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February 29, 2024

**Via email**

Chairman Joshua Vogt  
Town of Hurley Zoning Board of Appeals  
P.O. Box 569  
Hurley, NY 12443

**Via email**

Maggie Colan, Secretary  
Town of Hurley Zoning Board of Appeals  
P.O. Box 569  
Hurley, NY 12443

Re: Dave T. Douglas Trust Appeal of ZEO Determination Relating to  
1756 Hurley Mt. Road  
File No.: 6965.27.01.23

Dear Chairman Vogt and Ms. Colan:

As you know, I represent The Douglas Trust, the owner of real property commonly known as 8 Dug Hill Road (SBL#55.2-3-15.110) in connection with the above referenced appeal.

Please allow this letter to serve as a supplement to the appeal by The Douglas Trust dated January 4, 2024, from a determination made by Paul Economos, Building Inspector and Zoning Enforcement Officer (the "ZEO") dated December 5, 2023.

As a preliminary matter, there was some discussion at the initial meeting which took place on February 8, 2024, regarding the nature of the appeal and whether it pertained to the underlying use of the property at issue or simply to whether the ZEO properly determined that there was no issues at the property relating to noise, smoke or other types of nuisances. These are only symptoms of illegal use. To be clear, the initial complaint as well as this appeal relate to the illegal use of property commonly known as 1756 Hurley Mt. Road (SBL#55.2-1-8) (the "Property") as a commercial mulch processing facility and truck depot/dump.

## I. Mulch Processing Facilities Are NOT Permitted In The A-4 District

The Property consists of approximately 5.9 acres and is located in the A-4 zoning district.

Section 210-6 Town of Hurley Code defines the A-4 zoning district as follows:

A-4 Very-Low- Density Residential. **This district has been delineated to include the most sensitive environmental areas in the Town:** those areas where specific physical conditions require that particular care be taken to ensure that development will not affect (or be affected by) identified environmental constraints. These areas include lands having both poor soil characteristics (depth and/or vertical permeability) and either rough, steep topography or flood hazard area conditions, in combination with one or more of the following factors: protected wetlands and water bodies, agricultural district designation, poor road access and proximity to or inclusion of state forest preserve land holdings. It includes the flats along the Esopus Creek, the steep areas above the flats, the lands around the Ashokan Reservoir and the mountainous areas at the north edge of Town. (emphasis added)

Section 210-10 of the Town of Hurley Code provides that “[p]ermitted uses in all districts shall be in accordance with the Table of Use Regulations located at the end of this chapter”. The Table of Use Regulations lists many different types of uses that are permitted in the A-4 district, but no business uses, and no light industrial uses are permitted as of right in the A-4 district.

Moreover, neither the Town of Hurley Code nor the Table of Use Regulations authorizes mulch processing facilities like the one at issue on this appeal in any zoning district. “It is a basic tenet of zoning jurisprudence that an ordinance which lists permitted uses excludes any uses that are not listed”. Subdivisions, Inc. v. Town of Sullivan, 92 A.D.3d 1184, 1186 (3d Dep’t 2012) citing Incorporated Vil. of Old Westbury v. Alljay Farms, 100 A.D.2d 574, 575 (2d Dep’t 1984), *mod* 64 N.Y.2d 798 (1985); *see also* Matter of Moody Hill Farms v. Zoning Bd. of Appeals Town of N. East, 199 A.D.2d 954, 956 (3d Dep’t), *lv. denied* 83 N.Y.2d 755 (1994). Accordingly, for this reason alone, the commercial mulch processing facility that is being operated at the Property is illegal and should be shut down immediately.

As more particularly set forth in my letter dated January 4, 2024, the owners of the Property circumvented the fact that commercial mulch processing facilities are not a permitted use in the A-4 district by misrepresenting that their “use” at the Property is a lawful agricultural use which is permitted in the A-4 district. While “Agriculture (not including the keeping of fowl or farm animals)” and “Agriculture (including the keeping of fowl or farm animals)” are permitted uses in the A-4 district as of right, they are permitted as a “general use”, not a business use which is the current use of the Property. More importantly, as set forth below, their “use” is not a legitimate “agricultural use” under any definition of the term.

The Town of Hurley Code does not define the word agriculture. The Merriam-Webster dictionary defines “agriculture” as “the science, art, or practice of cultivating the soil, producing crops, and raising livestock and in varying degrees the preparation and marketing of the resulting products”. Here, it is indisputable that crops are not being produced at the Property and that

livestock is not being raised at the Property. Accordingly, the use at the Property does not qualify as “agriculture” based on the plain meaning of the word.

The Town of Hurley Code does, however, define “Farm Operation”, but the use at the Property also does not satisfy this definition. The Town of Hurley Code defines that term as follows:

The land and on-farm buildings, equipment, manure processing and handling facilities, and practices which contribute to the production, preparation and marketing of crops, livestock and livestock products as a commercial enterprise, as further defined in Article 25-AA, §301, Subdivision 11, of New York State Agriculture and Markets Law. Such farm operation may consist of one or more parcels of owned or rented land, which parcels may be contiguous or noncontiguous to each other.

Even the most liberal interpretation of this definition does not suggest that the term “agriculture” could include a commercial mulch processing facility and truck depot/dump. Likewise, the reference to NYS Ag & Markets law in the definition of “Farm Operation” does not transform the illegal use of the Property as a mulch processing facility to a legitimate agricultural use that would be permissible in the A-4 district.

NYS Ag & Markets law 301(11)<sup>1</sup> defines a farm operation as follows:

“Farm operation” means the land and on-farm buildings, equipment, manure processing and handling facilities, and practices which contribute to the production, preparation and marketing of crops, livestock and livestock products as a commercial enterprise, including a “commercial horse boarding operation” as defined in subdivision thirteen of this section, a “timber operation” as defined in subdivision fourteen of this section, **“compost, mulch or other biomass crops”** as defined in **subdivision sixteen** of this section and “commercial equine operation” as defined in subdivision seventeen of this section. Such farm operation may consist of one or more parcels of owned or rented land, which parcels may be contiguous or noncontiguous to each other. (emphasis added)

NYS Ag & Markets law 301(16) defines “compost, mulch or other organic biomass crops” as follows:

“Compost, mulch or other organic biomass crops” means the on-farm processing, mixing, handling or marketing of organic matter that is grown or produced by such farm operation to rid such farm operation of its excess agricultural waste; and the on-farm processing, mixing or handling of off-farm generated organic matter that is transported to such farm operation and is necessary to facilitate the composting of such farm operation’s agricultural waste. This shall also include the on-farm processing, mixing or handling of off-farm generated organic matter for use only on that farm operation. Such organic matter shall include, but not be limited to, manure, hay, leaves, yard waste, silage, organic farm waste, vegetation, wood biomass or by-products of agricultural products that have

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<sup>1</sup> For your convenience, annexed hereto as Exhibit “1” please find a copy of the “Guidelines for Review of Local Laws That Define ‘Farm Operations’, ‘Farm’, ‘Agriculture’, ‘Farmland’ or Any Similar Term”, which contains the relevant portions of the NYS Ag & Markets law.

been processed on such farm operation. The resulting products shall be converted into compost mulch or other organic biomass crops that can be used as fertilizers, soil enhancers or supplements, or bedding materials. For purposes of this section, “compost” shall be processed by the aerobic, thermophilic decomposition of solid organic constituents of solid waste to produce a stable, humus-like material.

This definition clearly does not bring the illegal commercial mulching facility within the ambit of the NYS Ag & Markets law. First, this definition assumes that a legitimate “farm operation” exists at the Property, which is not the case. Second, this definition requires that the “off-farm” organic matter be necessary to facilitate the composting of such farm operation’s agricultural waste, which is also not the case. Accordingly, the illegal activities that are taking place at the Property, i.e. a commercial mulch processing facility, are not governed by the NYS Ag & Markets law and are not exempt from the Town of Hurley’s zoning ordinances <sup>2</sup>.

In fact, Mulch Processing Facilities, like the one at issue on this appeal, are not defined by NYS Ag & Markets law at all. They are defined in 6 NYCRR Part 361-4 and are regulated by the NYS Department of Environmental Conservation as a **solid waste management facility**. **Solid waste management facilities are not permitted in any zoning district in the Town of Hurley**. See, Section 210-11 of Town of Hurley Code. A copy of a guidance document for Mulch Processing Facilities from the NYS Department of Environmental Conservation (“DEC”) is annexed hereto as Exhibit “2” (the “Mulch Guidance Report”) (emphasis added).

The Mulch Guidance Report acknowledges that “[s]imilar to other solid waste management facilities, **mulch processing facilities have the potential to cause adverse impacts to the environment and human health**” and it expressly states that the “**DEC is regulating the production and storage of mulch in order to reduce environmental impacts including dust, odor, adverse water quality and fires**”. See, Exhibit “2” at p.1 (emphasis added).

It is unclear whether the owners of the Property are properly registered with the DEC or follow any of the regulations promulgated by the DEC, but it is doubtful. Regardless, a thorough review of the Mulch Guidance Report, the relevant DEC regulations and the evidence related to the activities at the Property reveals that the operation at issue is not a legitimate agricultural use and poses a significant risk to the health, safety and welfare of residents and nearby properties<sup>3</sup>. Accordingly, the commercial mulch processing facility and truck depot/dump at issue is an illegal use in the A-4 district and should be shut down immediately<sup>4</sup>.

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<sup>2</sup> The “use” at the Property also does not fall within the NY Ag & Markets law because the parcel size, i.e. less than seven acres. Additionally, if the “use” was in fact a legitimate agricultural use, which it is not, then the owners could seek relief under Section 305-a(1) of the NY Ag & Markets law.

<sup>3</sup> Also uploaded with the aforementioned videos and photographs is a copy of a report prepared by Parsons and OBG at the request of the DEC titled Vegetative Organic Waste Management Facility Research Nassau and Suffolk Counties, New York, which further details the negative environmental and health impacts mulch processing facilities produce.

<sup>4</sup> It should be noted that even where manufacturing and light industry is permitted in the Town of Hurley “no manufacturing use, nor any trade, industry, use or purpose that is noxious or offensive by reason of the emission of

## II. Additional Photographs and Videos Depicting the Illegal Mulch Processing Facility and Truck Depot/Dump

Please take note that I have uploaded additional videos, photographs and documents relating to this appeal via a shared folder named Town of Hurley ZBA appeal The Dave T. Doglas Trust. A link to this folder will be provided to you by email.

The aerial photographs (aerial 1 – aerial 10), which were taken in February 2024, depict a full-scale commercial mulch processing facility and truck depot/dump with large piles of tree debris that have been harvested offsite and brought to the Property as well as large piles of mulch, sand and gravel and other construction materials.

The site photographs (site photo 1 – site photo 15), which were also taken in February 2024, give a street level view of the heavy equipment and the numerous piles of mulch, stone and debris that are littered about the Property. Old tires and overfilled dumpsters can also be seen in some of the pictures as well as road salting equipment.

The aerial and site photographs also depict numerous large trucks (bucket trucks, pick-up trucks, dump trucks, an oil truck etc.), construction equipment, trailers, sheds, dumpsters and shipping containers parked and stored on the Property. These materials appear to be either byproducts of Mr. Winne's commercial tree removal company, L.W. Tree Service, Inc, or used in connection with Mr. Zell's excavation company, Hurley Excavation and Landscaping Inc., or both. In any case, these materials that are not related to any legitimate agricultural purpose at the Property.

Most importantly, the aerial photographs show that this illegal mulch processing facility and truck depot/dump is located in the middle of a residential area less than 100 feet from residential homes and the Englishman's Creek.

The videos (8 in total), which were recorded over the course of the past year, provide evidence of the magnitude of the commercial activity and noise that emanates from the illegal activities that take place at the Property. You can hear this noise on any given day of the week at any given time. In fact, the loud thunderous ground shaking banging that can be heard in one of the videos (IMG\_0445.mov) started at approximately 7:00am. In another video large clouds of smoke can be seen rising from a pile(s) of mulch (IMG\_0866.mov) evidencing the risk of fire which is noted in the Mulch Guidance Report.

None of the videos or photographs show any indicia of legitimate agricultural activities or farm operations. All the videos and photographs depict a large commercial mulch processing facility and truck depot/dump located in the middle of a residential neighborhood. It is indisputable that the unlawful use of the Property threatens to pollute the air and water, threatens the public health,

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odor, dust, smoke, toxic or noisome fumes, radiation, gas, noise, vibration or excessive light, or any combination of the above, which is dangerous and prejudicial to the public health, safety and general welfare shall be permitted. *See*, Town of Hurley Code Sec. 210-11. Prohibited industrial uses. It simply makes no sense for the commercial mulch processing facility and truck depot/dump at issue to be a permitted use in the “**most sensitive environmental areas in the Town**”. *See*, definition of the A-4 district above (emphasis added).

safety and welfare, reduces property values, and significantly interferes with the reasonable use and enjoyment of neighboring properties.

As set forth above and in my letter dated January 4, 2024, the current use of the Property is not in line with any legitimate agricultural use, but function as a commercial enterprise in violation of the Town of Hurley Code. Accordingly, we respectfully request the reversal of the ZEO's determination and prompt issuance of a violation, compelling the owners of the Property to immediately cease their operations.

Thank you for your attention to this matter. Should you require further information or clarification, please do not hesitate to contact me.

Very truly yours,

A handwritten signature in black ink, appearing to read "S. M. Kemp". The signature is fluid and cursive, with the first letter of each name being capitalized and prominent.

Sean M. Kemp

# **EXHIBIT “1”**

**Guidelines for Review of Local Laws That Define “Farm Operations”,  
“Farm”, “Agriculture”, “Farmland” or Any Similar Term**

Pursuant to Article 25-AA, the term “farm operation” is used to identify and define commercial enterprises, through the use of land, buildings, equipment and practices, to carry-out an agricultural enterprise. Over the years, the State Legislature has amended the Agriculture and Markets Law (AML) to enhance the breadth of what constitutes a farm operation, including the type of crops, livestock and livestock products considered to be part of an agricultural enterprise.

In the administration of the AML regarding a municipality’s definition of “farm,” “agriculture,” “farmland” or any similar term used to describe an agricultural/farm operation in its zoning code, the Department compares the municipal definition to the State’s definition of “farm operation” as defined below. If a municipal definition does not encompass the breadth of crops, livestock, livestock products and farm enterprises identified in the AML, the local law may be deemed to be unreasonably restrictive and in violation of AML §305-a (1).

When a municipality examines its local laws for consistency with the AML, it is important to take into consideration certain aspects of the State’s definition of “farm operation.” Under the AML, a farm operation includes the production, preparation and marketing of crops, livestock and livestock products that are produced on land that is owned or rented, contiguous or non-contiguous to one another. Land can be owned or rented in another town or county and still be considered part of the farm operation. Furthermore, start-up farms may also be protected under the AML as long as the land is located within an agricultural district. Start-up farms will be described in another section of this document.

**Definition of Farm Operation in the AML**

301(11). "Farm operation" means the land and on-farm buildings, equipment, manure processing and handling facilities, and practices which contribute to the production, preparation and marketing of crops, livestock and livestock products as a commercial enterprise, including a “commercial horse boarding operation” as defined in subdivision thirteen of this section, a “timber operation” as defined in subdivision fourteen of this section, “compost, mulch or other biomass crops” as defined in subdivision sixteen of this section and “commercial equine operation” as defined in subdivision seventeen of this section. Such farm operation may consist of one or more parcels of owned or rented land, which parcels may be contiguous or noncontiguous to each other.

301(2). "Crops, livestock and livestock products" shall include but not be limited to the following:

- a. Field crops, including corn, wheat, oats, rye, barley, hay, potatoes and dry beans.
- b. Fruits, including apples, peaches, grapes, cherries and berries.
- c. Vegetables, including tomatoes, snap beans, cabbage, carrots, beets and onions.
- d. Horticultural specialties, including nursery stock, ornamental shrubs, ornamental trees and flowers.
- e. Livestock and livestock products, including cattle, sheep, hogs, goats, horses, poultry, ratites, such as ostriches, emus, rheas and kiwis, farmed deer, farmed



buffalo, fur bearing animals, wool bearing animals, such as alpacas and llamas, milk, eggs and furs.

f. Maple sap.

g. Christmas trees derived from a managed Christmas tree operation whether dug for transplanting or cut from the stump.

h. Aquaculture products, including fish, fish products, water plants and shellfish.

i. Woody biomass, which means short rotation woody crops raised for bioenergy, and shall not include farm woodland.

j. Apiary products, including honey, beeswax, royal jelly, bee pollen, propolis, package bees, nucs and queens. For the purposes of this paragraph, "nucs" shall mean small honey bee colonies created from larger colonies including the nuc box, which is a smaller version of a beehive, designed to hold up to five frames from an existing colony.

301(13). "Commercial horse boarding operation" means an agricultural enterprise, consisting of at least seven acres and boarding at least ten horses, regardless of ownership, that receives ten thousand dollars or more in gross receipts annually from fees generated either through the boarding of horses or through the production for sale of crops, livestock, and livestock products, or through both such boarding and such production. Under no circumstances shall this subdivision be construed to include operations whose primary on site function is horse racing. Notwithstanding any other provision of this subdivision, a commercial horse boarding operation that is proposed or in its first or second year of operation may qualify as a farm operation if it is an agricultural enterprise, consisting of at least seven acres, and boarding at least ten horses, regardless of ownership, by the end of the first year of operation.

301(14). "Timber operation" means the on-farm production, management, harvesting, processing and marketing of timber grown on the farm operation into woodland products, including but not limited to logs, lumber, posts and firewood, provided that such farm operation consists of at least seven acres and produces for sale crops, livestock or livestock products of an annual gross sales value of ten thousand dollars or more and that the annual gross sales value of such processed woodland products does not exceed the annual gross sales value of such crops, livestock or livestock products.

301(16). "Compost, mulch or other organic biomass crops" means the on-farm processing, mixing, handling or marketing of organic matter that is grown or produced by such farm operation to rid such farm operation of its excess agricultural waste; and the on-farm processing, mixing or handling of off-farm generated organic matter that is transported to such farm operation and is necessary to facilitate the composting of such farm operation's agricultural waste. This shall also include the on-farm processing, mixing or handling of off-farm generated organic matter for use only on that farm operation. Such organic matter shall include, but not be limited to, manure, hay, leaves, yard waste, silage, organic farm waste, vegetation, wood biomass or by-products of agricultural products that have been processed on such farm operation. The resulting products shall be converted into compost, mulch or other organic biomass crops that can be used as fertilizers, soil enhancers or supplements, or bedding materials. For purposes of this section, "compost" shall be processed by the aerobic, thermophilic decomposition of solid organic constituents of solid waste to produce a stable, humus-like material.

301(17). “Commercial equine operation” means an agricultural enterprise, consisting of at least seven acres and stabling at least ten horses, regardless of ownership, that receives ten thousand dollars of more in gross receipts annually from fees generated through the provision of commercial equine activities including, but not limited to riding lessons, trail riding activities or training of horses or through the production for sale of crops, livestock, and livestock products, or through both the provision of such commercial equine activities and such production. Under no circumstances shall this subdivision be construed to include operations whose primary on site function is horse racing, notwithstanding any other provision of this subdivision, an agricultural enterprise that is proposed or in its first or second year of operation may qualify as a commercial equine operation if it consists of at least seven acres and stables at least ten horses, regardless of ownership, by the end of the first year of operation.

### **Start-Up Farm Periods**

In the administration of the AML, the Department has considered the needs of “start-up” farm operations when the land used for agricultural purposes is located within a county adopted, State certified agricultural district. The Department examines the activity to be conducted, level of investment and involvement in the farm; soil and topographic characteristics of the property; agricultural knowledge of the landowner; and other factors that may specifically apply to a proposed agricultural activity. Concerning protections afforded under AML §305-a to farm operations, including “start-up farms,” municipalities should allow a reasonable period of time to establish the farm operation and its production of crops/livestock/livestock products. The Department considers the following start-up periods to be reasonable for a farm to achieve the level of production of its own goods that may be required by a local government for certain processing and marketing activities conducted by the farm<sup>1</sup>:

*Crops: 2 years*

*Hops: 3 years*

*Livestock: 2 years*

*Nurseries and Greenhouses: 2 years*

*Aquaculture: 2 years*

*Apiaries: 2 years*

*Christmas Trees: 8-10 years*

*Maple: 2 years*

*Orchards and Berries: 3-5 years*

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<sup>1</sup> Local governments may, of course, provide longer start-up periods in their discretion; and should consider weather, disease and other factors that may impact production.

Vineyards: 5 years

Woody Biomass: 3 years

### **Acreage and Gross Sales Requirements**

Under the AML, a “farm operation” must be a “commercial enterprise.” A “farm operation” is not required to be eligible for receipt of an agricultural assessment or meet the acreage and gross sales requirements to receive an agricultural assessment [AML §301(4) – *Land Used in Agricultural Production*].

In the absence of minimum acreage and gross sales requirements, the Department evaluates such factors as the acreage in production; capital investment and business assets; gross sales of crops, livestock and livestock products; the type of enterprise and number of years in operation. If needed, the Department also evaluates a number of other factors, including, but not limited to:

- 1) the landowner’s intent (especially for “start-up” farms);
- 2) whether the farm is operated in a businesslike manner;
- 3) time and effort spent on farming;
- 4) whether the landowner, or their advisors, have the knowledge needed to carry on the farming activity as a successful business;
- 5) whether the landowner was successful, or has experience with, similar activities in the past;
- 6) whether the landowner can expect future appreciation of the assets used in the business; and
- 7) whether the landowner’s investment is at risk.

### **Leased and Owned Land**

If a farm leases land for inclusion into its operation, crops or livestock grown/raised on leased land are treated the same as crops/livestock grown/raised on owned land. In both instances, the farmer must be producing the crop or raising the livestock as part of their operation; i.e., the farmer must be at financial risk if the crop/livestock fails or succeeds. Farmers either plant themselves or hire custom operators to plant and harvest crops on owned and/or leased land. Farmers may also hire custom operators to raise their livestock. In both instances, however, it is the farmer that provides the seed/livestock, fertilizer, pesticide/herbicide, feed, etc. and pays for the labor and custom applicator to produce/harvest the crop or raise the livestock. In this manner, the harvested crop or livestock raised are the farmer’s, whether the crop yields or finished weight of livestock are successful or diminished.

### **Conclusion**

If an agricultural operation is determined to be a farm operation as defined in AML §301(11), whether it is an existing or start-up agricultural enterprise, it may be afforded protections under the AML if the land is also located within a county adopted, State certified agricultural district.

**EXHIBIT “2”**

# Mulch Processing Facilities

6 NYCRR Part 361-4

## Summary

This document serves as guidance for Mulch Processing Facilities as defined by 6 NYCRR Part 361-4, which took effect November 4, 2017. A copy of this Subpart has been included as an appendix to this document. Similar to other solid waste management facilities, mulch processing facilities have the potential to cause adverse impacts to the environment and human health. DEC is regulating the production and storage of mulch in order to reduce environmental impacts including dust, odor, adverse water quality, and fires.

This guidance does not cover *composting and other organics recycling facilities*, which are regulated under 6 NYCRR Part 361-3. Composting is the aerobic, thermophilic decomposition of organic waste to produce a stable, humus-like soil amendment used as a source of nutrients, organic matter, liming value, etc. *Mulch processing facilities* create a product derived from tree debris, yard trimmings, and other suitable woody material, which is intended for use on soil surfaces to prevent the growth of weeds and minimize erosion.

## Regulatory Overview (please see appendix for full 361-4 text)

Each mulch processing facility is regulated under a different ‘tier’ based on the *total quantity of material on site at any given time*. This includes both incoming material as well as processed material. Once the finished product leaves the facility, this material is not considered a waste (ref: Part 360.12(c)(4)(iii)).

In addition to the types and quantities of materials accepted, facilities will be held to one or more of the following:

- pile size and separation distance restrictions;
- contaminant preclusion and removal;
- the marketing and movement of their product;
- storage restrictions and time frames;
- temperature monitoring and pile restacking (See Page 8);
- the development of run-on and run-off plans; and
- buffer zones from properties and water resources.

Regulatory Tiers	
Exempt	Processing facilities located at the site of waste generation or at a location in the state under the same ownership or control as the site of waste generation. (Part 360.14(b)(1))
	< 10,000 cy on-site – <b>subject to pile size restrictions, 10-foot separation between piles, and incoming material type criteria</b> (Part 361-4.2(b))
	Small (< 1 acre) tree debris disposal sites outside of Long Island – conditions apply (Part 363-2.1(g))
	Storm debris management from a Governor-designated disaster area (Part 361-4.2(c))
	Facilities managing material subject to invasive species regulations such as Emerald Ash Borer or other disease organism restrictions or quarantines (Part 361-4.2(d))
Registered	Total quantity on-site < 25,000 cy, but > 10,000 cy – subject to all design and operating criteria (Part 361-4.3)
Permitted	> 25,000 cy total quantity on-site – subject to all design and operating criteria (Part 361-4.4)

cy – cubic yards

## Incoming Material

Mulch processing facilities can **accept, process, and store** the following materials:

- yard trimmings (other than grass clippings);
- tree debris including tree and shrub parts, including branches, stumps, and trunks, as well as other similar woody vegetation;
- wood debris including unadulterated wood pallets and unadulterated wood that originates from wood product manufacturing or other similar sources; and
- finished mulch products generated elsewhere.

Mulch processing facilities are **not permitted** to accept, process, or store the following materials:

- construction and demolition (C&D) debris; and
- adulterated or contaminated wood.

Note: If the facility also desires to compost yard trimmings, regulation under Part 361-3 also applies.

For the exact definitions of these materials, see Part 360.2(b) numbers (283), (312), and (314).

### Adulterated or Contaminated Materials

Spotting contamination in a waste source or finished product pile can be challenging. Contamination can range from unwanted additions to the pile such as rocks and plastic, to adulterated or contaminated wood products. Physical contaminants can damage the processing equipment, and lead to a low quality product. Adulterated or contaminated wood can pose a significant health risk when exposed to humans, wildlife, and the environment.

Types of adulterated or contaminated wood:

- adhesives and paint;
- creosote-treated wood;
- CCA-treated wood;
- asbestos-contaminated material; and
- other pesticide or pressure treated lumber.



Figure 1 CCA-treated lumber often has a visibly greenish hue



Figure 2 Creosote-treated lumber is found frequently in railroad ties and marine structures



Figure 3 Small contaminants from mulch

Types of physical contamination:

- plastics;
- C&D debris;
- rocks/stones;
- garbage, strings and rope; and
- materials that will readily compost and generate heat.



Figure 4 Plastic-contaminated mulch



Figure 5 Rough grind mulch contaminated with colored plywood



Figure 6 Finished mulch with CCA wood (note how difficult it is to see contamination once mulch is processed)

## Processing

Following Part 361 regulations and best management practices will assist the mulch facility with avoiding *odors and dust, contaminated product, damaging equipment, impacting water resources, and fire events.*

### Pile Types and Grinds

Depending on what the facility produces, there can be many different wood grind sizes and colors of mulch. *Primary, or rough, grind* is any material that has gone through an initial machinery grind with the largest pieces measuring roughly 4 to 6 inches long. A *double or finely ground mulch* has been further processed, either through the same equipment or with a finer grate/blade setting to make the chips smaller.

Typically, material is treated with a *rough or primary grind* initially, and is sold as-is or is further processed into a *double ground mulch*. The finer the grind, the less air flow the pile receives, which increases the risk of hot spots and fires. (See: Fire Safety section)



Figure 7 Single grind mulch



Figure 8 Double grind mulch



Figure 9 Fine ground mulch

Below are some examples of equipment commonly used at mulch processing facilities.



Figure 10 Tub grinder with conveyor



Figure 11 Wood chipper



Figure 12 Horizontal grinder with colorizer

### Odor Issues

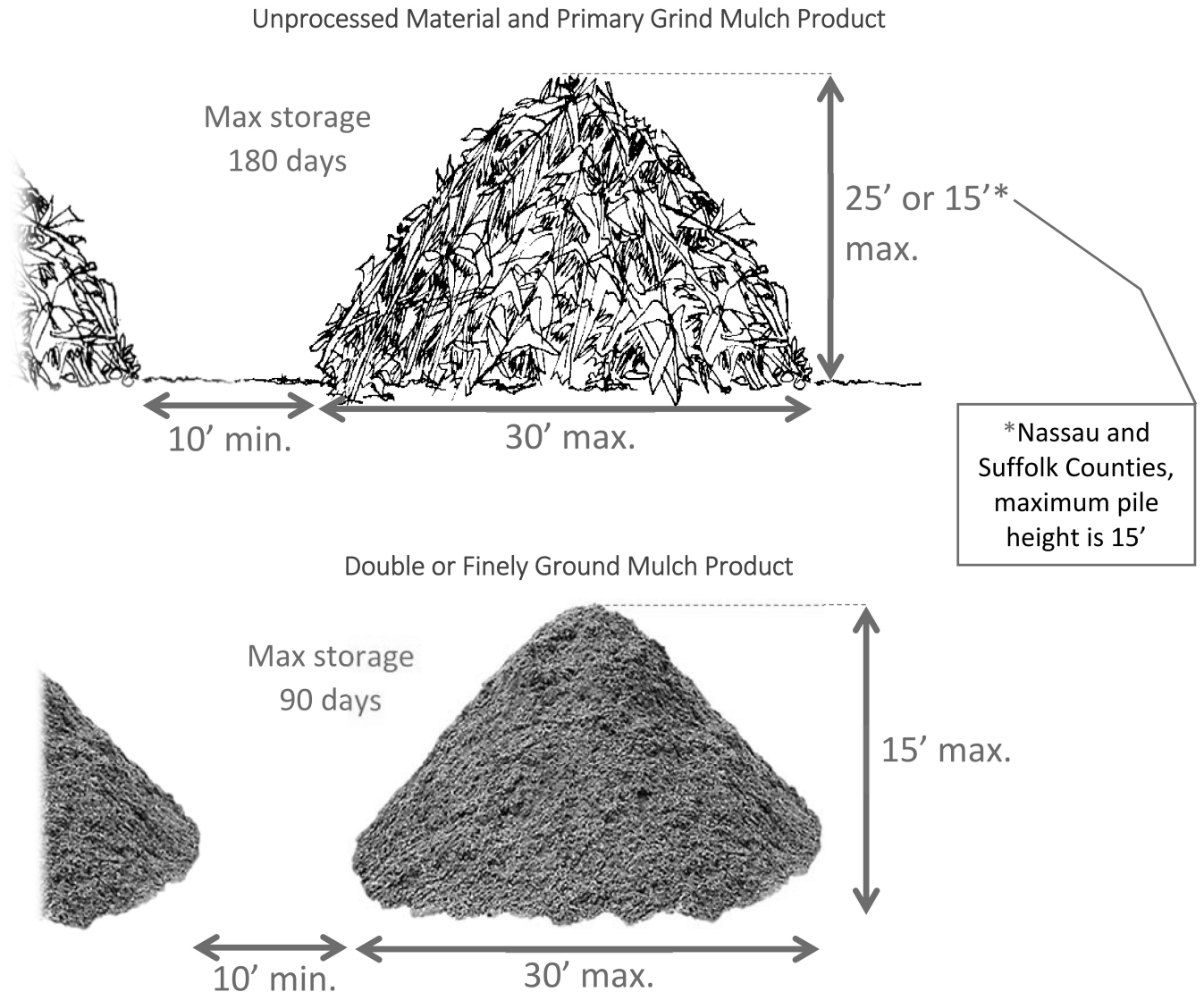
When managed properly, and only exposed to aerobic conditions, mulch piles should not produce objectionable odors. Facilities must be mindful of neighbors – odor inspections should be conducted along the perimeter of the facility, recorded, and any odor complaints need to be addressed. If necessary, the use of odor neutralizing sprays can be implemented. However, it is important to note that objectionable odors from a mulch pile may be indicative of other issues. If piles become too large, hot, or wet, they may undergo anaerobic decomposition, and thus emit odors. For double ground mulch, keeping these piles as a coarse grind while they “age” until they are closer to sale can minimize odor risks. Turning or restacking piles can also help to prevent odors (see: Fire Risk and Safety section), and should be done under wind conditions that minimize offsite impacts.

## Pile Size and Storage Limitations

Pile size limitations in Part 361-4 are based on the type of grind the material has been through as well as the location of the facility. The figures below show maximum pile height and base dimensions as well as the maximum time allowed to store on-site. Grinding mulch beyond a primary/rough grind should factor in enough time before the anticipated sale to meet the maximum storage limits, as mulch sales are seasonal in NY.

*Piles must be triangular in cross-section.* Proper pile sizing will minimize anaerobic conditions within the pile, which will limit odor impacts as well as reduce the risk of fires. (See: Fire Safety section) Pile size restrictions will also reduce the risk of on-site accidents, especially with driven equipment. Local laws or regulations may vary and, in some instances, be more constraining than Part 361-4 limits. This guidance document does not supersede other local, state, or federal requirements.

Note: All piles must be at least 10 feet apart. Standing water on the storage area must be minimized.

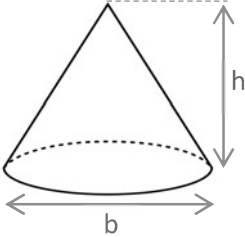
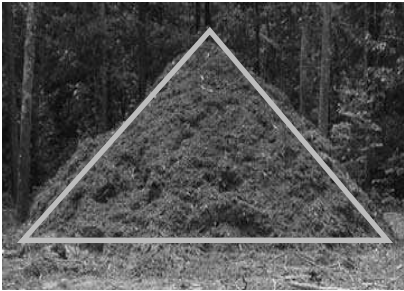




## Estimating Pile Volume

Mulch piles *must be* approximately triangular in cross-section. The following formulas may be used to estimate the total pile volume:

**Conical**

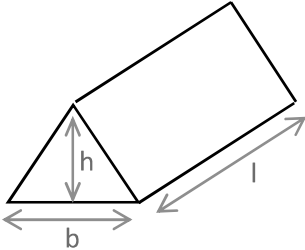



Volume Formula:

$$V = \frac{1}{3}\pi r^2 h$$

(where  $r = \frac{b}{2}$ )

**Windrow or Long Triangular**



Volume Formula:

$$V = \frac{1}{2} bhl$$

## Recordkeeping and Reporting

All facilities must keep records of daily operations and must report annually to DEC by March 1<sup>st</sup> of each year. Annual reporting forms are updated by December 15<sup>th</sup> of each year and can be found on the DEC website at [http://www.dec.ny.gov/chemical/52706.html#Annual Report Forms](http://www.dec.ny.gov/chemical/52706.html#Annual%20Report%20Forms).



## Site Water Management

Mulch processing sites must take care to prevent water pollution resulting from their processing activities. Because water both entering and exiting the site have the potential to bring in and off contaminants, all registered and permitted facilities must have a written run-on and run-off plan that is approved by DEC.

### Site Design Criteria

Mulch processing facilities must employ best management practices appropriate to their operation to restrict the amount of run-on and run-off generated on the site. Facilities must also adhere to specified buffer zones between property, water features, and all materials (including both processing and storage, listed below).

Buffer Areas	
Feature	Minimum Horizontal Separation Distance (feet)
Property line	25
Residence*	200
Potable water well	200
Surface water	200
State regulated wetland	200

\*Excludes owner's or operator's residence or a residence that existed prior to the effective date of 361-4.

## Water Contamination

### Sources

- Run-on from off site
- Stormwater from structures, covered areas, and impermeable surfaces
- Stormwater contacting unprocessed and processed stored materials and piles

What makes them a threat?

The water sources listed above can contain many different contaminants:

- BOD/COD
- Nutrients
- Turbidity

It is also possible that organic matter carried by the runoff water can cause the release of elements (iron, manganese, etc.) that already exist in the surrounding soils.



## Preventing Run-On and Run-Off

Run-on and run-off are influenced by many things; the size of the site, physical properties and materials of the pad, topography, location, climate, storm intensity, and rainfall are all possible factors. Below are some examples of best practices used at facilities as run-on and run-off prevention measures. These are examples of measures that may be considered for inclusion in the facility's site water management plan. One critical factor that must always be considered is minimizing the amount of run-on to the site. All run-on should be diverted around the operating and storage areas.



Low permeability pad – strategically sloped to direct water and reduce ponding (with or without runoff collection and treatment).



Bioswales / biofiltration structures; stormwater ditches lined in vegetation, cleaned regularly



Covering piles with breathable fabric



Compost filter socks or berms



Infiltration or storage ponds, sized appropriately for the site

These are just recommendations; each site must develop plans appropriate for the particular site.

## Fire Risk and Safety

Tree debris and wood debris are highly combustible and there are many ways a mulch pile could catch fire, either spontaneously or through human action. These fires are difficult to extinguish and have a high risk of spreading to nearby piles and structures. It is important for facilities to have a plan in place and work with their local fire departments to ensure preparedness in case of a fire emergency (including planning for a reliable water supply).

### ENVIRONMENTAL FACTORS TO WATCH FOR

- Dry weather conditions
- Minimal recent rainfall
- High winds
- Hot ambient temperatures

### AVOIDING FIRE RISK: PREVENTATIVE MEASURES

- Take care concerning the sudden introduction of oxygen/air into a pile (e.g., temperature probing, turning piles, etc.).
- Restack piles to avoid reaching high internal temperatures (See: *Restacking Piles* below).
- Do not compress materials in a pile (See: *Compressing Piles* below).
- Check for overheated machinery or equipment that causes a lot of friction on dry wood.
- Keep piles away from areas where there is a risk of electrical malfunctions and sparks.
- Keep piles away from gas vents.
- Do not allow smoking on the site. Post clear signage to educate visitors.
- Restrict site access to avoid vandalism, especially off-hours.



### Restacking Piles

All *processed material piles* must be turned, or restacked (pulled apart and reassembled), at least once in every 180-day period. This will help avoid reaching dangerous internal temperatures (maximum allowed temperature in Part 361-4 is 140°F) and anaerobic conditions (a lack of oxygen) in the piles.

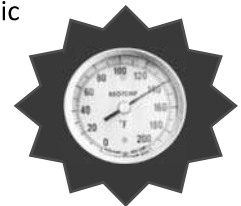
This can be accomplished simply with a loader or typical compost turner. Site operators will need to ensure that their facility has enough extra space to restack piles. Piles should be restacked when prevailing winds are blowing away from neighbors and other sensitive receptors.

### Compressing Piles

**Myth:** Driving heavy machinery on mulch piles to process them for a better product, compress them for added space, and reach the tops of piles are part of normal operation.



Compressing a mulch pile (making it denser) is known to cause spontaneous fires. When the pile is compressed, aeration is stopped, and the pile becomes anaerobic and begins to 'cook.' Temperatures can easily reach unsafe levels. When oxygen/air is introduced suddenly into a hot, anaerobic pile, flash fires can occur. Keep the piles loose!



### Biodegradation Emits Heat

Because the materials that create mulch are organic, there will be some break down in the piles over time. Wood and tree debris are both have the capacity to biodegrade, thus emitting heat. This is why temperatures must be monitored, just like in compost piles, to avoid issues.

## Temperature Monitoring

Use the *temperature probe* to take measurements at multiple points in the pile, including:

- center of the pile, where the temperature could be highest;
- within visible surface vents\*; and
- beneath growing fungi areas.



Fungi can show where warm, wet air is being emitted from the pile!

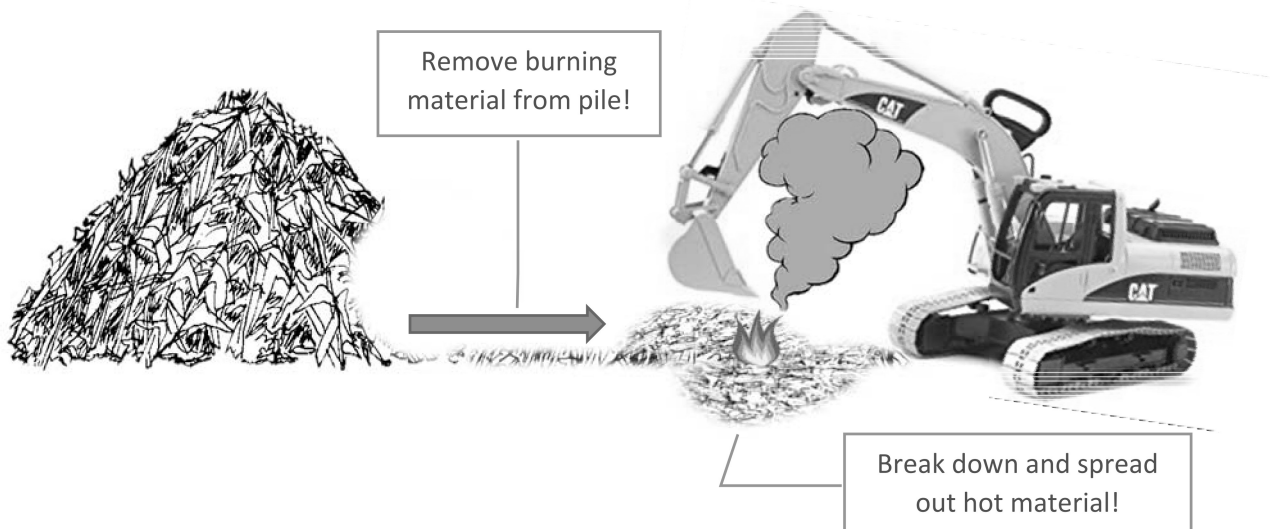
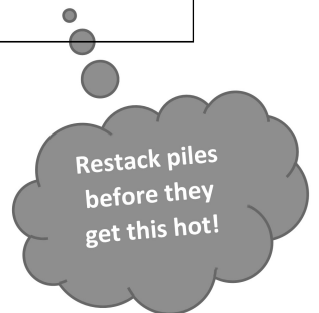


\*Surface vents can show visible vapor, especially during the cooler hours of the day. This will indicate where the warmer areas of the pile are. Probe cautiously! The sudden introduction of oxygen/air can cause a flash fire under the right conditions!

Required Temperature Monitoring Standards		
Pile Type	Monitoring Frequency	Maximum Acceptable Temp.
Unprocessed Piles	2x/month	<b>140° F</b>
Single Grind Mulch	2x/month	
Double or Fine Grind Mulch	Weekly	

## Breaking Down and Cooling a Pile

If piles exceed an internal temperature of 140° F, or if the pile is showing a rapidly increasing temperature, the facility must act to break down and cool the heated pile. Using water wisely is important – large volumes of water are ineffective at fighting mulch fires. Flooding the pile will not help with its suppression. The facility should focus on separating the burning material from the greater pile and targeting the hot spot with water while waiting for the local fire department to arrive.



## Fire Safety Summary

### Fire Prevention

- Keep pile sizes small
- Restack piles every 180 days
- Monitor piles, especially double and fine ground piles, looking for maximum 140° F
- Avoid pile compaction and driving machinery over piles
- Keep piles away from facility structures
- Watch for overheating machinery or electrical malfunctions
- Do not smoke at the facility; post signage to avoid cigarette butt disposal on-site
- Secure the site during off-hours to prevent vandalism
- Look for pile surface vents and fungi growing on the surface
- Do not introduce oxygen/air to a hot pile quickly



### If a fire occurs...

- Contact the local fire department and begin to follow the site's emergency plans
- Immediately begin to break down the pile with an excavator or equivalent machinery
- Use water resources strategically, targeting the hot spot of the separated pile  
**\*DO NOT FLOOD PILES!\***
- Keep smoking/smoldering material away from other piles and structures



### After a fire occurs...

- Provide community outreach about the emergency event and the actions taken by the facility
- Reassure the public by making them aware of the facility's emergency plan using newsletters, social media, or another platform
- Review facility operations to determine what caused the fire and the preventative measures that can be taken to avoid fire in the future

# APPENDIX

## 6 NYCRR Part 361-4 Mulch Processing Facilities

The following regulations are part of a rulemaking package associated with 6 NYCRR Part 360: Solid Waste Regulations. For additional information, as well as definitions, please see Part 360 (General Requirements) for all solid waste facilities.

## SUBPART 361-4

### MULCH PROCESSING FACILITIES

- 361-4.1**    **Applicability**
- 361-4.2**    **Exempt facilities**
- 361-4.3**    **Registered facilities**
- 361-4.4**    **Permit application requirements**
- 361-4.5**    **Design and operating requirements**
- 361-4.6**    **Recordkeeping and reporting requirements**

#### **Section 361-4.1 Applicability**

This Subpart applies to facilities that process yard trimmings (other than grass clippings), tree debris, and wood debris into mulch. This Subpart does not govern the processing of construction and demolition (C&D) debris into mulch. The requirements contained in Part 360 of this Title also apply to this Subpart. This Subpart does not apply to:

- (a) a facility that composts yard trimmings. That type of facility, or portion thereof, is regulated under Subpart 361-3 of this Part;
- (b) a facility for combustion or thermal treatment. That type of facility, or portion of one, is regulated under Subpart 362-1 of this Title; and
- (c) a facility that processes wood that is C&D debris. That type of facility, or portion thereof, is regulated under Subpart 361-5 of this Part.

#### **Section 361-4.2 Exempt facilities**

In addition to the exemptions provided in section 360.14 of this Title, the following facilities are exempt from this Subpart:

- (a) A tree debris disposal facility as specified in subdivision 363-2.1(g) of this Title.
- (b) A facility with less than 10,000 cubic yards total,

including storage of incoming material and processed material, provided the piles adhere to the size restrictions found in paragraphs 361-4.3(a)(4) and (5) of this Subpart and ten feet is maintained between piles.

(c) A facility used for the storage and processing of yard trimmings or wood debris that is considered storm debris from an area designated as a disaster area by the governor of New York State, provided criteria specified by the department are followed.

(d) A facility used for the management of materials subject to Emerald Ash Borer (EAB) or other disease organism regulations and other quarantine restrictions required by the department specified within that area.

#### **Section 361-4.3 Registered facilities**

Facilities of the following types are subject to the registration provision of section 360.15 of this Title unless otherwise exempt. In addition to the criteria in Part 360 of this Title, each facility must comply with the operating requirements specified in this section.

(a) A facility with more than 10,000 cubic yards of material but less than 25,000 cubic yards of material, including storage of incoming material and processed material, provided the following design and operating criteria are followed.

- (1) For wood debris, the facility has a program to



preclude the acceptance of contaminated wood and to inspect and remove any contaminated wood that arrives at the site. If the facility accepts pallets, the facility has equipment to remove nails and operate the equipment whenever pallets are being processed.

- (2) The facility does not accept C&D debris.
- (3) Material does not remain on-site unprocessed for more than 12 months.
- (4) All piles of material that contain unprocessed material or material that has gone through a primary rough grind (4 to 6 inch pieces) do not exceed 25 feet high and 30 feet wide at the base and piles are triangular in cross section, except in Nassau and Suffolk County pile sizes do not exceed 15 feet high and 30 feet wide at the base. In all cases, primary grind material is not stored for more than 180 days.
- (5) All piles of double or finely ground mulch do not exceed 15 feet high and 30 feet wide at the base and piles are triangular in cross section. Double or finely ground mulch is not stored for more than 90 days.
- (6) For all piles of double or finely ground mulch, the temperature in the piles is monitored at least once per week, twice per month for other piles. Multiple points in the piles are monitored with emphasis placed on areas that appear to be the hottest such as vents and areas of fungal growth. Probing is done cautiously to avoid introducing air into a hot spot and causing a flash fire. If the temperature is above 140 degrees Fahrenheit or a portion of the pile shows an increasing trend in temperature, the affected material is immediately be broken down and cooled.
- (7) All piles of material, both unprocessed and processed, are separated by at least ten feet.
- (8) Piles of processed material must be restacked as necessary to avoid temperatures above 140F, piles are restacked at least once in a 180 day period.
- (9) Restacking of piles must occurs when winds

are blowing away from sensitive receptors.

- (10) Piles of processed material are piled loosely and not compacted in any manner.
- (11) If a fire occurs, the affected portion of the pile is dismantled and watered to douse the fire or managed in a manner recommended by a local fire department.
- (12) Standing water on the storage area is minimized.
- (13) For the purposes of Part 360 and this Part, precipitation, surface water, and groundwater that has come in contact with wood debris, tree debris, and yard trimmings, both incoming and processed, is not considered leachate, but must be managed in a manner acceptable to the department. The facility must have a written run-on and run-off plan, submitted with the registration request, that is acceptable to the department that outlines the methods that will be used to prevent run-on from entering and run-off from leaving the site and to minimize the movement of organic matter into the soil at the site.
- (14) The following buffer areas from processing and storage are followed:

Feature.....	Min horizontal separation distance (feet)
Property line.....	25
Residence*.....	200
Potable water well.....	200
Surface water and State regulated wetland.....	200

\* Excludes owner’s or operator’s residence or a residence that existed prior to the effective date of this Subpart

**361-4.4 Permit application requirements**

A mulch processing facility that is not an exempt

facility or subject to the registration provisions of section 361-4.3 of this Title must obtain a permit, and must submit an application that demonstrates compliance with the requirements identified in section 360.16 of this Title and a description of how the facility will comply with the operating requirements in Part 360 of this Title and sections 361-4.5 and 4.6 of this Subpart.

### **361-4.5 Design and operating requirements**

A mulch processing facility required to obtain a permit must, in addition to the requirements identified in section 360.19 of this Title, design and operate the facility in compliance with the design and operating requirements specified in section 361-4.3 and the recordkeeping and reporting requirements of section 361-4.3 of this Part. Also, the facility must

have stormwater and run-off controls that minimize the potential for organic matter to reach groundwater and surface water resources.

### **361-4.6 Recordkeeping and reporting requirements**

The following criteria apply to both registered and permitted facilities:

- (a) The facility must keep records as required by subdivision 360.19(k) of this Title.
- (b) The facility must submit an annual report as required by paragraph 360.19(k)(3) of this Title.