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STATE OF MAINE
DEPARTMENT OF ENVIRONMENTAL PROTECTION



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Background information for stakeholder meetings on readily recyclable, audits, and program goals

The Department will hold stakeholder meetings on the topics of readily recyclable, audits, and program goals on March 14th and March 28th, from 1:00 pm to 5:00 pm EST. As a reminder, Meeting 1 provides stakeholders an opportunity to share prepared comments, and Meeting 2 will allow for discussion of those comments. Comments will be posted on the Department’s website and made available prior to Meeting 2. Meetings will be held in room 101 of the Deering Building at 90 Blossom Lane in Augusta and will also be available virtually. Please use [Maine’s EPR Program for Packaging website](#) to RSVP for a meeting.

The central task for the March meetings is to collect comments speaking to sections 13(A)(2), 13(A)(5), and 13(A)(6) of 38 MRS §2146 *Stewardship program for packaging*, which address the following:

A process for determining on an annual basis those types of packaging material that are readily recyclable, [...] [13(A)(2)]

and,

Requirements for the assessment of program performance, including the setting of program goals used to inform the producer payment schedule determined pursuant to subparagraph (1) and the investments in infrastructure and education made pursuant to [subsection 11](#), [...] [13(A)(5)]

and,

Requirements for the stewardship organization to conduct representative audits of recyclable material processed and sold by facilities that process recyclable material generated in the State, of municipal solid waste disposed of in the State and of waste littered in the State, [...] [13(A)(6)].

Included below are relevant excerpts from statute, contextual information, and questions for consideration. All excerpts are from 38 MRS §2146 unless otherwise noted. Words and phrases in bold font are statutory terms, and their definitions can be found at the end of this document.

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I. 13(A)(2) A process for determining what packaging material is readily recyclable on an annual basis

Readily recyclable and not readily recyclable are distinctions used to categorize **packaging material** types. They are significant because—

- In order for a municipality to participate in the program, it must provide for the collection and **recycling** of all packaging material that is categorized as readily recyclable; and,
- The criteria used to adjust producer payments must incentivize increased recyclability of packaging material; and,
- The proposed method for calculating municipal reimbursement for packaging material that is readily recyclable differs from the method for calculating municipal reimbursement for packaging material that is not readily recyclable. The proposed rule regarding the method for municipal reimbursement will—
 - 1) Provide reimbursement to participating municipalities for management of readily recyclable packaging material at the full median per-ton cost realized by similar municipalities, and
 - 2) Provide per capita reimbursement to participating municipalities for management of packaging material that is not readily recyclable, and
 - 3) Establish a cap on reimbursable per-ton cost for recycling of packaging material that is not readily recyclable.

Decisions regarding recyclability of packaging material being made by other jurisdictions are, to the extent reprocessing infrastructure is shared, relevant due to their effect on markets. Additionally, most producers will be making packaging materials for use in multiple jurisdictions; therefore, our classification of packaging material that is readily recyclable may want to consider these decisions.

At a minimum, the rules adopted by the Department must include—

A process for determining on an annual basis those types of packaging material that are readily recyclable, which must involve consultation with the stewardship organization and recycling establishments and must include a transitional period between the time that a type of packaging material is determined to be readily recyclable or to not be readily recyclable and the time that such determinations will be effective for the purposes of

March 2023

calculating producer payments and municipal reimbursements in accordance with this section;

The statute only requires that rule outline an annual process for determining packaging material that is readily recyclable. However, rule could include criteria for determining what packaging material is readily recyclable, define packaging material types, and establish a fixed transitional period. If not defined in rule, these details will need to be handled during the annual process of defining readily recyclable. Providing additional detail in rule can help set clear expectations and potentially simplify the annual process, while providing less detail allows for more flexibility.

Questions: What should the process look like? Who should be involved? What decisions should they make? When should they decide and how?

A. Criteria for readily recyclable.

The statute does not provide criteria for categorizing packaging material as readily recyclable. As noted above, similar decisions made by other jurisdictions are somewhat relevant. Below are summaries of criteria and lists of recyclable materials used by other jurisdictions.

- Vermont has a list of mandated recyclables. These materials are banned from landfills and must be accepted for recycling by anyone who is contracted to manage trash (see Vermont Statutes Annotated reference at the end of this document). It is not specific to packaging material but includes the following: aluminum and steel cans, aluminum foil and aluminum pie plates, glass bottles and jars for foods and beverages, polyethylene terephthalate (PET) plastic bottles or jugs, high density polyethylene (HDPE) plastic bottles and jugs, corrugated cardboard, white and colored paper, boxboard, and paper bags. The law allows the state to remove materials from the list “upon finding that insufficient markets exist and adequate uses are not reasonably available to serve as an alternative to disposal.”
- Massachusetts also has a common list of materials categorized as recyclables that are accepted by all of its 9 materials recovery facilities (MRFs) and banned from disposal (see “Guidance for Solid Waste Handling And Disposal Facilities on Compliance With MassDEP’s Waste Bans” reference at the end of this document). The list includes the following: metal food and beverage cans; plastic bottles, jars, tubs, and jugs; glass bottles and jars; and paper and cardboard boxes. This list was created through a meeting among all MRF operators considering the following three criteria: 1) threats posed to workers or equipment at the MRF; 2) capability of MRF equipment to sort and process the material; and 3) consistent market (buyer) demand for the material.

March 2023

- Quebec’s packaging product stewardship law does not limit collection of materials to those that are recyclable, but the implementing organization’s list of material types provides information on management outcomes (see EEQ Materials Guide reference at the end of this document).
- The statute outlining Oregon’s packaging stewardship program provides criteria for the state to use when determining what should be collected for recycling and how. Those criteria include the following: stability, maturity, accessibility, and viability of responsible end markets; environmental health and safety considerations; the anticipated yield loss for the material during the recycling process; the material’s compatibility with existing recycling infrastructure; the amount of the material available; the practicalities of sorting and the method of storing the material; contamination; the ability for waste generators to easily identify and properly prepare the material; economic factors; and, environmental factors from a life cycle perspective. Oregon state government has done extensive research to determine recyclability of packaging material with respect to these criteria (see State of Oregon Department of Environmental Quality references at the end of this document; pg. 11 of the “Rule Concept: Recyclable Materials Acceptance Lists, Part One” may be particularly helpful).

Questions: Should criteria for defining readily recyclable be set in rule? If so, what should they be? If criteria were determined in the annual process instead of or in addition to in rule, what would that look like?

B. Definition of packaging material types

The statute provides some criteria for the grouping of packaging material.

Packaging material means a discrete type of material, or a category of material that includes multiple discrete types of material with similar management requirements and similar commodity values, [...]

Packaging material types are the unit producers will use to report packaging sent into Maine and the unit used to reimburse to municipalities. As the unit used to reimburse municipalities, packaging material types must be specific enough to separately account for the most exclusive categories of items that might be sorted differently by different municipalities. Take the example of colored HDPE and natural HDPE: some municipalities manage them separately, some manage the two together, and others manage them along with other plastic material types and produce mixed plastics bales. In this example, material type categories must be at least as specific as HDPE natural and HDPE colored in order to compare costs across municipalities with varied

March 2023

management methods. Additionally, producer compliance with this law will be streamlined if packaging material types used for producer reporting are consistent across jurisdictions.

Questions: Should additional factors be considered when defining packaging material types? If packaging material types are not defined in rule, how should this list and these definitions be managed?

C. Transitional period

The statute notes the need for a transitional period between the time a material type is added or removed from to the list of readily recyclable materials and the time its new categorization should influence municipal requirements and producer fees.

Questions: Should there be a fixed transitional period defined in rule? If so, how long should it be? Or should the transitional period be part of the annual evaluation of readily recyclable to allow for flexibility in its length?

D. Other

Outstanding Question: Are there additional details surrounding readily recyclable that should be defined in rule?

II. 13(A)(5) Setting of Program Goals

At a minimum, the rules adopted by the Department must include—

Requirements for the assessment of program performance, including the setting of program goals used to inform the producer payment schedule determined pursuant to subparagraph (1) and the investments in infrastructure and education made pursuant to [subsection 11](#), which must include, but are not limited to, program goals supporting an overall reduction by producers in the amount of packaging material used, an increased reuse by producers of packaging material and an increased amount of post-consumer recycled content in packaging material used by producers; packaging material litter reduction goals; recycling access and collection rate goals for municipalities; and overall program and material-specific recycling rate goals.

To the maximum extent practicable, material-specific recycling rate goals adopted pursuant to this subparagraph must reflect the following recycling standards:

(a) Sorted glass is considered recycled if it does not require further processing before entering a glass furnace or before use in the production of filtration media, abrasive materials, glass fiber insulation or construction materials;

(b) Sorted metal is considered recycled if it does not require further processing before entering a smelter or furnace;

(c) Sorted paper is considered recycled if it does not require further processing before entering a pulping operation; and

(d) Plastic separated by polymer is considered recycled if it does not require further processing before entering a pelletization, extrusion or molding operation or, in the case of plastic flakes, does not require further processing before use in a final product; [13(A)(5)]

It is important to note that these goals are not enforceable, meaning producers, municipalities, or the SO will not be considered out of compliance if they are not met. They will be used to inform producer payment schedules and investments in education and infrastructure, therefore, if goals they are not met, that result will influence decision making in these two areas.

Consistency across jurisdictions with regard to how goals are measured may be helpful. Current product stewardship laws in the United States do not outline methods for measuring program results.

Questions:

- **What should a goal for overall reduction in the amount of packaging material used be? How should it be measured? Should it be collective or producer specific?**
- **What should a goal for increased reuse of packaging material be? How should it be measured? Should it be collective or producer specific?**
- **What should a goal for increased post-consumer recycled content in packaging material be? How should it be measured? Should it be collective or producer specific? Should it be material or material type specific? Should 3rd party verification be required?**
- **What should a goal for litter reduction be? How should it be measured? How could results be used? Should any entity be expected to make progress toward this goal?**
- **What should a goal for increasing recycling access be? Should it be applicable to participating municipalities or all Maine municipalities? How should it be measured? How could results be used?**
- **What should a goal for increasing collection rates be? Should it be collective or specific to individual municipalities? How should it be measured? How could results be used?**

- **What should goals for material specific recycling rates be? How can we account for the fact that we may not always be able to get data from downstream processors to ascertain the true amount recycled, as per the criteria above? Should any other goals be set? Should goals set for source reduction, waste reduction, or reuse targets?**
- **Should goals match goals set in other jurisdictions?**

III. 13(A)(6) Establishing provisions for representative audits

Rules adopted by the Department must include—

Requirements for the stewardship organization to conduct representative audits of recyclable material processed and sold by facilities that process recyclable material generated in the State, of municipal solid waste disposed of in the State and of waste littered in the State, which must include, but are not limited to:

- (a) *Provisions regarding the sampling techniques to be used in those audits, which must include random sampling;*

This is a general requirement relevant to all types of representative audits.

Questions: What sampling techniques should be used to ensure audits are representative of all facilities in the State? Is there a need to account for factors such as seasonality, geographic location, and method of recycling collection? Are there other factors that might result in biased audit results? Should priority be given to some factors over others? Should there be a method for delimiting factors considered if past audit results show little variation? Should there be a method for introducing new factors suspected of influencing audit results?

- (b) *For audits of recyclable material, provisions regarding:*

(i) *How those audits must be designed to collect information regarding the extent to which recyclable material processed and sold by those facilities reflects the tons of each type of packaging material collected in the State for recycling and the tons of each type of packaging material recycled in the State, as well as the ultimate destination of and intended use for that recycled material;*

(ii) *How those audits must be designed so that information collected through the audit of one facility will not be used to infer information about a different facility that uses different processing equipment, different sorting processes or different staffing levels to conduct processing; and*

(iii) The process by which a facility will be allowed to request and receive an audit if it can credibly demonstrate that an audit result being applied to its material output is not representative of its current operations;

This requirement refers to audits of material collected, audits of processed material, and audits to understand how material is ultimately used by reclamation facilities.

Questions:

- **For audits of material collected:**
How should audits be designed to reflect the tons of each type of packaging material collected in the State? How should the SO determine which sites should be audited? When should audits occur? How often should they occur? To what extent can they be combined or supplemented with quality control checks conducted at processing facilities? Should results influence municipal reimbursement? To what extent can results from one municipality be applied to another municipality? How might like-facilities be determined? What should the process of requesting and receiving an audit look like? What should qualify as a credible demonstration that an audit is not representative of a facility's current operations?
- **For audits of processed material:**
How should bale break audits be designed? How often should they occur? Can results from one processing facility be applied to another processing facility? What should the process of requesting an audit look like? What should the process of receiving an audit look like? What should qualify as a credible demonstration that an audit is not representative of a facility's current operations? The statute does not require processing facilities to submit to an audit; given this, should the ability to conduct bale break audits at processing facilities be required for municipal reimbursement? How else can cooperation with these audits be ensured?
- **For audits to understand how material is ultimately used by reclamation facilities:**
How can downstream audits be designed to reflect the ultimate destination of and intended use of recycled material? How might results of downstream audits be used? The statute does not require downstream facilities to submit to an audit; given this, what auditing is appropriate here? Can information provided by reclamation facilities obviate the need for an audit? Can assumptions be made in the absence of audit results? How else can cooperation with these audits be ensured?

(c) For audits of municipal solid waste, provisions regarding how the audits will be designed to collect information regarding the types and amount, whether by weight or volume, of packaging material in the waste stream and the percentage by weight and volume of the waste stream that is composed of packaging material; and

March 2023

This requirement refers to audits of the waste stream.

Questions: At what frequency should waste characterization audits occur? What data and what details should be collected from waste characterization audits? How should the results of these audits be used?

(d) For audits of waste littered in the State, provisions regarding how the audits will be designed to collect information regarding the packaging material type by amount, whether by weight or volume, in sampled litter, identification of the producer or producers of the packaging material in sampled litter, if identifiable, and an evaluation based on those audits regarding the areas of the State in which litter accumulation is greatest; [13(A)(6)]

Questions: At what frequency should litter audits occur? What data and what details should be collected from litter audits? Where should they be conducted? How should the results of these audits be used?

A. Municipal Reimbursement:

The proposed method for municipal reimbursement will require annual inputs from participating municipalities and municipal specific inputs defined by the stewardship organization or SO.

Several inputs to be defined by the SO will need to quantify the percent of a resource's time or use that is dedicated to a given process. Examples of these inputs include the percent of time spent on a packaging stream, with respect to labor, and the percent of use on a packaging stream, with respect to equipment, structures, and energy. For inputs such as miles traveled on a route or those required to figure depreciation, the SO will document this information. Please refer to the background document for the March 7th stakeholder meeting for inputs that will be determined in consultation with the SO.

Documented inputs would only change if there is a significant change in municipal operations affecting the management of streams that include packaging. Significant changes to management of packaging streams include the following: changes to staffing levels or employee duties, changes to collection, transportation, or processing procedure; new equipment, new uses of equipment, or retired use of equipment used to manage packaging streams; new structures, new uses of structures, or retired use of structure used to manage packaging streams; changes to transportation routes; energy use changes affecting total metered energy; or, changes to costs that are not commodity specific. The SO would presumably obtain these municipal specific inputs through audits that might include, but are not limited to, consultations with municipal staff or time studies. To obtain complete, site-specific information, the SO would need to audit when a municipality first signals its intent to participate, or after a participating municipality contacts the SO about a significant change to operations.

Questions:

- **How should the SO prioritize audits of municipal operations? What expectations should be set around timeframes for completing those audits for newly participating municipalities? How should situations in which the SO has not yet completed a municipal specific audit by the time of reporting be handled? Can municipal estimates of inputs be sufficient in some cases?**
- **How often, on average, do municipal recycling operations undergo significant changes? Is there a need to repeat audits for municipal recycling operations that have not undergone significant changes? If so, how often?**
- **What might be done to ensure we meet the need for quality data and transparency while helping to minimize associated administrative costs?**

B. Other

Outstanding Questions: When looking to balance data quality and cost, which of these types of audits should be prioritized? Which audit types can be limited in terms of data collected and frequency? Should audits showing little variation be scaled down over time? If so, what would the process look like to make that determination?

References:

Vermont Statutes Annotated, 10 V.S.A. §6602, “Universal Recycling Law”, available at: <https://dec.vermont.gov/sites/dec/files/wmp/SolidWaste/Documents/Universal-Recycling/ACT148.pdf>

EEQ Materials Guide, available at: https://www.eeq.ca/wp-content/uploads/EEQ_guide_matieres_2022_v3_en.pdf

State of Oregon Department of Environmental Quality, “Additional Details on Recycling Material Acceptance Lists, part one”, available at: <https://www.oregon.gov/deq/rulemaking/Documents/Recycling2023m4BP.pdf>

State of Oregon Department of Environmental Quality, “Rule concept: Recycling Material Acceptance Lists, Part One”, available at: <https://www.oregon.gov/deq/rulemaking/Documents/Recycling2023m3RC2.pdf>

State of Oregon Department of Environmental Quality, “Rule concept: Recycling Material Acceptance Lists, Part Two”, available at: <https://www.oregon.gov/deq/rulemaking/Documents/Recycling2023m4RC1.pdf>

March 2023

Massachusetts Department of Environmental Protection, “Guidance for Solid Waste Handling and Disposal Facilities on Compliance with MassDEP’s Waste Bans”, Revised October 2021, available at: <https://www.mass.gov/doc/waste-ban-guidance-for-operators-of-solid-waste-facilities-october-2021/download>

Important statutory terms:

“Packaging material” means a discrete type of material, or a category of material that includes multiple discrete types of material with similar management requirements and similar commodity values, used for the containment, protection, delivery, presentation or distribution of a product, including a product sold over the Internet, at the time that the product leaves a point of sale with or is received by the consumer of the product. "Packaging material" does not include a discrete type of material, or a category of material that includes multiple discrete types of material, that is:

- (1) Intended to be used for the long-term storage or protection of a durable product and that can be expected to be usable for that purpose for a period of at least 5 years;
- (2) A beverage container, as defined in section 3102, subsection 2, subject to the requirements of [chapter 33](#);
- (3) A container for architectural paint, as defined in [section 2144, subsection 1, paragraph A](#), as long as a paint stewardship program is in operation, has been approved by the department pursuant to [section 2144](#) and the stewardship organization operating that program:
 - (a) Has demonstrated to the department's satisfaction that it recycles at least 90% of the containers of architectural paint collected under the program; or
 - (b) Subject to the approval of the department, if unable to satisfy the requirements of division (a), has demonstrated to the department's satisfaction that it recycles at least 80% of the containers of architectural paint collected under the program; or
- (4) Excluded from the definition of "packaging material" by the department by rule adopted pursuant to [subsection 13, paragraph D](#).

"Readily recyclable" means, with respect to a type of packaging material, that the type of packaging material meets the criteria and standards for recyclability as determined by the department by rule pursuant to [subsection 13, paragraph A](#), subparagraph (2).

"Recycling" means the transforming or remanufacturing of an unwanted product or the unwanted product's components and by-products into usable or marketable materials. "Recycling" does not include landfill disposal, incineration or energy recovery or energy generation by means of combusting unwanted products, components and by-products with or without other waste.

