

New Hampshire Solid Waste Management Plan  
DRAFT – August 2022

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## I. Introduction

The New Hampshire Department of Environmental Services (NHDES) has prepared this plan in accordance with the Solid Waste Management Act, RSA 149-M<sup>1</sup>, which was established to protect human health, preserve the natural environment, and conserve precious and dwindling natural resources through the proper and integrated management of solid waste. In this plan, NHDES seeks to ensure that New Hampshire's solid waste is managed as sustainably as possible. The goals, strategies, and actions contained in this plan establish a framework intended to inform actions and decision-making by a range of stakeholders, including NHDES, the regulated solid waste industry, municipalities, the New Hampshire General Court, non-governmental organizations, and the general public.

As mandated under RSA 149-M:29, the purpose of this plan is to set out goals, strategies, and actions to:

- reduce solid waste generation through source reduction,
- increase diversion of waste from disposal,
- achieve the state's solid waste disposal reduction goal established in RSA 149-M:2,
- support the state's solid waste management hierarchy established in RSA 149-M:3, and
- maintain and ensure adequate disposal capacity for waste generated in New Hampshire.

## II. Current Status of Solid Waste Management in New Hampshire

### *Waste Reduction Goal and Waste Management Hierarchy*

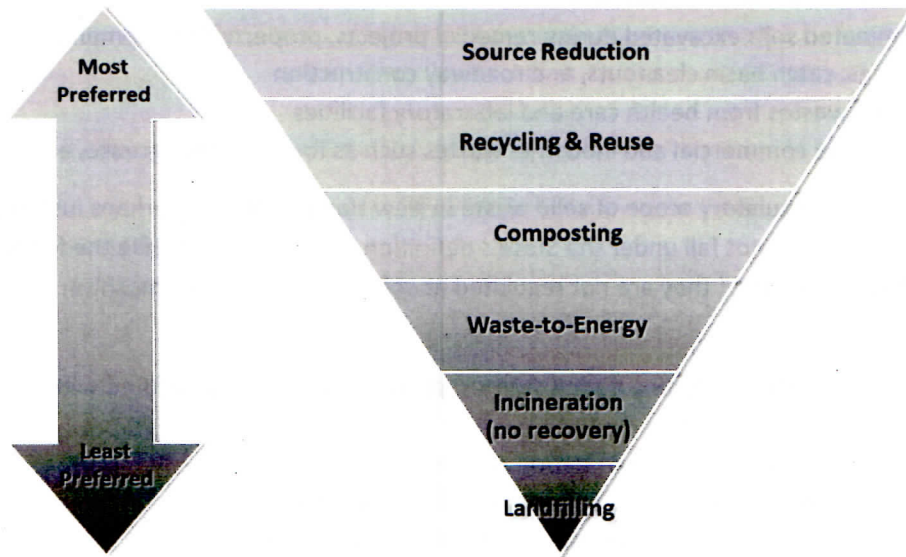
In 1990, the General Court amended RSA 149-M to establish a waste reduction goal, which has been subsequently revised over the years. The current version of this goal, codified in RSA 149-M:2, establishes a goal to reduce disposal of municipal solid waste (MSW) and construction and demolition debris (C&D) by 25% by 2030 and by 45% by 2050 (measured on a combined basis against baseline quantities of these waste types disposed in 2018). Achieving the disposal reduction targets set by this goal will require robust efforts to simultaneously reduce the quantities of waste generated while also maximizing diversion from disposal through reuse, recycling, composting, or other means. Although RSA 149-M:2 discourages the disposal of recyclable materials, it does not establish recycling, composting, or other forms of waste diversion as mandatory.

To promote achievement of the disposal reduction goal, the General Court also established a hierarchy of waste management methods to be used in New Hampshire (see Figure 1). Codified in RSA 149-M:3, this hierarchy provides a standard of preference for management of solid waste in the state, with priority placed on methods that reduce the generation of waste or divert recoverable materials from disposal. Source reduction is at the top of the hierarchy because such practices prevent a waste from being generated, which results in less waste needing end-of-life management, conserving resources, and reducing overall environmental impact. When a waste is generated, managing it via reuse, recycling, or composting is preferred because these methods recover and divert materials from disposal, thereby encouraging circular use of resources. Waste-to-energy technologies include incineration with energy recovery, anaerobic digestion, and emerging conversion processes that turn waste into fuel. These technologies are preferable to outright disposal in a traditional incinerator or a landfill because they recover energy and reduce volume and weight.

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<sup>1</sup>New Hampshire RSA 149-M: <http://www.gencourt.state.nh.us/rsa/html/nhtoc/NHTOC-X-149-m.htm>

Figure 1. New Hampshire's Waste Management Hierarchy



As established by the General Court, the waste management hierarchy, in conjunction with the disposal reduction goal, are intended to support an integrated waste management system in New Hampshire, combining a variety of approaches to reduce the quantity of waste generated while managing the waste that is generated in the most environmentally responsible manner available. In this way, the hierarchy serves as a guiding principle not only for NHDES and the state at large, but also for municipalities, commercial and industrial waste generators, solid waste management companies, and the public. However, it is worth noting that since the hierarchy was established in 1990, waste management infrastructure in New Hampshire has not significantly shifted from disposal toward more preferred management methods.

#### *What is Solid Waste?*

For the purposes of this plan, it is important to understand what is regulated as “solid waste” in New Hampshire. The term solid waste is defined in RSA 149-M:4, XXII, and encompasses any discarded or abandoned material, including “solid, liquid, semisolid or contained gaseous material resulting from industrial, commercial, mining, and agricultural operations, and from community activities.” As such, the category of solid waste covers a broad range of discarded or abandoned materials, including:

- Refuse generated at residential, institutional, commercial, and industrial establishments
- Recyclable materials that are not yet sorted, processed, or otherwise prepared for market
- Construction and demolition debris (C&D)
- Bulky waste (e.g., furniture, appliances, mattresses)
- Electronics (except for items considered universal waste, such as cathode ray tubes, which are subject to regulation as a hazardous waste)
- Vehicles, tires and associated parts

- Food waste
- Agricultural wastes including manure and animal carcasses
- Asbestos waste, typically from renovation and demolition of buildings
- Ash from utility-scale fuel combustion
- Contaminated soils excavated during remedial projects, property development, street sweepings, catch basin cleanouts, and roadway construction
- Infectious wastes from health care and laboratory facilities
- Other unique commercial and industrial wastes such as foundry sand, grease, and grit.

When discussing the regulatory scope of solid waste in New Hampshire, it is perhaps just as important to understand what does not fall under the State's definition of solid waste. While the following items may be classified as "wastes," they are not regulated as solid waste in New Hampshire:

- Hazardous waste
- Leaf & yard waste – including buried stumps, provided they are not located within 75 feet of any drinking water supply well
- Solid or dissolved materials in irrigation return flows
- Point-source discharges subject to Federal pollution control regulation
- Nuclear material subject to regulation under the Atomic Energy Act
- Septage or sludge not disposed at solid waste facilities permitted under RSA 149-M
- Human remains
- Waste-derived products certified for distribution and use (e.g., finished compost, processed glass aggregate, consumer goods with recycled content, etc.)

#### *NHDES' Role in Regulating Solid Waste*

Under RSA 149-M, NHDES is charged with regulating the facilities and practices associated with the collection, processing, treatment, recycling, and disposal of solid waste in New Hampshire. As directed by the statute, NHDES regulates solid waste facilities through a permit system, and oversees the management of solid waste through a combination of training and compliance assurance programs. To help the department fulfill its various responsibilities under RSA 149-M, NHDES has adopted a set of Solid Waste Rules (Env-Sw 100 et seq.), which are administered and enforced by NHDES' Solid Waste Management Bureau.

#### *Overview of New Hampshire's Solid Waste Management Infrastructure*

Under NHDES' solid waste permitting and regulatory system, solid waste facilities are grouped into three main categories:

- Collection, storage, and transfer facilities (e.g., transfer stations, recycling centers, scrap yards)
- Processing and treatment facilities (e.g., incinerators, anaerobic digesters, composting facilities)
- Landfills (e.g., active and closed landfills, inactive asbestos disposal sites)

Collection, storage, and transfer (C/S/T) facilities form the majority of New Hampshire's solid waste management infrastructure. There are 239 active C/S/T facilities in New Hampshire, 174 of which are publicly-owned municipal transfer stations that function as drop off centers for generators of trash and recycling within the facility's service area. The other 65 are primarily privately-owned commercial

transfer stations or scrap metal recycling facilities. In addition to the above-noted C/S/T's, there are also approximately 150 motor vehicle salvage yards in New Hampshire, which help to divert automotive waste to recycling and reuse. New Hampshire does not have any materials recovery facilities (MRFs) for sorting single stream recycling, although some transfer facilities may sort certain commingled recyclables on a limited scale.

New Hampshire has 17 active processing and treatment (P/T) facilities. This includes nine operating composting facilities holding solid waste permits. Facilities dedicated to the composting of leaf and yard waste do not require a solid waste permit, therefore NHDES lacks definitive data on how many leaf and yard waste composting operations exist in the state. The other P/T facilities in New Hampshire include two operating solid waste incinerators: one large-scale commercial waste-to-energy facility with an unlimited service area, and one small-scale municipal incinerator with a limited service area. In addition, there is one contaminated soils treatment facility and a handful of C&D/wood processing facilities. Currently, there are no permitted solid waste anaerobic digesters in New Hampshire.

With regard to active landfills, New Hampshire has six operating double-lined MSW landfills. Three of these landfills have limited service areas: the Lebanon Regional Solid Waste Facility in Lebanon, the Lower Mount Washington Valley Secure Landfill in Conway, and the Four Hills Secure Landfill Expansion in Nashua. The other three landfills are commercial facilities authorized to receive waste from an unlimited service area: North Country Environmental Services (NCES) in Bethlehem, the Mount Carberry Secure Landfill in Success, and the TLR-III Refuse Disposal Facility (aka Turnkey Landfill) in Rochester. There are also three operating non-MSW landfills: the Merrimack Station Coal Ash Landfill in Bow, the Corn Hill Road C&D Landfill in Boscawen, and the Epping Bulky Waste Disposal Area in Epping.

New Hampshire also has more than 300 closed/inactive landfills, the majority of which are unlined former municipal "dumps." Although perhaps not always considered part of the state's solid waste management infrastructure, these facilities perform a critical function as waste containment systems. As such, these landfills require ongoing monitoring and maintenance to assure protection of human health and the environment. In addition to these inactive landfills, there are approximately 360 documented asbestos disposal sites in New Hampshire. Most of these sites are in the Nashua/Hudson area, where up until the late 1970s a number of properties were filled with material containing asbestos waste distributed by the Johns-Manville Corporation. The sites include residential, commercial, industrial and public lands, both developed and undeveloped, as well as areas beneath roads and along riverbanks.

#### *Disposal and Diversion Figures*

In 2020, 1,956,789 tons of solid waste were disposed of in New Hampshire's landfills and incinerators. Of this total, 1,042,957 tons (about 53%) were generated within New Hampshire. The other 913,833 tons (about 47%) were generated in other states. The types of waste disposed include MSW (60%), C&D (14%), asbestos-containing waste (5%), sludge from wastewater treatment facilities (3%), non-hazardous contaminated soils (11%), and other special wastes, including wastes from industrial processes (6%). Recycling and other types of diversion have been harder to measure due to gaps and limitations in existing data. For the purposes of estimating a statewide recycling rate, NHDES used recycling data reported by municipal transfer stations as a general indicator of statewide recycling activities. For 2020, NHDES estimated an average municipal recycling rate of 26%. NHDES acknowledges that recycling data reported by municipal facilities only represents a subset of all recycling activities across the state. However, in the absence of more refined data, NHDES presumed the municipal data to be a suitable proxy for statewide recycling.

### III. Overarching Themes in This Plan

NHDES has identified several overarching themes that will be key to achieving the goals of this plan and contribute to a sustainable solid waste management system that balances social, economic, and environmental factors:

- **Reducing and diverting waste.** Efforts should focus on high-volume and weight materials, as well as single-use products and packaging. The U.S. Environmental Protection Agency (EPA) estimates that in 2018 the highest tonnage items disposed nationwide through landfilling were: food waste (24.14%), plastics (18.46%), paper and paperboard (11.78%), metals (9.53%), wood (8.32%) and textiles (7.73%).<sup>2</sup>
- **Developing infrastructure.** Additional infrastructure and more efficient waste handling practices in accordance with the waste management hierarchy will support waste reduction and diversion for New Hampshire-generated wastes.
- **Developing and improving local recycling markets.** In many cases, whether something is “recyclable” depends on whether there is an economically-viable market for the item. In turn, markets are highly dependent on available infrastructure capable of diverting, processing, and recovering materials. Keeping markets as local as possible will also minimize transportation costs and associated greenhouse gas emissions.
- **Conducting robust outreach and education** will ensure that messages are broadly disseminated to build public awareness and equip stakeholders with the best-available information to guide actions and decision-making.
- **Compiling comprehensive data** will be necessary to make informed decisions and plan next steps. For example, conducting a statewide waste characterization study would help establish baseline data and identify which waste streams should be prioritized for waste reduction/diversion efforts. Additionally, it will be important for solid waste facilities, haulers, and generators to have standardized tracking tools to document their progress and identify areas for improvement.
- **Exploring opportunities for regional cooperation/improved planning.** Municipalities and other stakeholders with mutual program objectives are encouraged to build partnerships to reduce duplicative efforts, maximize economies of scale, and ensure best use of limited funding/resources. Cooperative efforts may include sharing information, personnel, funding, and equipment/infrastructure.
- **Addressing climate change and environmental justice.** Solid waste management programs and policies implemented by state, local and private entities should align with state and federal climate change and environmental justice initiatives. This will help ensure that New Hampshire’s solid waste management system mitigates and adapts to worsening impacts from climate change, while also addressing environmental justice issues.
- **Establishing reliable funding sources.** Funding is an underlying issue that will determine success in achieving almost all of the goals identified in this plan. For many years, NHDES’ solid waste management program has been faced with limited resources, which has challenged the

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<sup>2</sup> See EPA 2018 Facts and Figures: <https://www.epa.gov/facts-and-figures-about-materials-waste-and-recycling/national-overview-facts-and-figures-materials#Landfilling>

department's ability to engage in many of the issues central to this plan. The same is true for many New Hampshire municipalities and solid waste management districts. Therefore, identifying additional funding sources will be important to ensure meaningful progress can be achieved.

#### IV. Goals, Strategies & Actions

RSA 149-M:29, I requires that the state's solid waste plan contain, at a minimum, the following elements:

*(a) Goals, strategies, and actions to reduce solid waste generation through source reduction, to increase diversion through methods such as reuse, recycling, and composting, and to achieve the state's solid waste disposal reduction goal, with such efforts incorporating the principles of the solid waste management hierarchy established in RSA 149-M:3*

*(b) Discussion of opportunities to reduce solid waste generation through source reduction and increase diversion through methods such as recycling and composting.*

*(c) Goals, strategies, and actions necessary to maintain and ensure adequate disposal capacity for management of waste generated in New Hampshire.*

In consideration of the above elements, this plan incorporates the following goals:

- 1) Reduce the quantity of solid waste generated
- 2) Reduce the toxicity of the solid waste stream
- 3) Maximize the diversion of residential, commercial, and industrial solid waste from disposal
- 4) Ensure adequate capacity for management of New Hampshire-generated waste
- 5) Develop local markets for waste diversion
- 6) Encourage solid waste infrastructure and practices that support State and Federal climate change initiatives
- 7) Ensure that solid waste policies and regulations support State and Federal environmental justice initiatives
- 8) Ensure sustainable funding sources to support solid waste management initiatives

It should be noted that the goals outlined above are not listed in order of priority. These goals will be executed by NHDES and identified partners, through a series of specific actions. These actions are organized under five key strategies, which form a "Strategy Toolbox."

The five strategies in the toolbox are:

- 1) Public Outreach, Education, and Technical Assistance
- 2) Incentive Programs (e.g., grants, tax write-offs, public recognition, "green" certification)
- 3) Data Collection and Research
- 4) Regulatory Updates (by NHDES or other state agencies)
- 5) Legislation

# Summary of Comments on 20220720 DRAFT NH Solid Waste Management Plan

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Author: Wilson, Paige      Date: 7/15/2022 10:20:00 AM

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Question for SWWG:

Should we allocate tasks to specific entities? If so, how do we do that?



Actions outlined in the Plan incorporate recommendations from the New Hampshire Solid Waste Working Group established in 2021,<sup>3</sup> and the final report published by the 2019 Committee to Study Recycling Streams and Solid Waste Management in New Hampshire.<sup>4</sup>

#### GOAL 1: REDUCE THE QUANTITY OF SOLID WASTE GENERATED

Reducing waste from the source leads to social, environmental, and economic benefits by decreasing the quantity of waste needing end-of-life management. Waste reduction involves “upstream” approaches that conserve resources, avoid costs, and relieve pressure on waste management infrastructure.

##### *Public Outreach, Education, and Technical Assistance*

Action 1.1 – Develop educational materials, including online resources, to educate residents, municipalities, and businesses about the NH Waste Management Hierarchy and source reduction. Topics may include:

- Modifying consumer practices to promote waste reduction and reuse, including proper food storage, buying in bulk, purchase planning, and purchasing used items.
- Encouraging reuse of consumer goods and packaging such as use of refillable beverage containers and reusable shopping bags.
- Information about community-wide actions to encourage source reduction and reuse through yard sales, swap events, and repair clinics.
- Information about reuse and donation of textiles.

Action 1.2 – Use the U.S Environmental Protection Agency (EPA) Food Recovery Hierarchy to conduct outreach that promotes food rescue and donation to address food insecurity and support local farmers. Put quality, edible food to its highest and best use. Promotion may involve using the Harvard Food Law & Policy Clinic fact sheets about food donation, date labels, feeding food scraps to animals, and tax incentives.

Action 1.3 – Coordinate with NH Department of Health and Human Services to review and adjust food safety regulations to support food recovery and reduce food waste (for example, school share tables).

Action 1.4 – Collaborate with the NH Department of Administrative Services Procurement and Support Services team to increase awareness and use of the Supply Redistribution Service available to state agencies, municipalities, and the public (in support of RSA 9-C<sup>5</sup>).

Action 1.5 – Research and compile a directory of organizations that facilitate reuse of surplus items generated by businesses and institutions, such as IRN: The Reuse Network, Habitat for Humanity, etc.

Action 1.6 – Assist schools and universities with waste audits to identify ways to reduce waste.

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<sup>3</sup> <https://www.des.nh.gov/about/boards-and-committees/new-hampshire-solid-waste-working-group>

<sup>4</sup> <http://gencourt.state.nh.us/statstudcomm/committees/1476/reports/2019%20Final%20Report.pdf>

<sup>5</sup> New Hampshire RSA 9-C: <http://www.gencourt.state.nh.us/rsa/html/l/9-C/9-C-mrg.htm>

Action 1.7 – Use resources published by the EPA on sustainable management of construction and demolition materials<sup>6</sup> to share best practices, promote reuse and encourage “deconstruction” of structures as a way to minimize generation of construction and demolition debris (C&D).

Action 1.8 – Educate larger manufacturing facilities on the benefits of conducting waste audits to help identify possible opportunities for waste reduction and cost savings. Audits may be conducted by a procured consultant, service provider, or the NHDES Solid Waste, Pollution Prevention (P2), and Small Business Technical Assistance programs.

#### *Legislation*

Action 1.9 – Explore legislation, including extended producer responsibility (EPR) programs that would require product brands and manufacturers to minimize unnecessary packaging, reduce the use of single-use plastic packaging and enhance the recyclability of their packaging.

## **GOAL 2: REDUCE THE TOXICITY OF THE SOLID WASTE STREAM**

Reducing the toxicity of the solid waste stream requires source reduction and diversion of household hazardous wastes (HHW) and materials containing toxic chemicals, such as PFAS. Approaches may include implementing producer responsibility policies and ensuring that end-of-life management options are convenient and protective of public health, safety, and the environment.

#### *Public Outreach, Education, and Technical Assistance*

Action 2.1 – Coordinate with the NHDES P2 program to develop public outreach and education about HHW, including household-generated universal wastes, that addresses:

- Safe and proper storage
- Safe reuse, recycling, and disposal options
- Alternative non-hazardous products and Do-It-Yourself (DIY) options

Action 2.2 - Develop educational resources about PFAS in common consumer goods to facilitate informed purchasing decisions.

Action 2.3 – Encourage safe disposal of sharps and unwanted pharmaceuticals by promoting the safest, most cost-effective, and most convenient collection systems. This action may be accomplished through collaboration between state agencies and other stakeholders such as Regional Planning Commissions, police departments, and healthcare facilities.

#### *Incentives*

Action 2.4 – Explore incentive programs to support efforts by municipalities and organizations that engage in direct outreach and education to limit the use and disposal of toxic household products. Mitigating the use of toxic household products may reduce the likelihood of illegal dumping where the costs then fall to the municipality.

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<sup>6</sup> <https://www.epa.gov/smm/sustainable-management-construction-and-demolition-materials>

Action 2.5 – Identify funding options to support regional HHW collections and the establishment of more permanent regional HHW drop-off facilities.

*Data Collection and Research*

Action 2.6 – Identify collection strategies for household-generated hazardous items including batteries, paint, antifreeze, small gas cylinders, mercury-containing devices, and e-cigarettes/vaporizers. Assess how these items are currently being collected (for example, drop-off events, year-round collections at a facility or retail location, manufacturer take-back programs) identify who is involved, how collections are funded, and gaps in collection options and service areas.

*Regulatory Updates*

Action 2.7 – Identify regulatory barriers that pose challenges for safe disposal of sharps and unused pharmaceuticals for the public, schools, and non-traditional healthcare facilities such as group homes.

Action 2.8 – Require permitted disposal facilities (incinerators and landfills) to host or sponsor at least one annual HHW collection day for households within the facility's service area.

*Legislation*

Action 2.9 – Explore legislation that would establish waste disposal bans and EPR for items such as rechargeable batteries, electronic devices, paint, and sharps.

Action 2.10 – Consider legislation addressing use of chemicals of concern in consumer products, such as PFAS in carpeting, clothing, upholstery, and food packaging.

**GOAL 3: MAXIMIZE THE DIVERSION OF RESIDENTIAL, COMMERCIAL, AND INDUSTRIAL SOLID WASTE FROM DISPOSAL**

When waste is generated, it should be diverted from disposal whenever possible. Diversion involves “downstream” approaches such as recycling, composting, or other methods that avoid disposal in landfills and incinerators. Investments should be directed towards new and existing facility infrastructure that supports diversion in accordance with the Waste Management Hierarchy. In addition, solid waste facilities and haulers should provide clear information about available diversion programs and what is acceptable or not acceptable in those programs.

*Public Outreach, Education, and Technical Assistance*

Action 3.1 – Promote composting of organic wastes (food scraps, leaf/yard waste, manures, clean wood) through educational workshops, demonstrations, facts sheets, and guidance documents to ensure stakeholders are equipped with the latest information.

Action 3.2 – Develop outreach and education materials, including fact sheets and online resources, about New Hampshire's current waste disposal bans.

Action 3.3 – Develop BMPs for municipal recycling contract negotiations with case study examples of effective contract strategies that support transparency and informed decision-making about projected costs/revenues.

Action 3.4 – Develop uniform educational resources and provide technical assistance to citizens, businesses, and municipalities to support best practices for recycling and increase local awareness about what is recyclable in their area.

- All solid waste management entities (including public/private solid waste facilities, haulers, and large waste generators) will be encouraged to share these educational resources on their websites to ensure consistent messaging about reuse and recycling (as well as other methods of diversion and/or waste reduction).
- Messaging should include information about the negative impacts of “wish-cycling,” which occurs when misinformed recyclers put items in the wrong waste stream resulting in increased processing expenses and less diversion overall.

Action 3.5 – Assist schools and universities with recycling programs, food scrap diversion, and waste audits.

Action 3.6 – Promote variable rate pricing/PAYT and bag checks as a method for increasing participation in recycling programs. This may be accomplished through the NHDES Solid Waste Operator Training (SWOT) program, technical assistance to municipalities, and/or partnering with NH Municipal Association to reach local decision makers.

Action 3.7 – Integrate additional waste reduction and diversion topics into NHDES SWOT workshops.

Action 3.8 - Increase education and training for solid waste operators and local decision makers about how to regionalize waste management practices. Consider regulatory changes to make it easier for communities to share facilities, equipment, and other solid waste management resources.

#### *Incentives*

Action 3.9 – Explore incentives for municipalities that enact regional waste management strategies to increase diversion (such as cooperative hauling/marketing, sharing equipment, building regional facilities, forming solid waste districts per RSA 53-A<sup>7</sup> or RSA 53-B<sup>8</sup>) as well as projects targeting diversion of specific materials/waste types (for example, developing programs for recycling polypropylene, film plastics, and diverting food waste).

Action 3.10 – Explore incentive/recognition programs for businesses and institutions that make significant efforts divert their own solid waste (similar to Maine’s Green Business/Environmental Leader Certification Program).

#### *Data Collection and Research*

Action 3.11 – Determine reoccurring issues and challenges with contamination (that is, unwanted or nonconforming items) in recycling and composting waste streams. Explore educational campaigns and/or regulatory changes as needed.

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<sup>7</sup> New Hampshire RSA 53-A: <http://www.gencourt.state.nh.us/rsa/html/iii/53-A/53-A-mrg.htm>

<sup>8</sup> New Hampshire RSA 53-B: <http://www.gencourt.state.nh.us/rsa/html/iii/53-B/53-B-mrg.htm>

Action 3.12 – Establish guidance for uniform measurement and tracking of waste diversion data for public/private generators, solid waste management facilities, and haulers. Consider existing measurement models and tools from the EPA and other entities, such as Re-TRAC.

*Regulatory Updates*

Action 3.13 – Review the list of waste-derived products that are certified by rule in Env-Sw 1503 and pursue updates if warranted.

*Legislation*

Action 3.14 – Consider legislation to implement disposal bans and/or mandatory recycling requirements for wastes such as food waste, clean wood, mattresses, textiles, and/or select recyclables such as paper, cardboard, metal cans, plastic containers. Prospective bans should be prioritized based on potential to reduce overall disposal (as indicated by waste characterizations or other data). Depending on availability of processing infrastructure and/or end-markets, certain disposal bans and/or recycling requirements may need to be phased in over time (using generation rate and/or proximity to receiving facilities to establish compliance thresholds). For example, some states have implemented food waste disposal bans that target large commercial food waste generators first, with smaller generators becoming subject to the ban over time. Such approaches help to build demand incrementally, allowing markets/infrastructure time to develop.

Action 3.15 – Explore legislation requiring a certain percentage of C&D (by weight) to be diverted from disposal if a C&D processing facility is located within a certain distance to where the waste is generated/collected.

Action 3.16 – Explore Product Stewardship and EPR programs to encourage recycling of certain items, including rechargeable batteries, electronic devices, paint, and bulky items such as mattresses and certain appliances.

Action 3.17 – Explore legislation to implement a beverage deposit return system (bottle bill) in New Hampshire as a method for diverting beverage containers from disposal.

Action 3.18 – Explore legislation requiring haulers to provide recycling collection for businesses and residents in their service area.

**GOAL 4: ENSURE ADEQUATE CAPACITY FOR MANAGEMENT OF NEW HAMPSHIRE-GENERATED WASTE**

Maintaining adequate capacity for management of New Hampshire's waste will necessitate an integrated solid waste management system with facility infrastructure encompassing all levels of the waste management hierarchy. This integrated system should prioritize capacity for diversion as much as possible, reserving disposal capacity for wastes that have limited or no other management options. Attaining this system will require capital investments from waste management entities at all levels, both public and private. Ensuring adequate capacity will also depend on comprehensive data to determine that existing and future waste management infrastructure is able to meet New Hampshire's projected solid waste management needs.

*Public Outreach, Education, and Technical Assistance*

Action 4.1 – Engage with public and private entities to explore options for developing alternative technologies and centralized processing facilities that increase waste management capacity consistent with preferred methods in the New Hampshire Waste Management Hierarchy. This may include exploring options for:

- A state-of-the-art materials recovery facility (MRF) for processing single-stream recycling,
- Composting and anaerobic digestion facilities for processing organic solid wastes,
- C&D processing facilities for separating and diverting components of C&D, or
- Systems that employ a variety of novel technologies enabling wastes to be locally and efficiently sorted, processed, reused, recycled or formed into new products.

Action 4.2 – Provide regulatory and permitting guidance to facility applicants, as needed.

*Data Collection and Research*

Action 4.3 – Explore additional data collection methods in addition to annual facility and hauler reports. This may include voluntary surveys and sourcing solid waste data from industry partners.

Action 4.4 – Conduct statewide waste studies to better understand New Hampshire’s waste stream and identify priorities for action. Studies may include:

- A waste characterization study to determine the average composition of waste streams disposed and recycled in New Hampshire, and
- Waste generation study to estimate the total quantity and types of waste being generated statewide.

*Regulatory Updates*

Action 4.5 – Evaluate annual reporting requirements for solid waste facilities and haulers and identify what data is necessary to inform statewide solid waste management planning. Adjust annual reporting requirements, as necessary.

Action 4.6 – Review current permitting requirements for research and development projects and make rule changes as necessary to encourage more solid waste management entities to engage in thoughtful experimentation that spurs innovative technologies for management of solid waste.

*Legislation*

Action 4.7 – Review RSA 149-M:23-25 relative to local solid waste management planning and formation of solid waste districts to evaluate whether amendments are necessary to assure that local planning efforts are relevant to local solid waste management needs and consistent with the state Solid Waste Management Plan.

## GOAL 5: DEVELOP LOCAL MARKETS FOR WASTE DIVERSION

Markets for recycling and diversion should be developed and bolstered across New Hampshire and New England to minimize disposal need and ensure a more circular economy. Such activities not only benefit the overall waste management system, but also present economic opportunities that will benefit New Hampshire's economy at large. NHDES will collaborate with public and private stakeholders to explore opportunities for expanding local and regional diversion markets. Because markets are highly dependent on available infrastructure, achievement of this goal will track closely with Goal 4 to ensure that facilities are developed to provide adequate capacity for diversion. Markets also rely on clear sorting guidelines and quality specifications to help waste generators and solid waste facilities understand what and how to recycle. More participation and conscious recycling efforts by consumers consistent with Goal 3 will result in higher recovery rates and ensure that recycling markets have a consistent, high-quality supply of recyclable feedstocks.

### *Public Outreach, Education, and Technical Assistance*

Action 5.1 – Participate in local, regional, and national discussions about materials management and share pertinent information with stakeholders to help improve recycling markets.

Action 5.2 – Work with other state agencies to update state procurement and Request for Proposal (RFP) policies to give preference to use of recycled content and certified waste-derived products (CWDPs) for certain activities or projects (for example, compost, crushed glass). CWDPs should be used if it is economically and logistically feasible for the specific application.

Action 5.3 – Compile and share educational materials to create awareness about how recyclables are used/what products they are commonly turned into, the benefits of buying recycled-content products, as well as the greater economic impacts of recycling.

Action 5.4 – Compile information on reuse businesses and solid waste facilities that provide diversion outlets and develop online resources, such as interactive maps, to visualize opportunities for reuse, recycling, donation, repair, etc.

Action 5.5 – Reestablish the State Recycling Market Development Coordinator position to facilitate efforts to develop and strengthen recycling markets in New Hampshire.

### *Incentives*

Action 5.6 – Develop incentives for New Hampshire businesses that produce products with post-consumer recycled content and compostable packaging to build demand for recycled materials.

### *Data Collection and Research*

Action 5.7 – Work with multi-state organizations such as the Northeast Resource Recovery Association (NRRRA), Northeast Recycling Council (NERC), Northeast Waste Management Officials Association (NEWMOA), University System of New Hampshire, and the Department of Business & Economic Affairs (DBEA) to research business opportunities with entrepreneurs to develop regional market strategies that support diversion.

Action 5.8 – Develop a Recycling Market Development stakeholder committee to explore options for diversion of difficult-to-recycle materials including C&D debris, furniture, carpeting, mattresses, glass, plastic film, and emerging consumer products/packaging that currently have limited diversion options.

Question for SWWG:

At 6/24 Meeting the Committee indicated language in this section is weakest part of entire plan -- specific recommendations for strengthening?



*Regulatory Updates*

Action 5.9 – Evaluate barriers to the use of crushed glass in construction projects. Consider regulatory updates to codify acceptable uses in low risk, low impact applications including underlayment for parking lots, walkways and sidewalks, and as backfill for pipes and culverts.

*Legislation*

Action 5.10 – Consider legislation requiring updates to State agency procurement policies to reduce solid waste and increase demand for recycled content. Policies should require product purchases with high post-consumer recycled content to drive market development.

**GOAL 6: ENCOURAGE SOLID WASTE INFRASTRUCTURE AND PRACTICES THAT SUPPORT STATE AND FEDERAL CLIMATE CHANGE INITIATIVES**

All stakeholders involved in solid waste management should consider climate change in planning and decision-making, emphasizing strategies that mitigate climate impacts and facilitate adaptation. As New Hampshire works towards achieving many of the other goals outlined in this plan, there will be indirect benefits related to water and resource conservation, improved energy efficiency, and a reduction in greenhouse gas emissions. For example, increasing recycling practices helps to reduce resource extraction, energy use and associated greenhouse gas emissions. Similarly, diverting food waste has the potential to reduce methane emissions that would otherwise result from food rotting in landfills. Additionally, development of more local diversion markets can minimize transportation costs and reduce emissions by eliminating the need to transport waste long distances. Below are additional actions that can further help to address the impacts of climate change.

*Public Outreach, Education, and Technical Assistance*

Action 6.1 – Develop guidance for installation of solar photovoltaic panels on closed, inactive landfills. Consider whether adjustments to solid waste permitting requirements may encourage such installations.

Action 6.2 – Collaborate with New Hampshire Department of Transportation and other stakeholders to update the State’s disaster debris management plan. Consider whether regulatory updates are needed.

Action 6.3 – Share case studies and information about opportunities for landfill reclamation to recover resources from closed, inactive landfills.

*Data Collection and Research*

Action 6.4 – Explore options to generate energy from waste using landfill gas, as well as alternative technologies such as anaerobic digestion and pyrolysis.

**GOAL 7: ENSURE THAT SOLID WASTE POLICIES AND REGULATIONS SUPPORT STATE AND FEDERAL ENVIRONMENTAL JUSTICE INITIATIVES**

The EPA’s principles of Environmental Justice (EJ) promote fair treatment and meaningful involvement of all people regardless of race, color, national origin, education, or income, with respect to the development, implementation, and enforcement of environmental laws, regulations, and policies. EJ typically centers on communities that have historically been marginalized and/or adversely impacted by

application of environmental laws, regulations, and policies. In New Hampshire, both urban and rural communities can experience negative impacts associated with solid waste management. To align with state and federal efforts, NHDES will work to ensure fair and equitable treatment of, and engagement with, individuals impacted by solid waste management activities in the state.

*Public Outreach, Education, and Technical Assistance*

Action 7.1 – Align solid waste program efforts with the NHDES Title VI – Nondiscrimination/Environmental Justice policy.

Action 7.2 – Identify resources to help with translating outreach materials, program information, and workshop presentations, to ensure equitable access for all people.

Action 7.3 – Work with solid waste management facilities, haulers, and local governments to promote equitable access to reuse and diversion opportunities.

*Incentives*

Action 7.4 – Explore opportunities for grant funding to promote diversion programs that meet the needs of EJ communities.

**GOAL 8: ENSURE SUSTAINABLE FUNDING SOURCE(S) TO SUPPORT SOLID WASTE MANAGEMENT INITIATIVES**

NHDES and stakeholders across the solid waste management system need sufficient resources, staffing, and oversight to carry out the actions presented in this plan. As such, sustainable funding is a foundational piece to its successful implementation. In New Hampshire, funding to support NHDES' solid waste management program has historically been limited, and insufficient to support state grant or loan programs that could incentivize the efforts of local governments and the private sector to advance statutory goals. To ensure that adequate funding is available to support implementation of this plan, it will be important to consider opportunities for additional funding to bolster existing resources.

*Public Outreach, Education, and Technical Assistance*

Action 8.1 – Compile information about federal and state grant and loan programs which support solid waste management practices and share this information with interested public and private entities.

*Incentives*

Action 8.2 – Pursue opportunities for funding to establish a grant program as authorized by RSA 149-R to support waste reduction and diversion efforts by New Hampshire businesses and municipalities. Grant programs may be used to support infrastructure, as well as outreach and technical assistance programs.

*Legislation*

Action 8.3 – Explore legislative opportunities for establishing a dedicated funding source to support state, local, and private sector solid waste initiatives that advance the goals of this plan.

## V. On-Going Plan Evaluation

NHDES will track progress toward achieving the goals of this plan through a variety of quantitative and qualitative data including, but not limited to, annual solid waste facility and hauler reports, meeting minutes, workshop participation, legislative hearings, published outreach materials, and examples of technical assistance provided. As the plan is implemented, NHDES will assess barriers, document lessons learned, and adjust actions accordingly to maximize the success of each goal. NHDES staff will seek opportunities to interact with local jurisdictions, solid waste districts, regional organizations, and other stakeholders to learn about successful initiatives and challenges encountered. Biennial Solid Waste Reports, issued by NHDES, will provide a check-in for meeting the State's disposal reduction goal and the specific goals in this Plan.

## VI. Summary

Reaching the vision for New Hampshire laid out in this plan requires active participation from everyone who uses and is involved in New Hampshire's solid waste management system. NHDES, the regulated solid waste industry, municipalities, the New Hampshire General Court, non-governmental organizations, and the general public must work together to build a sustainable waste management system, balancing economic, environmental, and social factors.

The short-term actions to be completed promptly after publication of this plan, include:

- Completing statewide waste characterization and waste generation studies,
- Securing reliable, on-going funding to support the actions identified in this plan,
- Gathering more comprehensive data by revising the contents of annual facility reports, and using other data tracking tools,
- Establishing administrative rules to increase compliance with hauler registration and reporting requirements, and
- Assisting municipalities with outreach and education through public workshops, guidance documents, training opportunities, and sharing online tools.

A more sustainable future in waste management requires systemic changes in how we produce, distribute, and use products and services in New Hampshire. These changes will require New Hampshire to move toward policies and practices that support higher diversion rates for wastes that are reusable, recyclable, or compostable, while also reducing waste generation by minimizing or eliminating the use of unnecessary or difficult to manage materials. Success in these areas will uphold the goals and hierarchy in RSA 149-M:2-3, and support the statute's vision for proper and integrated management of solid waste.

## VII. Appendices

- A) **Glossary of Terms** – Provide definitions of key words used in this plan so that readers have a consistent understanding of terms used in this plan. Supplement to regulatory definitions found in chapter Env-Sw 100 of NHDES' administrative rules.

Author: Nork, Michael      Date: 7/20/2022 2:46:00 PM

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Question for SWWG:

What metrics can be used to track progress? And who can provide data?

Author: Wilson, Paige      Date: 7/18/2022 1:57:00 PM

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Question for SWWG: Input on list of top priority actions?

Should we create an estimated timeline for completing these actions?

Author: Wilson, Paige      Date: 7/11/2022 12:05:00 PM

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Question for SWWG:

What terms should be included in the glossary?

- B) ***Summary of Actions Listed by Waste Type (Table)***
  
- C) ***Snapshot of Current Municipal Solid Waste (MSW) Management Costs*** – Compile information that describes processes/costs related to MSW collection, transportation (\$/ton/mile for sample # of facilities), disposal (\$ tipping fee/ton), recycling (market price per commodity), composting.