



## D. Appendix D, Airport Recycling, Reuse, and Waste Reduction Plan



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## D.1 Introduction

The FAA Modernization and Reform Act of 2012 (FMRA) amended Title 49, United States Code (U.S.C.) and made changes to the Airport Improvement Program (AIP) relative to recycling, reuse, and waste reduction at airports, namely the following:

- Section 132(b) which expanded the definition of airport planning to include “developing a plan for recycling and minimizing the generation of airport solid waste, consistent with applicable State and local recycling laws, including the cost of a waste audit”.
- Section 133 which added a provision to require airports preparing a master plan and receiving AIP project funding to ensure that a new master plan addresses issues relative to solid waste recycling at an airport including:
  - Feasibility of solid waste recycling at the airport,
  - Minimizing solid waste generation at the airport,
  - Operation and maintenance requirements,
  - Review of waste management contracts, and
  - The potential for cost savings and generation of revenue.

FAA issued a memorandum dated September 30, 2014, to “provide guidance on preparing airport recycling, reuse, and waste reduction plans as an element of a master plan or master plan update, within a sustainability planning document, or as a stand-alone document”. Within this guidance, FAA defines ‘recycling’ as “any program, practice, or opportunity to reduce the amount of waste disposed in a landfill. This includes reuse and waste reduction as well as the recycling of materials”.

This plan has been developed in accordance with FAA’s guidance and review existing programs in place at the Beverly Municipal Airport (BVY, or the Airport) and to provide review and guidance on potential improvements that could potentially be made to reduce waste and improve material recycling and reuse.

## D.2 Airport Description and Background

BVY is a publicly-owned, public-use, general aviation (GA) airport owned by the City of Beverly, Massachusetts, and located in the municipalities of Beverly, Danvers, and Wenham. The Airport encompasses 470 acres and provides a wide range of services including Fixed Base Operator (FBO) services, flight training, aircraft management, aircraft maintenance, and aircraft parking for based and transient aircraft.

Additional information regarding the Airport and its operations is included in **Chapter 2** of this Airport Master Plan.

## D.3 Existing Waste Sources

For airports, the identification and evaluation of waste streams can be complex due to the number of involved parties that independently may generate waste and recyclables and that have their own agreements relative to such materials. Primary sources of waste at airports such as BVY include the airfield, airport



administration/maintenance buildings, and the various hangars and tenants at the facility. Per FAA’s 2014 memo, waste sources can further be broken down by the level of control over which an airport has on the generation and disposal of various waste streams. Per the 2014 FAA guidance, the three identified levels of control are:

- Facilities over which an airport has direct control of waste management (i.e., public space, office space, administration building, airfield, etc.);
- Areas over which an airport has no direct control, but may have influence (tenant facilities, deplaned waste, etc.); and
- Areas over which an airport has no control or influence (areas the airport neither owns nor leases), which are excluded from the plan.

**Table 1-1** summarizes the identified areas of BVY that generate waste, the types of waste generated, and the level of control the Airport has over the waste. Building number references are taken from **Chapter 2** of the Airport Master Plan. Note that this plan only addresses Municipal Solid Waste (MSW), including construction and demolition (C&D) debris, food and yard waste, and deplaned waste. MSW includes items such as aluminum and steel, glass bottles and containers, plastic bottles and containers, packaging, bags, paper products and cardboard. It does not address hazardous waste, universal waste (batteries, electronics, CFLs, etc.) or industrial waste.

**Table D -1: Waste Generation**

Area	Wastes Generated	Level of Control
Area 1: Airfield	General debris found on airfield, Construction materials during improvement projects	Direct Control
Area 2: Administration Building, Building #45, Building #46	Plastic, glass, aluminum, oil, batteries, trash	Direct Control
Area #3: Tenants	Plastic, glass, aluminum, oil, batteries, trash	No Direct Control, but Can Influence

### D.4 Local Recycling and Waste Management Programs

The development along the east side of the Airport is in the City of Beverly, while the west side development is within the Town of Danvers. Both municipality’s waste and recycling programs are discussed herein.

The City of Beverly has multiple programs in place relative to solid waste collection and recycling. Municipal trash collection is by JRM Hauling and Recycling (JRM). JRM also maintains the Standley Street Yard Waste Compost Site, which collects yard waste and conducts curbside pickups for yard waste. Beverly is a “Dual Stream” Recycling Community, indicating that while glass, plastic, and metal can be mixed, paper and cardboard must be separated from those items for municipal recycling collections. The City has had a curbside recycling program since 2013. The City also has citywide curbside food compost collection for those that enroll in a fee-based program through a private contractor, Black Earth Compost.

The City of Beverly also has a Waste Reduction Committee which publicizes various collection events for items such as household hazardous waste, electronics, Styrofoam, etc.

The Town of Danvers' municipal solid waste and recycling is also collected and managed by JRM. Danvers also has a Dual Stream recycling program. The Town has zero waste recycling weekends for materials including textiles, household goods, electronics, metals, rigid plastics, and paper for shredding. The Town also offers a household hazardous waste day, textiles recycling, yard waste pickup, and transfer station access for drop-off of certain materials.

There are no specific waste management reduction programs or goals identified in either community at this time beyond the programs identified herein.

## **D.5 Overview of Airport Recycling, Reuse, and Waste Management**

Airports have been directed through agency guidance and legislation to develop reuse, recycling, and waste management programs and to assess potential improvements. Due to the presence of incentives and offers, many airports have installed solar panels, energy and water efficient fixtures, and used electric or other low-emission vehicles in their fleets, and incorporated energy efficiency and waste reduction into capital improvement projects.

The United States Environmental Protection Agency's (EPA's) guide entitled "Developing and Implementing an Airport Recycling Program", dated 2009, provides information for airport management about how to establish a successful recycling program as a first step in airports tackling waste management. The guide also provides information on source reduction opportunities and purchasing environmentally friendly products, as well as examples of innovative waste reduction programs at airports.

For many airports, their waste management program is tied heavily to the programs available in their municipalities, since many airports are municipally-owned or operated, as is the case with BVY. For BVY administrative and maintenance operations, Airport management employs recycle bins within various Airport buildings related to metals, rigid plastics, and paper that is removed and processed by City of Beverly recycling services.

To further identify other recycling efforts located on the Airport, BVY distributed tenant surveys to better understand how tenants handle waste and recycling. Due to COVID-19, tenant responses were limited. North Atlantic Air, Inc. (NAA), indicated that they have a dumpster for trash which is emptied by Waste Management every other week. NAA has also used Cyn Environmental Services to remove its waste oil and hazardous materials on an as-needed basis. The North Shore Aero Club either puts trash in the Airport's receptacles or takes the trash home with them for individual disposal. The BVY air traffic control tower indicated that they place trash in the Airport's trash receptacles. None of the three tenants has formal recycling programs currently in place.



## D.6 Recycling at BVY

BVY's current recycling program generally consists of recycling bins located within Airport-operated buildings (e.g., maintenance building, administration building) located alongside general waste bins. Recycling is processed by the City of Beverly municipal services. Tenant responses indicated that the BVY air traffic control tower and North Shore Aero Club have individuals that take home recyclables for personal recycling at their home. North Atlantic Air indicated that they would utilize recycling services if they were available at the Airport, but that they do not currently recycle.

## D.7 Plans to Minimize Waste Generation

The feasibility of waste reduction strategies varies by airport size and resources and location. Implementation of a few simple practices could decrease the amount of waste generated. Potential improvements could include:

- Provide educational material to tenants and airport employees on what material should be recycled and the appropriate business contacts. Encourage tenants to establish recycling.
- When feasible, purchase products made from recycled material and encourage tenants to do so.
- Add recycling, reuse, and waste reduction requirements to future tenant leases and amend current leases, if opportunity exists.

The potential success of implementing a long-term waste reduction, reuse, and recycling program requires several key elements, as indicated in FAA's *Recycling, Reuse and Waste Reduction at Airports – A Synthesis Document* and below is a list of those steps listed in that document as being necessary for developing a successful program:

1. Commitment from Management
2. Program Leadership
3. Waste Identification
4. Waste Collection and Hauler
5. Waste Management Plan Development
6. Education and Outreach
7. Monitor and Refine
8. Performance Monitoring
9. Promote Success
10. Continuous Improvements

In the future, BVY could enhance its existing program through employing simple steps to better educate staff and tenants about options for material reuse and recycling, encouraging waste reduction at the Airport, as outlined above.