Appendix F – Recycle, Reuse, Reduce

F.0 Introduction

As part of the Springfield-Beckley Municipal Airport Master Plan, environmental sustainability was reviewed in the following ways and presented in this appendix respectively.

- Policy Statement
- Airport Facility Overview
- Waste Source Review and Audit
- Recycling Feasibility
- Airport Waste Contracts
- Waste/Recycling Revenue Generation
- Solid Waste Generation Minimization Plan

F.1 Policy Statement

The Springfield-Beckley Municipal Airport (SGH) is committed to operating the airport in a that ensures a safe and healthy workplace for our employees and minimizes our impact on the environment. We will operate in compliance with relevant federal, state, and municipal environmental legislation, and we will strive to use environmental best practices in all we do.

F.2 Airport Facility Overview

SGH is located in Clark County in west central Ohio and is classified by the FAA as a general aviation airport. It and owned by the city of Springfield and falls under the Aviation Department. Detailed information about the facility can be found in Chapter 1, Inventory. The Springfield Air National Guard Base is the home base of the Ohio Air National Guard's (OANG) 178th Fighter Wing and is located on the north side of the airport. SGH falls within the Clark County Solid Waste District, which includes all the all incorporated and unincorporated territory in Clark County and a small portion of neighboring Greene County (Village of Clifton).

F.3 Waste Source Review

To fulfill the requirements of the waste audit, an interview and facility walkthrough[1] was conducted with the airport manager. During this interview and walkthrough, the following topics were discussed: sources of waste, collection of waste, control over waste sources, and feasibility of recycling at the airport. As a general aviation airport with no commercial airline service, minimal waste is generated on the facility that the sponsor has direct control over.

The City currently provides for two dumpsters at the airport: one by the terminal building and one by the flight school. All tenants have access to both on a continuous basis. Waste Management Inc. Commercial businesses at the airport provide for their own dumpsters also.

[1] *Instructions on Conducting Waste Assessments*, US Environmental Protection Agency, 2018.; *Business Guide for Reducing Solid Waste*, US Environmental Protection Agency, 1993. *NOTE:* A facility walk-through involves touring the facility (and its grounds), observing the activities of the different departments, and talking with employees about waste-producing activities and equipment.

The primary sources of SGH waste include the airfield, the terminal building, hangars, and tenants. The airport has various levels of control over these waste generators, which include the following:

- Direct control – These include areas that are controlled by the Airport where the sponsor is able to introduce recycling, reuse, and reduction programs directly, such as office space, the terminal building, and the airfield.
- Indirect – These are areas that are generally leased to tenants. The Airport can influence these areas by recommending recycling, reuse, and reduction programs and including language in the tenant contracts but cannot control what the tenant does is this area. They generally include hangars and other leased buildings and grounds.
- No control – These are areas the Airport neither owns nor leases. Because the sponsor has no direct or indirect control over these, they are not included in this chapter. An example might by the OANG, which is a user of the airport, but neither owned or controlled by it.

The identified areas of waste generation at SGH are included in **Exhibit F.3-1** along with the waste generated by each and any reduction and/or recycling programs in place are.

Exhibit F.3-1 SGH Waste Generation

Area	Waste Generated	Control
Airfield	Foreign object debris (FOD), construction material (asphalt, concrete, wood, metal), brush and limbs	Direct
Airfield operations/maintenance	Aluminum, batteries, cardboard, glass, oil, paper, plastic, steel cans, Styrofoam, tires, light bulbs, fluorescent tubes	Direct
Air Traffic Control Tower	None – Closed	Direct
Hangars/Tenants	Aluminum, batteries, cardboard, glass, oil, paper, plastic, steel cans, Styrofoam, tires, trash	Indirect
Terminal Building	Aluminum, batteries, cardboard, glass, light bulbs, fluorescent tubes oil, paper, plastic, Styrofoam, toner cartridges, trash	Direct

Source: SGH, Woolpert.

The amount of waste generated by each of these sources varies depending on if they are operating under normal conditions, are expanding their operations, or are implementing capital improvement projects. According to the Clark County Solid Waste Plan, the Residential/Commercial waste generation per person in Clark County was estimated to be on average 5.61 pounds per person per day.[2] This seems high for SGH considering the majority of aircraft are individually owned and not operated every day. A waste audit performed at Newport Municipal Airport suggested the airport FBO generated approximately 21 pounds of waste per week.[3] A waste audit performed at the La Grande / Union County Airport suggested individual airport tenants produced about one pound of waste per week and commercial tenants

[2] 2019-2033 Draft Solid Waste Management Plan Update, Clark County Solid Waste District, September 6, 2018.
[3] Newport Municipal Airport Master Plan Update, Final Draft June 2017.

averaged about 71 pounds per week.[4] A waste audit performed at Newport Municipal Airport suggested the airport FBO generated approximately 21 pounds of waste per week.[5] With these amounts in mind, the airport likely generates around 424 pounds per week (1 pound per 48 individual hangars + 71 pounds per conventional hangar + 21 pounds per FBO) or approximately 22,000 pounds per year.

F.4 Recycling Feasibility

Implementing a successful recycling program at specifically for SGH would be challenging. Given the small size of the airport and its small waste stream, maintaining a program and measuring the tangible benefits would also be costly and arduous. Issues for SGH are mostly its small size and lack of direct control. Additionally, there are multiple tenant groups that impacted and are affected by recycling and waste collection that creates a complex system with many opportunities for unintended consequences. Because of these issues, an airport wide recycling program has not been pursued. However, one commercial operator at the airport has a recycling dumpster next to their trash dumpster that is co-located with the city provide dumpster. This operator allows tenants to use this recycling dumpster also.

F.5 Airport Waste Contracts

As a department within a larger government, SGH uses the waste management program and contracts that are already in place throughout the larger municipality. Accordingly, there is no opportunity for review waste contracts.

F.6 Waste/Recycling Revenue Generation

Given SGH's small internal waste stream, there does not appear to be a potential for revenue generation. However, there is potential for cost savings as it is related to construction and demolition (CD) waste. CD debris can be defined as the non-hazardous solid waste stream than results from land clearing, excavation, and/or the construction, demolition, renovation, and repair of structures, runways, taxiways, ramps, and utilities. On an airport, CD debris commonly includes concrete, asphalt, wood, metals, plastic, pipe, rocks, earthwork, and land-clearing debris. In all industries, CD debris makes up approximately a quarter of all solid waste discarded in this country.[6] When it comes to the typical construction projects that occur at SGH, redirecting reusable materials back to the manufacturing process allows for a cost savings and a reduction in waste that is sent to landfills.

The primary runway at SGH is concrete. If/when the primary requires reconstruction, concrete recycling may save costs. In this process, concrete is crushed and screened onsite and then the aggregate is used as a base for the new runway. For large projects that require full reconstruction, this can be represent a substantial cost savings. Rehabilitation projects, such as mill and overlay, produce much less savings, if any. However, in these instances, the crushed concrete can be used to build temporary or permanent haul roads for major construction projects and future maintenance of the airfield that improves access and safety and vehicle roads on the airport. The crosswind runway at SGH is asphalt, along with most of the taxiway system. Asphalt tends to be recycled much easier into a pavement mixture on site than concrete, so asphalt recycling should be considered also, especially for rehabilitation projects.

[4] La Grande / Union County Airport Master Plan Update, Recycling & Solid Waste Management Plan, March 2018.
[5] Newport Municipal Airport Master Plan Update, Final Draft June 2017.
[6] *Recycling, Reuse and Waste Reduction at Airports: A Synthesis Document*, Office of Airports, Federal Aviation Administration, April 24, 2013

F.7 Solid Waste Generation Minimization Plan

While the airport has very little direct control over the generation of solid waste at the airport, it generally does not create a large amount. That being said, there are a number of voluntary measures the airport can undertake that include the following.

- Encourages the purchase of recycled materials and products on the airport.
- Encourage recycling in future lease contract.
- Recycle grass tree trimmings, brush, etc. from landscaping and maintenance operations into compost and mulch used around the terminal and airport entrance.
- Implementing a Pavement Recycling Program for new airport pavement replacement projects where there is a cost benefit.
- Providing clearly marked collection bins in the terminal and around the airport.

F.7 Conclusions

As a general aviation airport without commercial airline service, SGH is not of the size or magnitude to generate a significant amount of waste. It also has little control over its users of the airport and their generation of waste. Being t that it is an entity of a larger governmental unit, it does not control its own waste contracts. Accordingly, there is not a great opportunity for waste reduction or waste control in a normal operating environment. However, there is the opportunity for waste reduction in airport development projects, and this should be pursued on a project by project basis when there is a cost benefit to do so.