**Section 90.110 On-Site Disposal**

Persons disposing of animals (including fish or poultry) or parts of bodies thereof, other than to a licensed renderer, shall comply with the following:

a) Disposal by Burning

1) No open burning will be permitted.

2) Any disposal by burning must be performed with an incinerator that is in compliance with the Illinois Environmental Protection Act [415 ILCS 5].

b) Disposal by Burying

1) Burial shall be consistent with the following requirements:.

A) Location shall be in an area where runoff will not contaminate water supplies or allow leachate to discharge into streams, ponds or lakes.

i) Dead animals shall not be buried less than 200 feet from a stream, private potable water supply well, or any other potable water supply source, except in accordance with Section 14.2(b) of the Illinois Environmental Protection Act.

ii) Dead animals shall not be buried within the applicable 200 or 400 foot minimum setback zone of an existing community water supply well as established pursuant to Section 14.2 of the Illinois Environmental Protection Act.

B) Dead animals shall not be buried less than 200 feet from any existing residence not owned or occupied by the owner of the animal.

C) No more than a ratio of one pound of dead animals per one square foot of surface area shall be buried on an annual basis. No more than 3,000 pounds of dead animals shall be buried in each site location, and the same site shall not be used more frequently than once every 2 years for burial purposes. There shall be no more than three site locations within a radius of 120 feet.

2) Burial depth shall be sufficient to provide at least a 6" compacted soil cover over the uppermost part of the carcass. Precautions shall be taken to minimize soil erosion.

3) The abdominal cavity of large carcasses shall be punctured to allow escape of putrefactive gasses.

4) Lime or other chemical agent shall not be used to prevent decomposition.

5) Precautions shall be taken at the site of burial necessary to prevent any disturbance by animal or mechanical means.

6) Disease and nuisance vectors are to be minimized and controlled.

7) Burial site locations shall be available for inspection by Department personnel during normal working hours.

c) Disposal of Poultry by Composting. Persons disposing of poultry by means of composting shall comply with the following requirements:

1) The composter shall meet the following criteria:

A) Control disease vectors, dust and litter.

B) Ensure that carcasses are not visible from public roads or habitable structures.

C) Rot-resistant building materials such as preservative-treated lumber shall be used.

D) Keep carcasses in the composting facility until completely composted before spreading compost on the land.

E) The size of the composter shall be based on the facility's projected mortality rate of poultry, in which one pound of dead poultry per cubic foot of primary compost space per day is provided.

2) Composting shall comply with the following guidelines:

A) A mixture of one part dead poultry (by weight), one and one-half part poultry litter, and one-tenth part of straw shall be used. For example: 400 pounds of dead poultry will require 600 pounds of poultry litter and 40 pounds of straw.

B) Layering shall be done in the following order, starting from the floor:

i) First Layer: straw, poultry litter, straw, birds, and poultry litter.

ii) Second and Subsequent Layers: straw, birds, and poultry litter.

C) A 36" probe-type thermometer shall be inserted daily into the pile to check the temperature. Within 2 to 4 days, the temperature should peak between 135º F. and 150º F.

D) Once the temperature begins to fall from the peak (normally 7 to 10 days), the material shall be removed to the secondary treatment bin.

E) After 7 to 10 days in the secondary bin, the compost may be agronomically distributed over land under cultivation or reused in the composting process. For the purpose of this subsection (c)(2)(E), the agronomic rate is the annual application rate of poultry compost, either alone or in combination with other nutrient supplying materials, that is necessary to achieve a reasonable crop yield without exceeding crop nutrient requirements.

3) The composted material may be substituted for up to one-half of the poultry litter and one-half of the straw.

d) Disposal of Fish by Composting. Persons disposing of fish by means of composting shall comply with the following requirements:

1) The composter shall meet the following criteria:

A) A roof shall cover the entire composting area.

B) An impervious, weight-bearing foundation such as concrete shall be used.

C) Rot-resistant building materials such as preservative-treated lumber shall be used.

2) The base layer shall meet the following criteria:

A) Use 6 to 12" thick of a bulking agent.

B) Be no more than 6 to 8 feet wide, but as long as necessary to accommodate the day's supply of compost material.

3) Composting shall meet the following guidelines:

A) Composting layer shall consist of a mixture of one part fish, three parts bulking agent and one part recycled compost (if available) or bulking agent and shall be mixed prior to use in the composting layer. The mixing of the materials for the composting layer shall be done in a manner to prevent leakage (e.g., stock tank, bucket, mixing drum).

B) The cover layer shall consist of two parts bulking agent and two parts recycled compost (if available) or two parts bulking agent and should reach a thickness of 6 to 12".

C) Layering shall be done in the following order starting from the concrete: base layer, composting layer (fish, bulking agent and recycled compost), and cover layer. The composting and cover layers are piled on top of the base layer to form a trapezoid no higher than 4 feet.

D) Additions to the compost pile are done by adding new material to the end of the pile.

E) A probe-type thermometer shall be inserted daily into the pile to check the temperature. The temperature should peak between 140º F. and 165º F. The material can be recycled after it has composted for at least 2 to 3 weeks, and its temperature has dropped to air temperature.

F) After the temperature has dropped to air temperature (normally 2 to 3 weeks), the composted material may be used in the composting layer, or after one month, the composted material may be agronomically distributed over land under cultivation or reused in the cover layer. For the purpose of this subsection (d)(3)(F), the agronomic rate is the annual application rate of fish compost, either alone or in combination with other nutrient supplying materials, that is necessary to achieve a reasonable crop yield without exceeding crop nutrient requirements.

e) Disposal of Swine by Composting. Persons disposing of swine by means of composting shall comply with the following requirements:

1) Surface water shall be diverted away from the composter.

2) Location shall be in an area where runoff will not contaminate water supplies or allow leachate to discharge into streams, ponds or lakes.

A) Composter shall not be constructed less than 200 feet from a stream, private potable water supply well, or any other potable water supply source, except in accordance with Section 14.2(b) of the Illinois Environmental Protection Act.

B) Composter shall not be constructed within the applicable 200 or 400 foot minimum setback zone of an existing community water supply well as established pursuant to Section 14.2 of the Illinois Environmental Protection Act.

3) Persons disposing of swine by means of composting shall, at minimum, perform the following:

A) Control disease vectors, dust, and litter;

B) Ensure that livestock carcasses are not visible from public roads or habitable structures:

C) Begin processing livestock carcasses within 24 hours after the animals' deaths;

D) Keep livestock carcasses in the composting facility until completely composted before spreading on land; and

E) Remove all finished compost within 12 months after completion of the compost process.

4) For bin composting, the composter shall consist of primary and secondary bins. The size of the composter shall be based on the facility's projected mortality rate of swine during any 3-month period. The primary and secondary bins shall each contain a minimum of 10 square feet of composting area for each 1000 pounds of carcass to be composted.

5) For bin composting, the composter shall be constructed of permanent rot-resistant wall materials, such as preservative-treated wood, concrete, or precast concrete such as highway lane dividers. Each composter bin shall be three sides of a rectangle or square. One side of the bin shall be left open for loading, unloading and mixing the compost. In emergency situations, hay bales of 48" or greater in diameter may be used on a temporary basis in the above configuration of side walls.

6) Composting shall comply with the following guidelines:

A) Coarse sawmill sawdust, shredded cornstalks, chopped straw, coarse-ground corn cobs, and other materials possessing like properties and having similar particle size are recommended for the carbon source.

B) It is expected that the carbon source will be required in the ratio of approximately one cubic foot of the carbon source per 10 pounds of carcass (3.7 cubic yards of the carbon source per 1000 pounds of carcass). A supply of the carbon source shall be stockpiled and maintained on the premises at all times when the composter is in operation.

C) For static pile composting, the compost bin, windrow, or other formed structure shall have a layer of carbon source a minimum of 10" deep placed on the base before the first carcass is placed in the bin. There shall be a minimum of 10" of carbon source between the carcass and the wall or the exposed surface. The carcass shall be covered with a minimum of 10" of carbon source. The carbon source shall be added to the pile as composting begins, daily or as frequently as needed to sustain a 10" cover of carbon source over all carcasses in the structure's uppermost layer.

D) A compost thermometer with a probe at least 36" long shall be obtained and used daily to measure the temperature of the compost. The compost temperature should reach 135 to 160° degrees F. (57° to 71° C.) and be recorded daily. Compost temperature indicates microbial activity and stage of composting process. The composting process shall be managed in such a way that the heating and decomposition can proceed to completion. If aerobic composting does not begin with 7 days, i.e., if temperatures do not rise above 135° F., the compost pile or windrow shall be turned and/or moisture content of the carbon source adjusted to allow the process to proceed. Temperature records shall be available for examination until the compost is disposed of as in subsection (e)(6)(G).

E) For bin composting, all compost from the primary bin shall be allowed to undergo a second composting phase as follows:

i) When the temperature surrounding the last carcass placed in the composter drops below 130° F. (typically up to 3 months after the last carcass addition), the compost in that bin shall be transferred to a second bin and allowed to reheat, through a second composting cycle. Moisture shall be added to the compost as needed to promote further composting activity.

ii) Compost shall remain in the second bin for the duration of the secondary composting cycle (typically 3 months). Temperature of the compost shall be measured using the compost thermometer to monitor the composting process.

F) Finished compost shall be agronomically distributed over land under cultivation or reused in the composting process. Finished compost may be returned to the primary composting bin in the ratio of up to 50% finished compost to fresh carbon source. For the purpose of this subsection (e)(6)(G), the agronomic rate is the annual application rate of swine compost, either alone or in combination with other nutrient supplying materials that is necessary to achieve a reasonable crop yield without exceeding crop nutrient requirements.

f) Disposal of Cattle, Equine, Cervidae, Sheep, Goats, or Other Small Animals by Composting. Persons disposing of cattle, equine, cervidae, sheep, goats, or other small animals by means of composting shall comply with the following requirements:

1) Carcasses of those animals dying of suspect neurological causes shall not be composted.

2) Surface water shall be diverted away from the composter.

3) Location shall be in an area where runoff will not contaminate water supplies or allow leachate to discharge into streams, ponds or lakes.

A) The composter shall not be constructed less than 200 feet from a stream, private potable water supply well, or any other potable water supply source, except in accordance with Section 14.2(b) of the Illinois Environmental Protection Act.

B) The composter shall not be constructed within the applicable 200- or 400-foot minimum setback zone of an existing community water supply well as established pursuant to Section 14.2 of the Illinois Environmental Protection Act.

C) A composting site shall be located at least ¼ mile from the nearest occupied residence (other than a residence located on the same property as the facility).

4) For bin composting, the composter shall be constructed of permanent rot-resistant materials, such as preservative-treated wood or concrete.

5) The size of the composter shall be based on the facility's greatest projected mortality rate of animals during any 3-month period of the year.

6) For bin composting, the composter bin minimum width dimension shall be large enough to allow placement of the largest carcass with at least one foot of space all around the carcass for carbon source material, or at least one foot greater than the width of the loader bucket used for turning the compost, whichever is larger.

7) A composting thermometer with a minimum probe length of 36" shall be kept available at the facility for monitoring progress of the compost process.

8) Records of carcass additions, composter operation and land application of finished compost shall be maintained on the premises.

9) Composting shall comply with the following guidelines:

A) Coarse sawmill sawdust, shredded corn stalks, chopped straw, coarse-ground corn cobs, and other materials possessing like properties and having similar particle size are recommended as the carbon source.

B) A supply of carbon source materials shall be stockpiled and maintained on the premises at all times when the composter is in operation.

C) Finished compost from the carcass composting process (secondary bins or windrows) may be re-used in an amount appropriate to maintaining proper composting operation (up to 50% volume of re-used finished compost suggested).

D) For static pile composting, the compost bin, windrow, or other formed structure shall have a layer of carbon source a minimum of 10" deep placed on the base before the first carcass is placed in the bin. There shall be a minimum of 10" of carbon source between the carcass and the wall or the exposed surface. The carcass shall be covered with a minimum of 10" of carbon source. The carbon source shall be added to the pile as composting begins, daily or as frequently as needed to sustain a 10" cover of carbon source over all carcasses in the structure's uppermost layer.

E) Carcasses weighing more than 300 lb. shall be processed prior to covering with carbon source material. Processing may consist of, but is not limited to:

i) opening the abdominal cavity to facilitate contact of carbon source material and reduce distention of carcass with gases; and

ii) incising the large limb muscles to facilitate contact of carbon source material and thereby hasten composting.

F) For bin composting, the composting process shall be monitored and managed in such a way that heating and decomposition can proceed to completion (typically 3 months in the primary bin from the time the last carcass is placed in the bin and another 3 months in the secondary bin from the time the compost is moved into the secondary bin from the primary bin). Water shall be added as necessary to adjust the moisture content of the compost and promote further composting activity.

G) Finished compost shall be agronomically distributed over land under cultivation or reused in the composting process. Finished compost may be returned to the primary composting bin in a ratio of up to 50% finished compost to fresh carbon source material. For the purpose of this subsection (f)(9)(G), the agronomic rate is the annual application rate of the compost, either alone or in combination with other nutrient supplying materials, which is necessary to achieve a reasonable crop yield without exceeding crop nutrient requirements.

g) Disposal of swine, cattle, cervidae, sheep and goat offal by composting. Persons disposing of swine, cattle, cervidae, sheep or goat offal by means of composting shall comply with the following requirements:

1) Offal of those animals dying of suspect neurological causes shall not be composted.

2) The composter shall be located entirely over impervious foundation materials. One of two foundations shall be used:

A) Impervious soil (permeability equal to less than 1 x 10-7 cm/sec., as defined in Section 651.0703 (Geotechnical considerations in waste facility siting) of the Agricultural Waste Management Field Handbook, Soil Conservation Service, U.S. Department of Agriculture, 1992). A 4 to 6" base of ungraded (varying particle size) field lime over the soil foundation is suggested as a runoff control measure.

B) An impervious, weight-bearing foundation such as concrete or asphalt.

3) Surface water shall be diverted away from the composter.

4) Location shall be in an area where runoff will not contaminate water supplies or allow leachate to discharge into streams, ponds or lakes.

5) The composter shall not be constructed less than 200 feet from a stream, private potable water supply well, or any other potable water supply source, except in accordance with Section 14.2(b) of the Illinois Environmental Protection Act.

6) The composter shall not be constructed within the applicable 200- or 400-foot minimum setback zone of an existing community water supply well as established pursuant to Section 14.2 of the Illinois Environmental Protection Act.

7) A composting site shall be located at least ¼ mile from the nearest occupied residence (other than a residence located on the same property as the facility).

8) The composter shall consist of at least two bins, allowing operation as primary and secondary composting sequences.

9) The composter shall be constructed of permanent rot-resistant materials, such as preservative-treated wood or concrete.

10) The size of the composter shall be based on the greatest projected offal rate from animals during any 3-month period of the year.

11) The composter bin minimum width dimension shall be at least one foot greater than the width of the loader bucket used for turning the compost.

12) A composting thermometer with a minimum probe length of 36" shall be kept available at the facility for monitoring progress of the compost process.

13) Records of offal additions, composter operation and land application of finished compost shall be maintained on the premises.

14) Composting shall comply with the following guidelines:

A) Coarse sawmill sawdust, shredded corn stalks, chopped straw, coarse-ground corn cobs, and other materials possessing like properties and having similar particle size are recommended as the carbon source.

B) A supply of carbon source materials shall be stockpiled and maintained on the premises at all times when the composter is in operation.

C) Finished compost from the offal composting process (secondary bins) may be re-used in an amount appropriate to maintaining proper composting operation (up to 50% volume of re-used finished compost suggested).

D) Offal placed on the floor of a primary bin shall be mixed in a 50/50 ratio to carbon source material and underlain with at least 12" of absorbent carbon source material.

E) Any offal placed in the primary composter bin shall be immediately covered with a layer of carbon source material to a depth of at least 12" on top and all sides. Carbon source material shall be added to the composter daily or as frequently as needed to sustain a cover of carbon source material over all parts of carcasses in the bin's uppermost layer.

F) Offal and carbon source material may be added to the primary bin until the bin is full.

G) The composting process shall be monitored and managed in such a way that heating and decomposition can proceed to completion (typically 3 months in the primary bin from the time the last carcass is placed in the bin and another 3 months in the secondary bin from the time the compost is moved into the secondary bin from the primary bin). Water shall be added as necessary to adjust the moisture content of the compost and promote further composting activity.

H) Finished compost shall be agronomically distributed over land under cultivation or reused in the composting process. Finished compost may be returned to the primary composting bin in a ratio of up to 50% finished compost to fresh carbon source material. For the purpose of this subsection (g)(14)(H), the agronomic rate is the annual application rate of the compost, either alone or in combination with other nutrient supplying materials, which is necessary to achieve a reasonable crop yield without exceeding crop nutrient requirements.

(Source: Amended at 44 Ill. Reg. 19467, effective December 3, 2020)