to and from this facility. Finally, who is responsible for cleaning up any biosolid spills from any treatment unit failure?**

**Response 26:** The generator, Dovetail Energy, LLC, would be required to address spills in accordance with the "Dovetail Energy Digester Contingency Plan for Spills," which was included as part of application submitted for PTI No. 933544, approved Jan. 24, 2014. Ohio requires specific steps to be followed in the event of a spill which includes notifying Ohio EPA's spill hotline. If a spill event occurs, Ohio EPA's Division of Environmental Response, Investigation and Enforcement and Division of Surface Water would mobilize to address any unauthorized discharge of biosolids to waters of the state.

**Comment 27: Does this proposed biosolids treatment system include the addition of a second generator and are there plans for a second generator in the future?**

**Response 27:** No.

**Comment 28: Ground water monitoring wells were to be required for the earthen lagoon. If the ground water and the sole source aquifer are so sensitive to contamination, why was it such a great idea to put this facility here?**

**Response 28:** Ohio EPA staff was concerned that earthen lagoons might not be sufficient to contain leaks. As such, the Agency was

going to require the facility provide monitoring wells and conduct a ground water monitoring program to ensure that the ground water was not impacted.

To address these concerns, the facility proposed to construct a concrete biosolids storage tank with a leak detection system. The concrete storage tank is not expected to impact the underlying ground water and as such ground water monitoring was not required. The existing and proposed treatment system comply with our permitting requirements and are acceptable to Ohio EPA.

**Comment 29: Why was this site proposed in the first place?**

**Response 29:** Ohio EPA was not involved in choosing the location for this site and has no information regarding why it was chosen.

**Comment 30: The facility has been cited in violation at least two times. How many violations does Ohio EPA have on this facility?**

**Response 30:** Dovetail Energy has received the following Notices of Violation (NOVs):

- May 29, 2015 - land application of biosolids within 33 feet of surface waters
- Dec. 6, 2016 - biosolids present on the surface within 300 feet of a well, lack of signage, not adhering to specific conditions of site authorization (injection)
- April 21, 2017 - not adhering to specific conditions of site authorization (injection)
- July 14, 2018 - not maintaining the required freeboard in the effluent storage tank and exceeding the average design flowrate

The land application violations were quickly resolved, and changes have been made to the equipment used to inject biosolids to ensure compliance with the specific condition of the site authorizations. The most recent NOV will be resolved by a combination of the PTI approval and modifications to the NPDES permit.

**Comment 31: Concerns were raised about noise generated from the site.**

**Response 31:** PTI applications are evaluated for compliance with specific criteria established in Ohio's rules and regulations and can

only be approved if those criteria are met. Noise is not a criterion that Ohio EPA has the legal authority to evaluate when reviewing a PTI application.

**Comment 32: How many permits has Ohio EPA denied?**

**Response 32:** Ohio EPA does not track denied permit applications. Ohio EPA works with applicants to ensure they understand the rule criteria used to evaluate permit applications. If an application is not acceptable, the applicant may revise the application to meet compliance requirement. In many cases, the applicants revise applications to meet the requirements of the rules. In other cases, the applicant will withdraw the application. If an applicant cannot revise their application to meet the requirements of the rules and chooses not to withdraw their application, Ohio EPA would deny the PTI application.

**Comment 33: Who tracks compliance at this facility and is this self-monitored by facility?**

**Response 33:** The facility has been issued an NPDES permit addressing the biosolids generated at this site. The facility is required to conduct the monitoring and reporting requirements contained in this permit. Monthly reports providing the required information are submitted to Ohio EPA. The facility is also required to comply with Ohio regulations for the treatment and beneficial use of biosolids. Ohio EPA, Division of Surface Water, tracks compliance at the facility by reviewing the submitted monthly reports and by conducting inspections at the facility.

**Comment 34: How many complaints has Ohio EPA received on this facility?**

**Response 34:** From Jan. 1, 2016, through the public hearing date of March 22, 2018, Ohio EPA has received 15 complaints.

**Comment 35: Several area water reclamation facilities (WRFs) recycle biosolids at Dovetail Energy. In 2017, almost 16,000 tons of biosolids were diverted from landfills to Renergy from these WRFs. The expansion of the Dovetail facility will help create a healthier environment through sustainable waste diversion and renewable energy creation. Dovetail's process helps preserve valuable landfill space.**

**Response 35:** Ohio EPA has noted your comment.

**Response 36:** **The siting of this facility involved possible ethics violations.**

**Response 36:** Ohio EPA is neither aware of, nor authorized to investigate ethics violations. Anyone who believes Ohio's ethics laws have been violated are encouraged to contact the Ohio Ethics Commission at (614) 466-7090 ([www.ethics.ohio.gov](http://www.ethics.ohio.gov)).

**End of Response to Comments**