

APPENDIX H: RECYCLING, REUSE AND WASTE REDUCTION PLAN

## Recycling, Reuse and Waste Reduction Plan

Per FAA Order 5100.38D, master plans funded with AIP dollars must address issues related to an airport's recycling, reuse, and waste reduction programs. This includes:

- Reviewing waste management contracts
- Assessing the feasibility of solid waste recycling at the airport
- Identifying operations and maintenance requirements
- Identifying the potential for cost savings or generation of revenue
- Minimizing the generation of waste at the airport

This recycling, reuse, and waste reduction plan provides information regarding the VRB waste and recycling programs, based on a review of the practices by VRB and its tenants.

### *1.1. Background*

The inventory chapter detailed the various facilities and features of the airport. As a public-use airport, VRB is owned and operated as a department of the city of Vero Beach, Florida, and as such, primarily receives waste-handling services through the city's contract with Waste Management. Most of the waste at VRB is generated by the aeronautical and nonaeronautical tenants, as well as the users of the various facilities. VRB is responsible for collecting waste generated by the commercial airline service and its administration offices, while tenants are responsible for their own trash and any recycling disposal. In addition to municipal solid waste, VRB and some of the tenants have hazardous waste, spill waste, and project-related construction and demolition waste, which are typically managed by an outside contractor.

Common waste disposed at VRB includes:

- General office waste: paper, plastic (hard plastic containers and film plastics), aluminum cans, bottles, and cardboard boxes
- Small-scale in-flight service-related waste such as food, food packaging, paper products, and cardboard
- Construction and demolition waste from construction projects
- Hazardous waste such as batteries, fluorescent light bulbs, solvents, tires, and paint

Most of the waste generated by VRB staff is from the office areas; however, this is a small volume relative to the overall waste generated by the tenants, passenger airline service, restaurant, and other airport users. Some of the waste minimization efforts undertaken by one or more tenants include:

- Double-sided printing and electronic document use/storage
- Recycling fluorescent light bulbs, oil, and cleaning solvents
- Converting fluorescent light bulbs to longer-life LEDs
- Recycling scrap metal

VRB does not have a formalized recycling or waste reduction program; however, a number of tenants and businesses on VRB property have taken steps to reduce waste and increase recycling efforts. For example, there are tenants that recycle paper, plastic, glass, and scrap metals. Regardless, there are no formalized goals or targets and, therefore, no tracking or reporting on such measures at VRB. Because of the way solid waste and

recycling services are billed (i.e., flat-rate billing rather than by volume), it is even difficult to track and monitor the performance of these services. A formalized recycling program could be established, but staff time requirements and costs are common challenges to such programs.

*1.2. Waste Review*

In lieu of a full waste audit, a review of waste management practices and programs was completed. In-person and virtual meetings were held with airport management, while other tenants and stakeholders, including aeronautical and numerous nonaeronautical businesses on VRB property, were contacted to complete a survey of their waste disposal practices. Of the 50 invitations sent to tenants, 23 completed the survey. A copy of the survey is included at the end of this document.

The tenants of VRB-managed hangars and facilities have access to dumpsters and even waste oil receptacles (see **Figure 1**). Other tenants are responsible for collecting waste items from their leased facilities. More than 50 aeronautical and nonaeronautical businesses have waste receptacles near their facilities, while others transport it to the various marked disposal containers (dumpsters) around VRB.

**FIGURE 1: DUMPSTER AND WASTE OIL RECEPTACLE IN THE VRB HANGAR AREA**



On-airport waste removal and disposal services are primarily provided through the city of Vero Beach’s Solid Waste Division; however, some are handled by the Indian River County Solid Waste Disposal District. The city and county contract these services to Waste Management. From tenant responses, it was determined that most of those that recycle and have on-property collection are also serviced by Waste Management.

While there is no airportwide recycling pickup service, several tenants and businesses at VRB independently pay for commercial recycling services. In fact, more than half of the tenants that responded to the waste review survey indicated having some form of a commercial recycling program. Typical recycled items include paper, plastic, and cardboard, glass, plastic, metal, and aluminum cans. Additionally, a few contractors, mechanics, and construction businesses in VRB’s industrial areas recycle scrap aluminum, other metals, and waste oils. Some tenants, mostly small business owners, report periodically taking recyclables to their residences for recycling disposal or to the

county landfill, which operates a recycling center. One of the more unique findings of this waste review was from the distillery in the south airport industrial park, which shared its practice of providing process waste (spent grains) to cattle farmers as a feed supplement. A small number of tenants expressed interest in recycling but would prefer a free option or inclusion with commercial waste removal, because the added cost of commercial recycling would be too expensive.

### *1.3. Review of Recycling Feasibility*

There are factors that impact the operations at VRB's ability to recycle. The primary factor is that a recycling pick-up service is not provided in parallel with regularly scheduled commercial solid waste pickup and would require VRB to procure these services and assign staff to manage it. These would likely be the greatest barriers to implementing an effective airportwide recycling program. VRB has a relatively large footprint with many tenants and limited resources. Because most tenants and businesses oversee their own waste management contracts, continual coordination with all the tenants would not necessarily be needed for a successful recycling program to be implemented at airport-managed facilities.

Every other year, VRB hosts the Vero Beach Air Show. At the time of this airport master plan, this event is in the planning stages for the spring 2024 show. As a three-day event with additional days for setup and breakdown, the air show has historically drawn crowds between 55,000 and 75,000 attendees. This provides an opportunity for a recycling stream from an event that generates a fair amount of recyclable materials (e.g., bottles, cans, and paper products).

### *1.4. Operation and Maintenance Requirements*

VRB has a very limited number of staff and additional responsibilities could be a burden, specifically on the limited janitorial staff responsible for maintaining the spaces and buildings managed by VRB. This could create a barrier to the implementation of an airportwide recycling program. Conversely, there are airport tenants that have considerably more staff than the airport and would be less burdened by initiating an in-house recycling program.

### *1.5. Potential for Cost Savings or Revenue Generation*

For construction projects, the airport should consider promoting that all contracts require some level of cost savings related to the reuse or repurposing of materials. VRB may also be able to sell scrap metal, particularly from projects that involve demolition and/or construction. While the low volume of waste limits the potential for savings or a reliable revenue generation source, some of the nonaeronautical tenants sell scrap metals, proving the commodity market is present in the area. These are various contractors and construction businesses in the industrial areas leased by VRB.

### *1.6. Plan to Minimize Solid Waste Generation*

The following initiatives were identified that could advance VRB's recycling and waste reduction efforts that can be implemented individually, based on staff resources.

- **Provide airportwide recycling:** Work with the city to establish a recycling service and collocate recycling receptacles with waste receptacles throughout the public areas in the terminal, administration offices, and facilities where waste is managed by the airport.
- **Provide water bottle filling stations:** Install water filling stations near water fountains beyond the security checkpoint and in public areas to help minimize disposable plastic bottles by encouraging the use of reusable bottles.

- **Provide recycling for large events:** Coordinate with organizers of large events at VRB that may create a large recycling stream, such as the Vero Beach Air Show, to provide recycling options for patrons and visitors.
- **Develop a waste reduction program:** Develop and implement a waste reduction program and encourage employee participation. The program should incentivize waste reduction, diversion, and recycling, as well as include quantifiable goals to track progress and performance. Identify relevant waste reduction goals and officewide recycling methods (e.g., reusable toner cartridges, rechargeable batteries, reusable packaging, etc.) and individual participation (e.g., reusable water bottles, etc.) to further this program.
- **Develop environmentally preferable purchasing procedures:** Work with the city to establish procedures for purchasing materials with recycled/bio-based content, low toxicity, or other environmentally friendly products. Consider green-label equipment in purchasing guidelines or other equipment that has low emissions and/or low sound levels.
- **Develop an awareness campaign:** If a recycling service is provided, educate employees, tenants, and customers about proper recycling practices; this could include posters and additional signage.
- **Provide hand dryers:** Install high-efficiency hand dryers in all restrooms that do not have them and reposition towel dispensers to reduce paper towel use.
- **Charitable donations:** Collect lost and found items (e.g., jackets, sunglasses), as well as materials abandoned in the passenger terminal facilities and donate these materials to a local charity, if allowed.
- **Enhance tenant engagement:** Coordinate with tenants to consolidate materials, improve the economies of scale, and expand awareness about recycling practices.
- **Host a periodic universal waste collection day:** Coordinate with the city of Vero Beach and/or Indian River County to host a periodic (quarterly or semiannual recommended) collection day for universal waste. Provide an opportunity for VRB employees, tenants, and even the local community to drop off materials such as batteries, lightbulbs, electronics, chemicals, paints, pesticides, etc. An example could be to coordinate with local jurisdictions to create an annual electronics recycling drive.

1.7. Waste Review Survey Distributed to Airport Tenants

1. What is the name of the business or organization that you represent?  
\_\_\_\_\_
2. What are the typical waste items your organization throws away?
  - Paper
  - Plastic
  - Glass
  - Cardboard
  - Metals
  - Paint
  - Construction materials
  - Other (please specify) \_\_\_\_\_
3. If you selected Metals, Paints, and/or Construction Materials in question 2 above, do you recycle, sell, or salvage construction waste or metal shavings?
  - Yes (please describe) \_\_\_\_\_
  - No
  - Don't Know
4. Before trash is disposed, are obvious or visible recyclables removed?
  - Yes (please specify) \_\_\_\_\_
  - No
  - Don't Know
5. Does your organization have a recycling program?
  - Yes
  - No
6. What materials does your organization collect for recycling?
  - Paper
  - Plastic
  - Glass
  - Cardboard
  - Metals
  - Other (please specify) \_\_\_\_\_
7. Do you separate recyclables, or do you use single-stream recycling (collected in one bin)?
  - Separate
  - Single-stream
  - Other (please specify) \_\_\_\_\_
8. When did you begin your recycling program?  
\_\_\_\_\_

9. How frequently is waste picked up? [**daily, twice a week, weekly, monthly, other**]
- Daily**
  - Twice a Week**
  - Weekly**
  - Monthly**
  - Other (please specify)** \_\_\_\_\_
10. Who is your waste removal service provider? \_\_\_\_\_
11. Do you track the volume of waste or recyclables that is disposed/picked up? [**Yes or No**]
- Yes**
  - No**
  - Don't Know**
12. Please Estimate the monthly volume for waste and recycling:
- Average total waste disposed of:** \_\_\_\_\_
  - Average amount of recycling picked up:** \_\_\_\_\_

**Policies and Practices**

13. What current policies or procedures does your company require/follow related to waste collection or recycling? \_\_\_\_\_
14. Does your company have any waste reduction practices (e.g., double-sided printing, paperless office, preferable purchasing [recycled content, no VOCs, etc.], materials reuse)?  
\_\_\_\_\_
15. Do you have any materials (flyers, posters, etc.) promoting recycling near waste and recycling bins to encourage recycling?
- Yes (describe)** \_\_\_\_\_
  - No**
16. Has your facility established any waste reduction goals or targets? [**Yes or No**]
- Yes**
  - No**
  - Don't Know**
17. Please Describe your waste reduction goals and targets.  
\_\_\_\_\_
18. Tell us about your success in meeting these goals. From your perspective, what are the challenges to this success? \_\_\_\_\_
19. Please provide any other information on how your company manages waste and recycled materials.  
\_\_\_\_\_
20. Would you be willing to share a recent waste and/or recycling collection invoice(s), so we may document volumes and service frequency at the airport? \_\_\_\_\_

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