General Disclaimer for this Presentation:

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► The information within this presentation is slated to facilitate discussions on various existing and potential regulatory mechanisms. No final decision regarding this information is expressed or implied.



Welcome to the NJDEP Stakeholders Meeting for

Amendments to Recycling Rules at N.J.A.C. 7:26A-1.1 and 1.4

December 2, 2021

* 1:00 to 3:00 PM





Opening Remarks - Why Amendments to Rules are Necessary

- Minimize potential adverse environmental Impacts from non-compliance
 - Limits on storage amounts and durations
- Better enforceability
 - Improved record keeping
 - Increase/improved reporting requirements
- Ensure better coordination with local and county officials
 - Optimal management and enforcement of activities
- Clean-Up
 - Deleting exemptions that are not necessary or problematic
 - Combine like activities
 - Need for additional new exemptions

POTENTIAL NEW FOOD WASTE EXCLUSION DETAILS - EXPLAINED

Only excludes from the Solid Waste regulations, other programs area regulations may apply.

Air Compliance and Enforcement, Northern Field Office For counties: Bergen, Essex, Hudson, Hunterdon, Morris, Passaic, Somerset, Sussex, Warren, and Union.	973-656-4444 or AirCE-Northern@dep.nj.gov
Air Compliance and Enforcement, Central Field Office For counties: Burlington, Mercer, Middlesex, Monmouth, and Ocean.	609-292-3187 or AirCE-Central@dep.nj.gov
Air Compliance and Enforcement, Southern Field Office For counties: Atlantic, Camden, Cape May, Cumberland, Gloucester, and Salem.	856-614-3601 or AirCE-Southern@dep.nj.gov



[D]

POTENTIAL NEW FOOD WASTE EXCLUSION DETAILS - EXPLAINED

Only excludes from the Solid Waste regulations, other programs area regulations may apply

Stephen Boyer - Stormwater contact for any exempt operator who is a municipality stephen.boyer@dep.nj.gov 609-633-3823

Eleanor Krukowski - Stormwater contact for all other exempt operator —

Eleanor.krukowski@dep.nj.gov

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Introductions - NJDEP Rule Team

- ► Assistant Commissioner's Office, Site Remediation & Waste Management
 - ❖ Judith Andrejko, Esq., Regulatory Officer / Moderator
- Bureau of Recycling & Hazardous Waste Mgt.
 - * Karen Kloo, Bureau Chief
 - Rakesh Patel, Engineer
 - ❖ Daniel Murray, Engineer & Co-Exemption Coordinator
 - Alexander Sadat, Engineer & Exemption Coordinator
- Bureau of Solid Waste Compliance & Enforcement
 - Thomas Farrell, Bureau Chief
 - Paul Smith, Case Manager

Introduction – Welcome Stakeholders



Most questions will be covered through the "Polling" Functionality

 Please type your name and affiliation before making a comment in the Question and Answer section.

 To ensure accurate notes, please type in full and complete sentences.

Please make your points and questions as concise and clear as possible.

Goals of the Meeting

► Solicit Input

► Encourage Recycling



Agenda Outline

New Exemption

 Closed Loop Anaerobic Digestion

New Exemption

Food Waste Transfer

Demonstration Projects § 1.4(e)

 Small-Scale Recycling Activities not exempted under 1.4(a)

Recap of Exclusion §1.1f

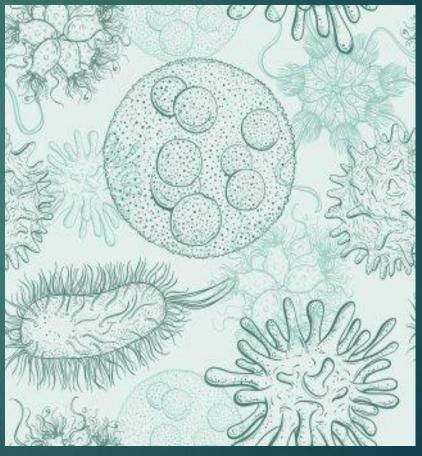
- Micro-Scale Food Waste Composting
- Community Gardens

Recap of Exemption

- Small-Scale
 Outdoor Food
 Waste Composting
- Small Scale Indoor Food Waste Composting

POTENTIAL NEW EXEMPTION – Closed Loop Biogas Generation Through Anaerobic Digestion

- Anaerobic digestion of recyclable food scraps, manure and other biodegradable Class C materials
- Generates usable natural gas (predominantly methane)
- Slows reduction of landfill space



What materials would this Exemption allow to be processed in the digester?

While limited by the operations manual provided by each manufacturer of an anaerobic digester, in general, such systems, when operated properly, can digest the following food stocks without incident:

Produce

Dairy

Meats

Manure

Fats/Oils from food

Why Encourage Food Waste Recycling? (from https://www.epa.gov/sites/default/filles/documents/Why-Anaerobic-Digestion.pdf)

Food waste has THREE TIMES the methane production potential as biosolids!

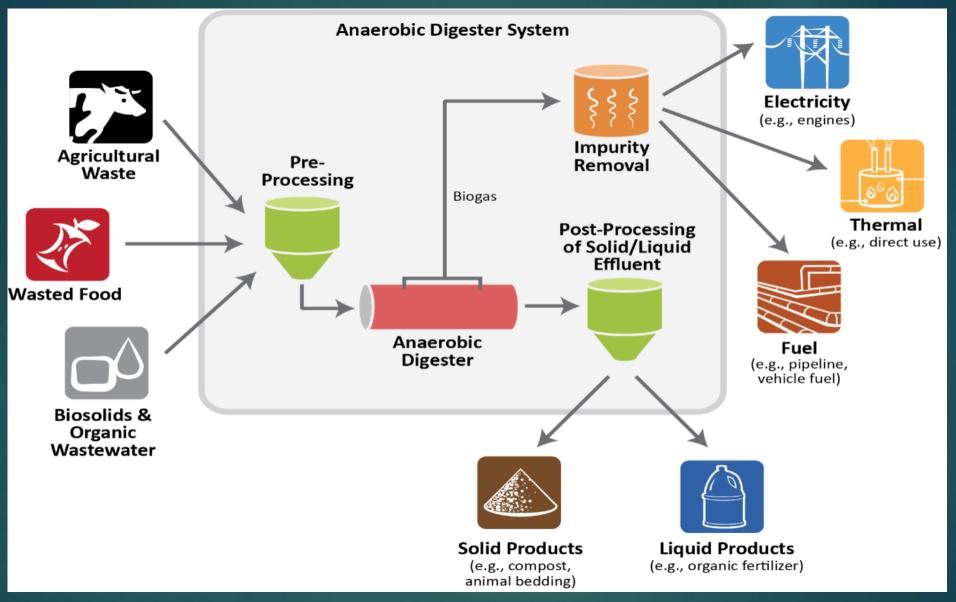
- Cattle manure= 25m³ gas/ton
- Biosolids= 120 m³ gas/ton
- Food waste= 376 m³ gas/ton

What materials is the Department considering to prohibit in the digester?

Notwithstanding any inclusion or omission from the manufacturer's specification, the Department is considering prohibiting the following from being processed in an anaerobic digester subject to this Exemption:

grease or oils not derived from food or plants solvents, chemicals or hazardous wastes

materials that would otherwise be solid wastes if not processed in the digester or otherwise could not be recycled



Possible New Exemption Limitations Under Consideration

QUESTION 1:WHAT WOULD BE A GOOD FREQUENCY OF OPERATOR TRAINING?

- A. ONCE PER YEAR
- B. EACH TIME A NEW OPERATOR IS ASSIGNED
- C. ONCE EVERY FIVE YEARS
- D. WITHIN ONE YEAR OF START-UP
- E. OTHER:

Question 2: What should the Department consider as documentation of adequate training?

- a. certificate from manufacturer
- b. certificate from widely recognized association accepted by the U.S. Composting Council
- c. self-certification using the Department's form
- d. other:



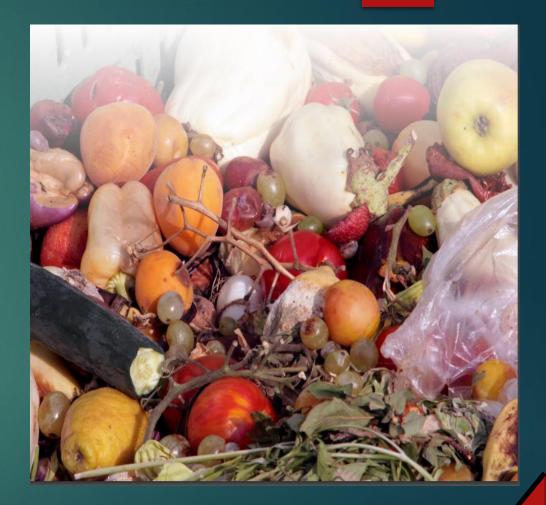
Question 3: Although existing air regulations at N.J.A.C. 7:27 require that the subject digesters have an Air Permit with specific emission limitations, an appropriate buffer distance from the digester and its supporting equipment should be no less than:

- a. 50 feet from the property line.
- b. 100 feet from the property line.
- c. 500 feet from the property line.
- d. other:_____



Question 4: The anaerobic digestor shall not receive more than:

- a. One ton of material per day
- b. The daily throughput of material identified in the manufacturer's specifications
- c. The lesser of selections "a" and "b" above
- d. Other:



Question 5: Materials to be processed in the digester shall be added to it:

- a. within 24 hours upon receipt
- b. within 24 hours upon receipt if immediately placed in gas tight containers
- c. within 48 hours upon receipt if immediately placed in gas tight containers
- d. within one week upon receipt if immediately placed in gas tight containers
- e. other:

Question 6: The biosolids collected within the digester shall be:

- a. available for immediate placement in a garden for nutrient rich residual effluent.
- b. managed as a solid waste, depending upon their classification.
- available for recycled uses if sufficient analyses confirm such use as appropriate.
- d. discarded in the solid waste dumpster.
- e. subjected to a Beneficial Use Determination pursuant to NJAC 7:26-1.7(g).
- f. other: _____



Question 7: Unless otherwise specified by the Air Permit, the anaerobic digester system shall be tested for tightness and performance at a frequency:

- a. which is dependent upon the presence of odors.
- b. once per month
- c. once per quarter
- d. as needed but no less than monthly
- e. as needed but no less than annually
- f. other:

Question 8: The anaerobic digester system should contain a/an alarm system(s) that address:

- a. hydrogen sulfide gas emissions
- b. temperature
- c. water level
- d. pressure
- e. all of the above
- f. other: _____



Question and Answer

Please raise your hand and wait to be called upon.

Please type your question into the chat function.

POTENTIAL NEW EXEMPTION: FOOD WASTE TRANSFER



POTENTIAL NEW EXEMPTION: FOOD WASTE TRANSFER | WHY?

- Already Transfer Activities Related to
 - Class B (Current exemptions 5 & 7)
 - Class C (Current exemption 19)
 - Class D (Current exemptions 14 & 15)
- > Further Facilitate Food Waste Recycling

POTENTIAL NEW EXEMPTION: FOOD WASTE TRANSFER | TRANSFER FEATURES

► Livestock Producer

- Exempt Class C
- Permitted Class C



[N]

POTENTIAL NEW EXEMPTION: FOOD WASTE TRANSFER | ODORS

► Air Regulations

► Air Filtration System



POTENTIAL NEW EXEMPTION: FOOD WASTE TRANSFER | LEACHATE

Stormwater Rules

► Containment Requirements



POTENTIAL NEW EXEMPTION: FOOD WASTE TRANSFER | PHYSICAL CONTAMINANTS



- Consolidation & Repackaging
- Containment

Proper management

POTENTIAL NEW EXEMPTION: FOOD WASTE TRANSFER | DAILY RECORD KEEPING



- ► Using DEP Form:
 - Volume in CY of both incoming And outgoing materials and materials stored on-site
 - Records kept for 3 years

POTENTIAL NEW EXEMPTION: FOOD WASTE TRANSFER | QUESTIONS

- Question #9: What should the minimum buffer distance be between food waste transfer buildings and the property line?
 - (A) "0 ft.;" (B) "25 ft.;" (C) "50 ft.;" (D) "Other (Type-in)"
- Question #10: How many cubic yards of material should be allowed to be stored at any one time?
 - * (A) "50 CY;" (B) "100 CY;" (C) "500 CY;" (D) "1,000 CY" (E) "Other (*Type-in*)"

POTENTIAL NEW EXEMPTION: FOOD WASTE TRANSFER | QUESTIONS - continued

▶ Question #11: What should the time limit be on food waste storage?

(A) "24 hours;" (B) "48 hours;" (C) "72 hours;" (D) "Other (Type-in)"

Question and Answer

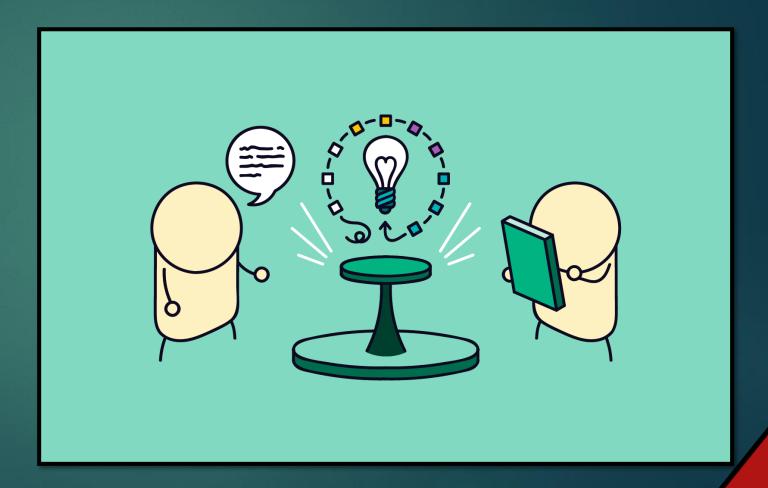
Please raise your hand and wait to be called upon.

▶ Please type your question into the chat function.

POTENTIAL NEW 7:26A-1.4(e) EXEMPTION: DEMONSTRATION PROJECTS

Main Topics

- 1. Basis for Exemption
- 2. Requirements
- 3. Limitations



DEMONSTRATION PROJECTS

BASIS FOR EXEMPTION

- ► Conducting small-scale recycling activities that are not specifically exempted under N.J.A.C. 7:26A-1.4(a)
 - Such activities would not be authorized under other exemptions.
 - ❖ Proposal to add subsection "e" to 7:26A-1.4
 - Gather data to demonstrate that these activities can be conducted in an environmentally sound manner
 - Department holds the discretion to determine if innovative activities can be conducted in an environmentally safe manner.
- ► Alternative operation would require a Recycling General/Limited Approval

DEMONSTRATION PROJECTS

REQUIREMENTS BEING CONSIDERED

► Submittal of an application for DEP review

- ❖Site plan map
- Project description
- Need for project
- Environmental Controls
- Review fee



DEMONSTRATION PROJECTS

LIMITATIONS BEING CONSIDERED – Part 1



- Fixed time limit to not exceed one (1) year.
- ► Extension granted if necessary if the operator provides sufficient data demonstrating that activities are conducted in an environmentally sound manner with no public health impacts.

DEMONSTRATION PROJECTS

LIMITATIONS BEING CONSIDERED – Part 2

- ► Consistency with environmental statutes applicable to the project, including but not limited to:
 - Solid Waste Management Act
 - Water Pollution Control Act
 - Air Pollution Control Act
- Consistency with DEP Letter of Approval



[Y] **#3**

DEMONSTRATION PROJECTS

LIMITATIONS BEING CONSIDERED – Part 3

- ► Mechanism for continued operations
- ► Establish a pathway to include future exempt operations under 1.4(a)



EXEMPT DEMONSTRATION PROJECTS 1.4(e) Questions

- Question #12: What should the maximum throughput be to be considered small-scale under this exemption?
 - Answers: (A) "1 cubic yard/day;" (B) "5 cubic yards/day;" (C) "50 cubic yards/day;" (D) "Other (Type-in)"

- Question #13: Should there be a minimum daily limit placed?
 - Answers: (A) "Yes;" (B) "No"
- Question #14: What review fee should be assessed on applications?
 - Answers: (A) "Less than \$1000;" (B) "Greater than \$1000;" (C) "Other (Type-in)"

Question and Answer

Please raise your hand and wait to be called upon.

Please type your question into the chat function.

POTENTIAL NEW 7:26A-1.1(f) EXCLUSION OF MICRO-SCALE FOOD WASTE COMPOSTING

- ► N.J.A.C 7:26A-1.1 Excludes certain activities from the scope of the recycling rules
- ➤ 7:26A-1.1(e) excludes composting and onsite use of farm feedstock

► Proposal will add paragraph 1.1(f) to exclude micro-scale food waste composting



POTENTIAL NEW FOOD WASTE EXLUSION: WHY EXCLUDE MICRO-SCALE?

- Received petition for rulemaking requesting a food waste composting exemption
- Encourage urban residential community to source separate and compost food waste
- Potential impact to the environment and neighboring properties would be minimal



[Y]

POTENTIAL NEW FOOD WASTE EXCLUSION: WHO WOULD BENEFIT?

- > Community Gardens
- ➤ Multi-family dwellings
- ➤ Non-profit groups such as boy scouts







POTENTIAL NEW FOOD WASTE EXCLUSION DETAILS: SCALE

- > Smallest quantities of food waste
- > Lowest throughput capacities



[AA]

- > Odor control and stormwater management
- Composting operations must be conducted within a container

POTENTIAL NEW FOOD WASTE EXCLUSION: LIMITATIONS

- > Only vegetative food waste allowed
- Accepts food waste generated in the community
- Compost operations conducted within the community



[AB]

POTENTIAL NEW FOOD WASTE EXCLUSIONS: LIMITATIONS

- Quality control of incoming wastes
- > Record keeping required.
- Operator must certify that property owner consents to compost operation



Question and Answer

Please raise your hand and wait to be called upon.

Please type your question into the chat function.

RECAP OF POTENTIAL NEW EXEMPTION - OUTDOOR FOOD WASTE COMPOSTING

Main Topics for Today

- 1. Operational Requirements
- 2. Buffers
- 3. Bulking Agents
- 4. Operator Training
- 5. Daily Record Keeping
- 6. Much More...



[AD]



RECAP OF POTENTIAL NEW EXEMPTION – OUTDOOR FOOD WASTE COMPOSTING

Summary of NEW Exemption:

- One must utilize the following to effectively conduct this activity -
 - Gas-Permeable Water-Repelling Compost Cover
 - 2. Leachate Collection System
 - 3. Air Blower



[AE]

RECAP OF POTENTIAL NEW EXEMPTION – OUTDOOR FOOD WASTE COMPOSTING: FUNDAMENTAL QUESTIONS

- ▶ Question #15: "What are some of the preferable solutions or alternatives to gaspermeable and water repellent cover for the compost pile?"
 - ► Answers: *Type-in*

- Question #16: Do you see any challenges in implementing this technology (cover, leachate collection and air-blower)?
 - Answers: (A) "Cost;" (B) "Maintenance" (C) "Both A and B" (D) "Other (type-in)" [AJ

RECAP OF POTENTIAL NEW EXEMPTION – INDOOR FOOD WASTE COMPOSTING

Criteria:

- 1. Types of Food Waste
- 2. Building Design Criteria
- 3. Indoor Food Waste Composting Operations
- 4. Bulking Agent Management
- 5. Finished Compost
- 6. Operator Training
- 7. Record Keeping



RECAP OF POTENTIAL NEW EXEMPTION – INDOOR FOOD WASTE COMPOSTING OBJECTIVES

- ► Minimize and control odors
- ► Eliminate contact water
- ► Minimize fire risks



RECAP OF POTENTIAL NEW EXEMPTION – INDOOR FOOD WASTE COMPOSTING: DESIGN CRITERIA

- Impermeable sloped floor for drainage
- Leachate collection system
- Interior air ventilation system



[AH]



[Al]

RECAP OF POTENTIAL NEW EXEMPTION—INDOOR FOOD WASTE COMPOSTING: FUNDAMENTAL QUESTIONS

- Question #17: "What are the other alternatives to ensure appropriate leachate collection?" E.g., manual floor washing, floor cleaning using industrial vacuums/machines, etc.
 - Answers: "Type-in"
- Question #18: Do you see any challenges in implementing air management systems?
 - * Answers: (A) "Cost" (B) "Space" (C) "Maintenance" (D) "All of the Above" (E) "Other (type-in)"

Question and Answer

Please raise your hand and wait to be called upon.

Please type your question into the chat function.

Suggested changes to N.J.A.C. 7:26A-1.4(b) – General Requirements for All Exemptions

- Cannot claim multiple exemptions of certain types
 - * NJDEP discretion to limit a person claim of combination of multiple exemptions
- ► Must receive NJDEP's acknowledgement prior to commencing operations
- Require documentation that all required State, county, and municipal approvals have been obtained
 - Currently unclear if the appropriate local and county officials receive notification
- Expiration one-year cycle with ability to renew
 - Phase-in period for compliance with new requirements
 - ❖ Fee for Initial application and renewal.

Suggested changes to N.J.A.C. 7:26A-1.4(b) – General Requirements for All Exemptions

Potential NEW addition to rule - WE NEED YOUR THOUGHTS

THE CONCEPT =

- Add language to the exemptions portion of the rule that allows NJDEP to terminate
 the exempt activity if the criteria in N.J.A.C. 7:26A-1.4(a) are no longer met by the
 exemption holder.
- Next step would be for that exemption holder to obtain a General or Limited Approval to continue operating.

THE POINT =

There would be no appeal/hearing process regarding termination of the exemption;
 the default result is having to obtain a permit.

Changes to N.J.A.C. 7:26A-1.4(c) - Certification

- ► Adds certification language consistent with other rules
 - Certification statement additional permit and approval attesting
 - 'including obtaining applicable municipal, county, State, and Federal permits and approvals'
 - Clarification on individuals signing the certification
 - Corporation
 - Limited Liability Company
 - Partnership
 - > Sole Proprietorship
 - Municipal, county, State, Federal, or other public agency
 - > Duly authorized representative

Closing Remarks

- ► Thank you for your input!
 - Summaries of the topics covered at the meeting and relevant information will be made available following the meetings at
 - https://www.nj.gov/dep/workgroups/index.html
- ► This is the last planned stakeholder meeting for these rule amendments.
- ► Following proposals of the rule changes, formal comments on the rules can be made by anyone during the announced comment period.
- Please direct your main questions via email to: exemptrecycling@dep.nj.gov



References - Part 1:

- 1.[A] Essential Powerpoint Image (Siphoned for Display purposes ONLY). Link https://www.vecteezy.com/free-vector/modern-white-background
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- 32. [AD] Essential Powerpoint Image (Siphoned for Display purposes ONLY). Link https://www.biocycle.net/yard-trimmings-composting-site-food-waste-ready/
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