Donation Capabilities at Fort Benning, GA

U.S. ARMY GARRISON FORT BENNING
Executive Summary

BLUF. This document is a supplement to the 2016 U.S. Army Garrison Fort Benning Integrated Solid Waste Management Plan (ISWMP). This ISWMP identifies plan reduction and contingency efforts related to solid waste at Fort Benning. To enhance the content of this plan, a Waste Characterization Study was performed at Fort Benning. The study analyzed waste collected across Fort Hood to determine the success and shortcomings of the installation’s solid waste management efforts. The Waste Characterization results were used to inform suggestions that are cost effective, environmentally responsible, and provide long term support of the Installation’s military mission. This study provides details and guidance to Fort Benning on donation efforts as a waste diversion tactic.

Fort Benning has a successful solid waste program which employs a range of waste reduction and diversion methods that can be improved upon to strengthen waste generation reduction and increase solid waste diversion. Section 13 of this plan offers recommendations with specific actions that will help Fort Benning implement donation programs strategically around the installation. With successful implementation of food and non-food donation programs, Fort Benning can significantly reduce their solid waste stream.

FINDINGS: The majority (64%) of the waste stream at Fort Benning is organic waste. Another 9% of the waste stream is non-recyclable municipal solid waste (MSW). These two categories of waste have high potential for diversion through donation. The rest of the waste stream is made up of recyclable materials. To decrease the organic waste, food donation programs at the installation’s 25 dining facilities and single commissary should be implemented. To decrease the amount of non-recyclable MSW that is generated, donation programs should be implemented at the installations numerous training barracks and general purpose warehouses. The Columbus metropolitan statistical area has significant poverty. Census data indicates that poverty is concentrated in black women under the age of 18. There are numerous non-profit organizations that serve the area, and these organizations can be partnered with for donation programs. The road to creating successful donation programs at Fort Benning begins with identifying the correct buildings, and community partners, and using the guidance found in this document to take the necessary steps forward.
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1 Introduction

This study into the donation markets surrounding U.S. Army Garrison Fort Benning, Georgia was prepared for Giselle Rodrigues by a student research assistant working under her supervision at the U.S. Army Corps of Engineers Engineer, Research and Development Center, Construction Engineering Research Laboratory (USACE ERDC CERL) to fulfill the requirements of the student’s Masters of Urban Planning degree program, and to supplement the Integrated Solid Waste Management Plan (ISWMP) completed by USACE ERDC CERL for U.S. Army Garrison Fort Benning.

Fort Benning’s Department of Public Works Environmental Division (DWP-ENV) is responsible for the development of the ISWMP. DPW-ENV was assisted by USACE ERDC CERL to produce both a waste characterization report and the ISWMP in the summer of 2016. This report consisted of a full analysis of the waste stream at Fort Benning, including its sources, components and weighted distributions. The waste characterization identifies key waste components and the building types that are responsible for producing them in the waste stream with the goal of diverting these materials from landfills. After key components and building types are identified, the CERL team is able to recommend sustainable solutions for diverting those materials in a Integrated Solid Waste Management Plan (ISWMP). Understanding the current make-up of the installation’s waste composition and working through recommendations in the plan provides DPW-ENV with the tools to optimize recycling, composting, and other waste stream reduction efforts.

This study is made necessary by several mandates requiring Integrated Solid Waste Management beginning in the 1990s. The concept of extending focus past disposal of solid waste and into source reduction, reuse and recycling, and composting to reduce the volume of materials being sent to the landfill was originally established by the U.S. Environmental Protection Agency (EPA). Since then, the U.S. Department of the Army has established more strict and defined goals for waste management (found in AR 200-1 and AR 420-1) and made the Facilities Policy Division of the Army Assistant Chief of Staff for Installation Management (ACSIM) primarily responsible for seeing the goals met. All Army installations throughout the world are required to complete tasks that include, but are not limited to, planning and developing new and improved compliance strategies for solid waste management as well as track and report their compliance progress throughout the year.

In addition, the Army Net Zero Directive applies to all Army installations, including Fort Benning. The Net Zero initiative seeks to align installations practices and culture with the broad sustainability goals of the Army in the realms of energy, water, and solid waste. Under the solid waste initiative, installations take all fiscally responsible action to surpass requirements for waste diversion and aim to utilize waste management strategies that result in little to no solid waste being sent to the landfill. Installation Management Command (IMCOM) Atlantic District, which oversees Fort Benning, states, “The Army’s vision is to appropriately manage our natural resources with a goal of net zero
installations, Fort Benning’s Objectives and Targets run parallel to that vision”. Fort Benning’s target date for Net Zero is December 2020 and runs parallel to the Army’s 2020 Vision.

2 Purpose

This study is a supplementary plan to the completed Waste Characterization and ISWMP. The ISWMP utilizes both Environmental Protection Agency and Department of Defense structures to recommend actions for more effective waste management.

Thus, the purpose of this study is twofold. First, this study seeks to define, analyze, and characterize U.S. Army Garrison Fort Benning’s abilities, in terms of their legal, social, and geographic constraints, so as to identify plausible options for waste reduction via donations to surrounding communities. Secondly, this study seeks to characterize Fort Benning and its surrounding city of Columbus, Georgia for Giselle Rodrigues and her team at USACE CERL in hopes of informing future approaches to serve the solid waste reduction needs of the installation in question.

The option of donation on top of the list of sustainable practices currently recommended by the USACE CERL team (green procurement (GP), diversion, reuse and recycling, etc.) will serve to benefit both Fort Benning and surrounding communities. Benefits will include: strengthening the existing covenant between Fort Benning and surrounding communities, raising the standard of living of some of the poorest and most at-risk individuals in the area, reducing hauling and tipping costs for material removal in Fort Benning, and furthering the sustainability of Fort Benning resources for waste management.

This study will provide a systemic analysis of Fort Benning’s donation options, and will produce recommendations based on that analysis. Recommendations will primarily focus on Fort Benning’s waste management programs, policies, and practices. Finally, recommendations will seek to remain feasible, efficient, and economical but should be understood to be mere suggestions.

3 Study Objectives

The objectives of this study are as follows:

- To maximize current installation donation practices according to its full capabilities.
- To provide an initial guide for decision makers to use effective means to manage solid waste in a manner that is mutually beneficial to Fort Benning and surrounding communities.
- To identify plausible donation practices that benefit the environment and protect human health without producing a loss of efficiency or usable/valuable resources.
• To increase the volume of solid waste diverted from the landfill to a level that meets or surpasses state, DoD, and Army waste diversion goals.

4 Community Covenant

This study also goes to strengthen and serve the Army Community Covenant that exists between US Army Garrison Fort Benning; Columbus, Georgia; and Phoenix City, Alabama. This covenant is an agreement made between the three institutions to encourage and facilitate mutual support to strengthen families. The covenant is an agreement that Army strength and morale comes from families, and support must be exchanged between the community and Fort Benning to sustain these families. The Army Community Covenant was signed by the mayors of Columbus and Phoenix City, presidents of the chambers of commerce for both towns, the commanding general of Fort Benning, among others. A donation program is one way to further reinforce the strong bond that Fort Benning has with its surrounding area.

5 Legal Basis for Donation

Legally, all military departments can donate excess property to qualified and certified law enforcement agencies, anti-terrorism groups, border control, State Agencies for Surplus Property (SASP), State Education Agencies (SEAs), and many other entities including museums and disaster relief programs under the 501(c) tax structure. Department of the Army Memorandum on Army Food Donation Procedures details the commitment of the Army to provide excess food to food recovery and distribution agencies, while the general authority to donate surplus government property is found in the Federal Surplus Personal Property Donation Program in Title 40 of the United States Code (U.S.C.), Section 549. Implementing regulations are found in title 41 Code of Federal Regulations, section 102-37. Further relations can be found in 32 CFR 273.8 (https://www.law.cornell.edu/cfr/text/32/273.8).

The Army Memorandum on Army Food Donation Procedures established that where feasible, food donation programs will be implemented at Army installations in the United States and at Army operation on Joint Bases. The memorandum gives guidance for creating programs that protect human health and adhere to food safety guidelines, while providing food to eligible non-profit organizations.

Generally, all military branches must go through the General Services Administration (GSA) to donate excess personal property. 41 CFR chapters 101 and 102 outline the law regarding the transfer of excess property through GSA. This will be the reference that is needed when donating clothes, shoes, lightly used furniture, and other non-food items. 41 CFR 102-37.125 gives holding agencies the authority to donate some items without GSA approval. These are items that are deemed condemned (headed for disposal), obsolete, or otherwise
invaluable during Federal and surplus donation screening as required in 41 CFR 102-36. Items that have entered the waste stream then have a very high potential for donation. In many cases, the donation of materials that have already been condemned can be streamlined by bypassing GSA.

6 Fort Benning, Georgia

Fort Benning, Georgia

Figure 1 Concerned area locator map including Fort Benning, GA; Columbus, GA; and Phoenix, AL
6.1 History and Personnel

As shown in Figure 1, Fort Benning is located in western Georgia and eastern Alabama. It covers an area of 182,464 acres straddling Alabama-Georgia border, approximately 93 percent of the installation is in Georgia (170,510 acres) with the remaining acreage in Russell County (11,954 acres), Alabama. Fort Benning is the six largest installation in the United States and commonly known as the “Tri-Community”, in US Army Garrison Fort Benning; Columbus, Georgia; and Phoenix City, Alabama.

Camp Benning was originally established in 1918 on only 85 acres of land to provide basic training for soldiers entering World War I. In 1920 the United States Congress voted to establish Camp Benning as a permanent military post. In that same year the Infantry School was established at Camp Benning. In 1922, Camp Benning became Fort Benning. Due to high casualty rates in World War I, thought to be caused by a lack of training for US soldiers, Fort Benning received a renewed sense of purpose and concentration in the late 1920s and early 1930s. The drastic change to the military education received at Fort Benning is still known as the Benning Revolution. Since then, Fort Benning has been at the forefront of training the world’s best warrior, often hosting and providing training for the soldiers of allied nations. Fort Benning has been a major Army post in each military conflict since its inception with no exception.

Today, Fort Benning is home to the United States Infantry School, the Army Maneuver Center of Excellence, Western Hemisphere Institute for Security Cooperation, and many unit tenants. The Fort has a long and important history of training the world’s best soldiers in all efforts necessary for an Army at War.

6.2 Population

Fort Benning is projected to remain relatively stable in size and population. The Army Stationing and Installation Plan (ASIP) projected population data for Fort Benning until Year 2022 (Table 1). Table 1 details the projected population of Fort Benning in terms of military and civilian personnel.
The Columbus Metropolitan Statistical Area (MSA) is located in East central Georgia and West, central Alabama. As shown in Figure 2, the MSA lies between Georgia’s and Alabama’s state capitol. Traveling between either capitol takes less than two hours from the Columbus MSA and this helps make it a key linkage between the two major cities.

6.3 Columbus Metropolitan Statistical Area

At the time of this plan the installation supports a population over 338,000 which includes about 29,061 active military, over 3,500 Department of Army civilians, and over 7,000 on-post family members. The total “daytime” population exceeds 130,000 to include soldiers, civilians, contractors, and family members living on post. This population will continue generating excess material, food and non-food, that will be important for Fort Benning’s donation programs.

<table>
<thead>
<tr>
<th>Category</th>
<th>FY14</th>
<th>FY15</th>
<th>FY16</th>
<th>FY17</th>
<th>FY18</th>
<th>FY19</th>
<th>FY20</th>
<th>FY21</th>
<th>FY22</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total Full-Time Military</td>
<td>14,418</td>
<td>13,517</td>
<td>11,016</td>
<td>10,877</td>
<td>10,818</td>
<td>10,757</td>
<td>10,758</td>
<td>10,700</td>
<td>10,758</td>
</tr>
<tr>
<td>TDY Students and Trainees</td>
<td>16,772</td>
<td>17,018</td>
<td>16,785</td>
<td>17,939</td>
<td>16,878</td>
<td>17,179</td>
<td>17,179</td>
<td>17,179</td>
<td>17,179</td>
</tr>
<tr>
<td>Total Full-Time Civilians</td>
<td>182</td>
<td>253</td>
<td>245</td>
<td>245</td>
<td>245</td>
<td>245</td>
<td>245</td>
<td>245</td>
<td>245</td>
</tr>
<tr>
<td>Army Civilians</td>
<td>4,118</td>
<td>3,675</td>
<td>3,856</td>
<td>3,541</td>
<td>3,478</td>
<td>3,459</td>
<td>3,471</td>
<td>3,471</td>
<td>3,471</td>
</tr>
<tr>
<td>PCS Students Civilian</td>
<td>2</td>
<td>2</td>
<td>2</td>
<td>3</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>Contractors</td>
<td>3,679</td>
<td>4,508</td>
<td>3,772</td>
<td>3,703</td>
<td>3,558</td>
<td>3,513</td>
<td>2,625</td>
<td>2,554</td>
<td>2,554</td>
</tr>
<tr>
<td>Other Civilians</td>
<td>3,065</td>
<td>2,993</td>
<td>2,989</td>
<td>2,972</td>
<td>2,972</td>
<td>2,972</td>
<td>2,972</td>
<td>2,972</td>
<td>2,972</td>
</tr>
<tr>
<td>Total Full-Time Civilians</td>
<td>10,864</td>
<td>11,178</td>
<td>10,619</td>
<td>10,219</td>
<td>10,009</td>
<td>9,945</td>
<td>9,069</td>
<td>8,998</td>
<td>8,998</td>
</tr>
<tr>
<td>Transient and Rotational</td>
<td>49</td>
<td>49</td>
<td>49</td>
<td>49</td>
<td>49</td>
<td>49</td>
<td>49</td>
<td>49</td>
<td>49</td>
</tr>
<tr>
<td>Total Civilians</td>
<td>10,913</td>
<td>11,227</td>
<td>10,668</td>
<td>10,268</td>
<td>10,058</td>
<td>9,994</td>
<td>9,118</td>
<td>9,047</td>
<td>9,047</td>
</tr>
<tr>
<td>Total Base Population</td>
<td>42,285</td>
<td>42,015</td>
<td>38,714</td>
<td>39,329</td>
<td>37,999</td>
<td>38,175</td>
<td>37,300</td>
<td>37,171</td>
<td>37,229</td>
</tr>
<tr>
<td>Reserve Component Military</td>
<td>539</td>
<td>732</td>
<td>677</td>
<td>665</td>
<td>757</td>
<td>757</td>
<td>757</td>
<td>757</td>
<td>757</td>
</tr>
</tbody>
</table>

Table 1  Source: Army stationing and Installation Plan, SAMAS 2016 data based on SAMAS 30-JUN-2016, ASIP as of 31-JUL-2016, 2014-2022 data based on USAFMSA FMS as of 07-JUN-2016.
Figure 2  Columbus GA-AL Metropolitan Area locator map
6.3.1 Population

The focus of this study is the Columbus Metropolitan Statistical Area, which is located on the south-central Alabama-Georgia border. Columbus, Georgia is the larger of the sister communities to Fort Benning. These two cities are located just across the Chattahoochee River from one another. Columbus is Georgia's third largest city with a population of 200,285 people, according to the 2015 American Community Survey 5 Year Estimates. Phoenix City, Alabama is much smaller with a population of 37,570 people. The Columbus MSA is located within two hours of both Atlanta, Georgia, and Montgomery, Alabama, making it a distinct half-way point between these two state capitols.

6.4 Demographic Analysis

The following demographic analysis is meant to expose the populations and geographies in the Columbus MSA that would most gain from the implementation of a Fort Benning donation program. The community's need for assistance in all of its forms is real and very urgent. Ideally, Fort Benning donation programs will execute a targeted outreach effort to organizations that assist those with the most need within the community. There are specific groups that can be identified within the Columbus MSA and can be reached out to specifically as the recipients of food, clothing, and other types of donations that Fort Benning produces.

According to the 2010 U.S. Census, the Columbus MSA is 52% white and 40% black. Table 2 is a breakdown of population by race in the Columbus MSA. The population is pretty equally divided between whites and blacks, with only 7.8% of the populations falling outside of these two categories. Though the populations of blacks and whites is nearly equal in size, they are not equal in economic wellbeing.

<table>
<thead>
<tr>
<th>Population by Race</th>
<th>Columbus, GA-AL Metro Area</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Estimate: Percent Total</td>
</tr>
<tr>
<td>Total population</td>
<td>241,918</td>
</tr>
<tr>
<td>One Race</td>
<td>235,037</td>
</tr>
<tr>
<td>White</td>
<td>126,269</td>
</tr>
<tr>
<td>Black or African American</td>
<td>96,888</td>
</tr>
<tr>
<td>American Indian and Alaska Native</td>
<td>964</td>
</tr>
<tr>
<td>Asian</td>
<td>4,739</td>
</tr>
<tr>
<td>Native Hawaiian and Other Pacific Islander</td>
<td>533</td>
</tr>
<tr>
<td>Some Other Race</td>
<td>5,644</td>
</tr>
</tbody>
</table>
An analysis of the Columbus MSA points to the fact that poverty follows racial, geographic and gendered lines. The median household income in the United States is $53,889, whereas the median income in the Columbus MSA is $44,359. Table 3 is a racial breakdown of median household incomes in the Columbus MSA. As shown, white residents of the MSA are doing well, with incomes above the US median, but residents of other races are doing far worse. Incomes are racialized in Columbus, as they are in areas throughout the United States. It is clear that black households make significantly less money ($32,247 per year) than do white households ($44,359) and other races.

<table>
<thead>
<tr>
<th>Race</th>
<th>Estimate</th>
<th>MOE</th>
</tr>
</thead>
<tbody>
<tr>
<td>All Races</td>
<td>$44,359</td>
<td>+/- 1,148</td>
</tr>
<tr>
<td>White Alone</td>
<td>$54,973</td>
<td>+/- 1,388</td>
</tr>
<tr>
<td>Black Alone</td>
<td>$32,247</td>
<td>+/- 1,064</td>
</tr>
<tr>
<td>Asian Alone</td>
<td>$62,550</td>
<td>+/- 10,687</td>
</tr>
<tr>
<td>Other</td>
<td>$38,795</td>
<td>+/- 3,160</td>
</tr>
<tr>
<td>Mixed Race</td>
<td>$36,259</td>
<td>+/- 6,480</td>
</tr>
</tbody>
</table>

Table 3: Median Household Income by Race for Columbus MSA. 2015 American Community Survey 5 year Estimate

Further lending to the urgent need for targeted outreach for the recipients of Fort Benning’s donated materials is the percentage of impoverished people in the Columbus MSA that are minors. As shown in Table 4 Poverty among the entire population is at 18.7%. More than a third of those impoverished are under the age of 18 (36%).
Table 5 shows that there are more working aged women in poverty than there are men. Of impoverished workers, 62% are women and 38% are men. Women are experiencing higher rates of poverty even though they are employed at similar rates as impoverished men. Focused assistance can be lent to organizations that help women so as to lend attention to this dynamic.
Figure 3 shows that there is clearly a correlation between geographic location, income, and race in the Columbus MSA. Census tracts along the Chattahoochee River in both Columbus, GA and Phoenix City, AL have the lowest incomes. These same census tracts also have the greatest total populations of black residents. Census tracts 25 and 27 in Columbus and census tract 308 in Phoenix City are very distinct in showing the correlation between black households and low income.

This simple, but affective, demographic analysis shows that a Fort Benning donation program would be ideal in partnering with organizations that support black female youth. As detailed in the Section 11, it is not possible for Fort Benning to determine exactly what population receives the donated materials from its programs. The materials are distributed by State Agencies for Surplus Property (SASPs). Donors are encouraged to seek out eligible local organizations to receive donated items. In the event that Fort Benning personnel have the ability to encourage State Agencies for Surplus Property to direct materials to the impoverished black female youth population, it should.
Figure 3  Median Household Income Vs Black Population Density in the Columbus MSA.
7 Review: Fort Benning Waste Stream Analysis and Management Plan

The following sections will serve to summarize the waste stream analysis, findings and recommendations until the point of this study. After reading this section, you should know the general process by which Fort Benning’s waste stream was analyzed, key terms and definitions related to solid waste, and the relevant results of that analysis as it pertains to this study.

7.1 Fort Benning Waste Stream Characterization

The Fort Benning Waste Characterization was completed in May of 2016 by the U.S. Army Corps of Engineers, Engineer Research and Development Center, Construction Engineering Research Laboratory. This study was funded by the U.S. Army Installation Management Command. The information collected in this study provided the foundation for the development the Integrated Solid Waste Management Plan (ISWMP) for the installation as directed by the DoD Integrated (Non-Hazardous) Solid Waste Management Policy Memorandum of February 2008 and required by Army Regulation 420-1.

In general, the purpose of a waste characterization study is to assess the installation’s waste stream to identify materials that have potential for diversion that are currently being disposed as waste. To do this, our team must completely understand the operation of buildings at Fort Benning to determine waste generation trends. For instance, when completing a waste characterization, it is necessary to understand the differences between barracks and offices in terms of what activities go on inside, what capabilities these buildings have for storage, and when they typically dispose of their solid waste. To manage the number of assumptions used in the study, our team collected background information on Fort Benning with the assistance of DPW-ENV. This information was obtained through conference calls, email correspondence, and references from previous projects and visits. Then, in February of 2016, our team sent two members to Fort Benning to meet with DPW-ENV personnel with the task of jointly choosing the right buildings on Fort Benning that would best represent the waste stream of the installation. Further information gathered during the pre-visit included confirming the number and location of dumpsters affiliated with each building, and securing the installation’s refuse and recycling pick-up schedules. The knowledge of DPW personnel combined with the expertise of the CERL team members resulted in the choosing of 24 buildings representing 19 building types on installation. The buildings chosen, along with their building types, are listed in Table 5.
<table>
<thead>
<tr>
<th>NZP Building Type</th>
<th>Official Building/Organization Name</th>
<th>Building Number(s)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Army Reserve Component</td>
<td>Armed Forces Reserve Center, 98th Training Division</td>
<td>4400</td>
</tr>
<tr>
<td>Child Development Center (CDC)</td>
<td>Indianhead CDC</td>
<td>2389</td>
</tr>
<tr>
<td>Common Space</td>
<td>Main Post Chapel</td>
<td>1680</td>
</tr>
<tr>
<td>Dining Facility (DFAC)</td>
<td>1/507 PIR (Airborne) Dining Facility</td>
<td>838</td>
</tr>
<tr>
<td>General Instruction Building (GIB)</td>
<td>Advanced Leadership Course (ALC); I-Bullet</td>
<td>224</td>
</tr>
<tr>
<td></td>
<td></td>
<td>336, 466, 490, 497</td>
</tr>
<tr>
<td>Hospital</td>
<td>Martin Army Community Hospital</td>
<td>9250</td>
</tr>
<tr>
<td>Office – Large</td>
<td>Meloy Hall</td>
<td>6</td>
</tr>
<tr>
<td>Office – Small &amp; INFOSYS</td>
<td>Directorate of Emergency Services Contractor Building (DESC) &amp; Network Enterprise Center (NEC)</td>
<td>19, 89</td>
</tr>
<tr>
<td>Outpatient Healthcare Center (OHC)</td>
<td>Consolidated Troop Medical Clinic (CTMC)</td>
<td>2515</td>
</tr>
<tr>
<td>Physical Fitness Facility (PFF)</td>
<td>Smith Fitness Center</td>
<td>2874</td>
</tr>
<tr>
<td>Postal Exchange (PX)</td>
<td>Main Exchange</td>
<td>9220</td>
</tr>
<tr>
<td>Restaurant – Quick Service</td>
<td>PX Minimall - Food Court</td>
<td>103</td>
</tr>
<tr>
<td>Retail – Strip Mall</td>
<td>PX Minimall - Store side</td>
<td>103</td>
</tr>
<tr>
<td>Retail – Supermarket</td>
<td>Fort Benning Commissary</td>
<td>9230</td>
</tr>
<tr>
<td>School - Primary</td>
<td>Faith Middle</td>
<td>1375</td>
</tr>
<tr>
<td>Tactical Equipment Maintenance Facility (TEMF)</td>
<td>Bradley Training Division (Bradley Trng)</td>
<td>5205</td>
</tr>
<tr>
<td>Tactical Equipment Maintenance Facility (TEMF)</td>
<td>EOD Training Unit (Airfield Hangar)</td>
<td>2491</td>
</tr>
<tr>
<td>Training Barracks (TRNG BRKS)</td>
<td>198th Infantry Brigade (INF BDE)</td>
<td>3405</td>
</tr>
<tr>
<td>Unaccompanied Enlisted Personnel Housing (UEPH)</td>
<td>75th Ranger Regiment (Ranger UEPH)</td>
<td>2641</td>
</tr>
</tbody>
</table>

*Table 6  List of Buildings Characterized by Net Zero Planner Building Type*

In May of 2016, our USACE team sent six members to Fort Benning to conduct a field audit of these 24 buildings. During this waste characterization event, samples from dumpsters at selected sites were obtained. Both waste and recycling components were manually separated and weighed.

The waste and recycling categories sorted are listed in Table 6. These categories include a range of materials covering organics, metals and plastics. In addition, a category is dedicated to materials with no means for diversion. This category named “non-recyclable MSW” includes any materials with no outlet for composting, dehydration, digestion or recycling. Examples of these materials are condiment packaging, retort/laminate packaging and other materials with no markets available.
<table>
<thead>
<tr>
<th>Material Type</th>
<th>Disposal Type</th>
</tr>
</thead>
<tbody>
<tr>
<td>Food</td>
<td>Compostable</td>
</tr>
<tr>
<td>Soiled/Waxed Paper</td>
<td>Compostable</td>
</tr>
<tr>
<td>#1 PET</td>
<td>Recyclable</td>
</tr>
<tr>
<td>#2 HDPE</td>
<td>Recyclable</td>
</tr>
<tr>
<td>#3 PVC</td>
<td>Recyclable</td>
</tr>
<tr>
<td>#4 LDPE</td>
<td>Recyclable</td>
</tr>
<tr>
<td>#5 PP</td>
<td>Recyclable</td>
</tr>
<tr>
<td>#6 PS</td>
<td>Recyclable</td>
</tr>
<tr>
<td>#7 Other</td>
<td>Recyclable</td>
</tr>
<tr>
<td>Aluminum</td>
<td>Recyclable</td>
</tr>
<tr>
<td>Corr. Cardboard</td>
<td>Recyclable</td>
</tr>
<tr>
<td>Glass</td>
<td>Recyclable</td>
</tr>
<tr>
<td>Mixed Paper</td>
<td>Recyclable</td>
</tr>
<tr>
<td>Newspaper</td>
<td>Recyclable</td>
</tr>
<tr>
<td>Paperboard</td>
<td>Recyclable</td>
</tr>
<tr>
<td>Steel/Ferrous</td>
<td>Recyclable</td>
</tr>
<tr>
<td>White Paper</td>
<td>Recyclable</td>
</tr>
<tr>
<td>Unopened MRE or MRE Heater</td>
<td>Hazardous</td>
</tr>
<tr>
<td>Non-Recyl. MSW</td>
<td>Non-Recyclable</td>
</tr>
<tr>
<td>Non-Recyl. MSW</td>
<td>MSW</td>
</tr>
</tbody>
</table>

*Table 7: Materials Included in waste characterization and their disposal type*

By quantifying and characterizing waste and recycled materials generated in this representative sample of buildings, our team was then able to use the data obtained to create estimates on waste generation and distribution installation wide. Installation wide, buildings were assigned a standardized building type and data from the 24 representative buildings were extrapolated over them, using building square footage as a common metric, to produce a characterization of the waste stream coming from the entire base. A brief flow chart to help readers understand the process of characterizing Fort Benning’s waste stream, analyzing that data and producing subsequent reports and recommendations to installation personnel is provided in Figure 4 below.
Figure 4 Work flow chart showing the data and reporting stages undergone until the point of this study on donation.
The waste characterization report explains the findings of the building audit and installation wide extrapolation. Making sense of the data often calls for a clear understanding of the building type’s functions and related characteristics. The quantitative results of the waste characterization must be leveraged against the qualitative understanding of how the waste is generated in that building type, who generates it, and a number of other considerations. For instance, it was found that Fort Benning’s hospital generates the most daily waste of all 24 buildings that were audited. A comparison of waste outputs is shown in Figure 5. This can be deceiving when determining the most effective strategies for waste management. This is because the hospital generates the most daily waste as an individual building, but there is only one hospital on the installation. When taking into account the number and size of buildings on the entire installation, each generating waste daily, according to their building type and function, it is clear that the hospital is not the leading waste generator. Further, it is important to note that hospitals are highly regulated in terms of their waste output. Hospital waste has a high probability of being hazardous or contaminated, and this understanding places some limits on the possibilities for alternative waste management practices.

![Figure 5: Materials Generated for Buildings Characterized](image)

Results of the waste characterization showed that Fort Benning generates just under 14,000 tons of waste each year. The vast majority of this waste comes from the installation’s dining facilities (DFACs). Figure 6 shows a comparison of annual waste generation by building type throughout the installation. Looking at this data, it becomes clear that a very effective way to decrease Fort Benning’s solid waste output is to address
the organic waste in their dining facilities. Food donation from DFACs on installation will be an emphasis for this study.

![Installation Wide Materials Generated by Building Type](image)

*Figure 6* Installation Wide Materials Generated by Building Type

As a percentage of the total waste generated at Fort Benning, non-recyclable Municipal Solid Waste (MSW) is the least of the three categories (Figure 7). The 9% (1.481 tons) of non-recyclable MSW that Fort Benning generates is a barrier for the installation in terms of reaching total Net Zero. To restate the definition, Non-recyclable MSW includes any materials with no outlet for composting, dehydration, digestion or recycling. Fortunately, there are still ways in which items in this category can be diverted from the landfill, and donation is one of those ways.
Based on the results found in the quantitative analysis of waste types and their weights in the Fort Benning waste stream, our team provided the installation with recommendations of alternatives for waste diversion. Recommendations are geared towards getting Fort Benning to meet their goal of Army Net Zero Waste by 2020 by taking into account the installation’s current capabilities and suggesting new capabilities be developed. These recommendations are included in the Integrated Solid Waste Management Plan (ISWMP).

7.2 Fort Benning Integrated Solid Waste Management Plan

Fort Benning’s ISWMP is a comprehensive planning and goal oriented tool for the systematic coordination of management of solid waste generated on installation. Recommendations and action items provide Fort Benning personnel with information and direction for administering the installation’s solid waste programs, policies, and practices in a feasible, efficient, and economical manner.

The objectives of this ISWMP were as follows:

- To reconcile current installation practices with modern environmental and human health standards.
- To provide a tool for decision makers to use effective means to manage solid waste in a manner that protects human health and the environment.
- To incorporate the Environmental Protection Agency’s (EPA) pollution prevention hierarchy (source reduction, recycling, treatment, and disposal) and the U.S. Army Net Zero Initiative hierarchy (Reduction, Re-purpose, Recycling/Composting, Energy Recovery and Disposal) to manage, reduce and divert non-hazardous waste generated at the garrison in accordance with requirements set forth in federal, state,
local as well as the Department of Defense (DoD) regulations and policies outlined in Section 6 of this document.

- To increase the volume of solid waste diverted from the landfill to a level that meets or surpasses state, DoD, and Army waste diversion goals.

Fort Benning’s ISWMP provides a succinct document including all of the elements of waste management, including the responsibilities of personnel involved; regulatory requirements (federal, state, local, executive, DoD, and installation specific); waste reduction tactic over views; factors affecting waste decision making; and contingency planning.

The ISWMP culminates into a section devoted to recommendations specific to Fort Benning’s waste management. Overarching recommendations were made in the following areas:

1. Organic Waste Diversion
2. Improvements on SWAR Reporting
3. Continued Expansion of the QRP
4. Locations of Recycling Containers and Trailers
5. QRP Outreach Strategies
6. Thrift Shop and Lending Closet Promotion
7. Dissemination of Information about Special and Hazardous Waste

Area one addresses food waste reduction at the Installation’s dining facilities (DFACs). DFACs are a main concern of the Army Food Program (referenced in section 11). These buildings are the primary location on installation where soldiers eat each day. Each dining facility follows a Food Service Management Plan that outlines their functions. The plan will outline who the DFAC will serve by category (soldier, unit, staff, active, civilian, etc.) and quantity, who will staff the facility, equipment required, and all of the estimated costs related to the facility’s functioning. Primarily, it was recommended that DFAC staff take preemptive steps to reduce the amount of waste being produced at dining facilities. By “preemptive”, it is meant that the action is taken before a food is deemed waste. Steps must be taken to avoid encouraging food waste production by kitchen staff and consumers. One way the CERL team recommended a change was by mechanical means such as moving to a tray-less system, thus reducing the amount of food that diners can carry in a single sitting. Further, our team recommended that the DFACs conduct internal audits to adjust how many meals they prepare each day. An internal audit such as this will help to reduce how much food is purchased and prepared that is likely to go untouched by consumers. Over time, these tactics will result in less food waste. As a policy, DFACs will always prepare more food than will be eaten so as to not run out of food for soldiers, who serve and fight for our country. It is this extra food that is subject to a donation program.

Area six proves that a baseline structure for property donation exists in Fort Benning. Unfortunately, Fort Benning’s Thrift Shop and Lending Closet are two markedly underutilized resources on the installation. Our team found that the lending closet, which can help relocated families avoid purchasing disposable/single-use property such as plastic
ware and cheap furniture, is unknown to many soldiers during their short term stays on base. Given the right efforts to vamp up these services, Fort Benning can use the Thrift Show, Lending closet, along with donation programs to create a culture of sustainability.

The ISWMP recommends proven waste reduction techniques that will increase the efficiency and value of waste management in Fort Benning. To take these recommendations a step further, this study goes on to introduce donation as another technique that can help to reduce food and non-recyclable municipal solid waste.

8 Waste Stream Analysis for Donation Capabilities

This section will expand upon the findings of the waste characterization, the recommendations of the ISWMP, and address key building types that should be considered for food and non-recyclable MSW donation programs. Results from the Solid Waste Characterization Study identified significant amounts of materials with compostable and reuse value. Food and non-recyclable municipal solid waste are the main components of interest in this study. Figure 8 is a breakdown of Fort Benning’s waste stream by its waste components. Food is by far the largest material generated, at an estimated rate of 8,027.6 tons per year; and non-recyclable MSW is third on the list, at a rate of 906.9 tons per year.

![Figure 8](image_url)  
*Figure 8  Installation wide Fort Benning generates 8,027.6 tons/yr of food, and 906.9 tons/yr of non-recycl. MSW*
8.1 Food

Compostable materials are broken down into two categories for the waste characterization. These categories are food and soiled paper (Figure 9). Soiled paper is not a component to be considered for donation, but food is. Food made up an estimated 86% (8,587 tons/year) of the compostable materials in the Fort Benning waste stream. All of the building types included in the waste characterization contributed food to the waste stream (Table 8), but the top five building types were Dining Facilities (6,133.9 tons/year), Retail-Strip Malls (642.8 tons/year), Restaurant- Quick Service (417.7 tons/year), Hospital (334.2 tons/year) and Retail-Super Market (226.9 tons/year). Of these five building types, two of them have high potential for food donation and the other three are unlikely to develop a donation program for foodstuffs.

![Basewide Compostable Waste](image)

*Figure 9  Installation Wide Organic Waste (10,031.3 tons/year) is 86% (8,758.1 tons/year) food*

<table>
<thead>
<tr>
<th>Food Waste Generation by Building Type</th>
<th>Fort Benning, GA (Tons/Year)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Building Type</td>
<td>Tons/Year</td>
</tr>
<tr>
<td>DFAC</td>
<td>6133.9</td>
</tr>
<tr>
<td>RETAIL-STRIP MALL</td>
<td>642.8</td>
</tr>
<tr>
<td>RESTAURANT-QUICK SERVICE</td>
<td>417.7</td>
</tr>
<tr>
<td>HOSPITAL</td>
<td>344.2</td>
</tr>
<tr>
<td>RETAIL-SUPERMARKET</td>
<td>226.9</td>
</tr>
<tr>
<td>ALL OTHER BUILDING TYPES</td>
<td>262.1</td>
</tr>
<tr>
<td>Grand Total</td>
<td>8027.6</td>
</tr>
</tbody>
</table>

*Table 8  Installation Wide Food Waste Generation by Building Type*
Dining facilities and super markets have high potential for food donation programs, and other installations have successfully created these programs and are responsible for diverting hundreds of thousands of pounds a year from landfills into food banks, schools, Veteran’s Associations and other organizations. DFACs are governed by the Department of the Army under Army Regulation 30-22. DFACs can find guidance for their operation in Department of the Army Pamphlet 30-22. This pamphlet outlines AR 30-22 and also states that a DFAC’s Food Program Manager will develop and implementation donation programs in efforts for food recovery. Super markets are called commissaries in the military and are run by the Defense Commissary Agency (DeCA). Commissaries operations are governed by Defense Commissary Agency Directive (DeCAD) 40-5, which is detailed in DeCA Manual (DeCAM) 40-5.1. Commissaries are allowed to donate food items to a number of agencies as so long as it would otherwise be destroyed as unusable, unmarketable, and unsellable, but has been certified as edible by an appropriate food inspection technician.

The other three building types have significant concerns that are likely to reduce the feasibility of donation programs in these locations. Further, the standardized processes and guidance for donation programs in these buildings does not exist at this time. Some examples of concerns at each building type are:

**Retail-Strip Malls and Restaurant-Quick Service** (fast food) may not be structured physically for the storage of excess food, nor do they have the organizational policy structure that will support a donation program. Further, they are not managed by AR 30-22 and can be thought of as the same as strip malls and fast food places in any other city. These strip malls may contain a number of small restaurants that serve a variety of food. The foods served here may not be suitable for donation, there may not be adequate area for storage, or there could be high levels of difficulty for transporting the food to the vehicles of agencies picking up the food.

**Hospitals** are encouraged to have donation programs by Department of the Army Memorandum on Food Donation Programs. These building types may be suitable for donation programs, but this is up to the personnel on site. These buildings tend to be highly restricted because of the potential for contamination. The risk for contamination is a big factor when thinking about building types to focus on for donation programs. Other considerations include the need for staff, internal transportation/storage, loading spaces, and building policies.

Donation is only one way in which food waste should be attacked and decreased on Army installations. There are a variety of tools in the toolbox to address organic waste diversion, each should be utilized to the extent that they are effective, economical, and safe for humans and the environment. The first step is to reduce surplus food from ever being an issue. The first tool for waste recovery is the concern of this study: donation to people in need. More tools for food waste diversion include feeding animals, waste to energy
systems, and composting. An easy guide to food recovery is provided in Figure 10, the Environmental Protection Agency's hierarchy for food recovery programs.

![Food Recovery Hierarchy](image)

*Figure 10 The Food Recovery Hierarchy, Source: US Environmental Protection Agency*

8.1.1 Dining Facilities (DFACs)

There are 25 buildings categorized as Dining Facilities (DFACs) on installation. These buildings produce the vast majority of food waste and should be concentrated on most. All DFACs may not have the capacity for donation programs, so installation personnel should reach out to facility managers to discern which buildings have the capacity and which do not and why.
As shown in Figure 11, installation wide DFACs produce an estimated 6,000 tons of total food waste per year. Not all of this food waste is capable of being donated for consumption by human beings. DFAC food waste can be broken down from its total current waste output down to the final amount that can be donated. In dining facilities, food waste comes from pre-consumer sources and post-consumer sources. Pre-consumer food waste is that which never makes it out to the line and thus is never exposed to consumer based contamination. Pre-consumer food waste that cannot be donated includes the ingredients that are cut from meals like apple cores, bread ends, fruit and vegetable peels, etc. The food that can be donated from pre-consumer streams include the foods that are never altered but must be disposed of. This includes the breadstuffs and dairy products that reach their stated expiration dates, bruised fruits, etc. that cannot legally, or otherwise, be put out on the food line. Post-consumer food waste is that which has been cooked, or otherwise prepared. The food that is never uncovered while on the line, or not put out on the line even though it was prepared, can be donated within a time-sensitive window. See the “Quick Guide to Determine Suitability for Donation” published in Department of the Amy Memorandum on...
Army Food Donation Procedures dated 31 July 2014 (referenced in Section 11.1 of this study).

8.1.2 Commissary

There is only one Commissary on installation, which may lessen the effort needed to develop the policy structures necessary for this type of program. Focusing on this building is highly recommended.

![Retail-Super Market Material Generation by Waste Component](image)

Figure 12: Installation wide materials generated by Retail-Super Markets

Figure 12 shows that food waste is the largest waste component in the commissary waste stream. Most food waste from commissaries has gone untouched by consumers, but has lost its sale value for some other reason. A majority of food waste from commissaries comes from produce that has lost its sale value because of age or bruising, breadstuffs and dairy that has reached its stated expiration date, or canned goods that are dented. Food waste at the Fort Benning commissary is estimated to be 226.9 tons/year. This food is not legally allowed to be sold after its expiration date, but can be donated or composted within a time-sensitive window. The same Quick Guide to Determine Suitability for Donation” published in Department of the Amy Memorandum on Army Food Donation Procedures dated 31 July 2014 (referenced in Section 11.1 of this study) can be utilized to determine which foods are eligible for donation from commissary waste.
8.2 Non-Recyclable Municipal Solid Waste (MSW)

Non-recyclable municipal solid waste (MSW) is made up of all of the materials that are not organic or recycled. These materials make up 9% (1,481.1 tons/year) of Fort Benning’s waste stream. Typical materials in this category are textiles, furniture, food wrappers, diapers, mixed material items, etc. The main products that can be pulled from MSW and donated are clothing, shoes, sheets and blankets, and furniture. A majority of these items will come from the general purpose warehouses (GPWs) and training barracks.

Table 9, provided below, is a list of building types and their MSW output. Though training barracks and GPWs do not produce the most non-recyclable MSW, they do produce the types of MSW that are likely to have high diversion potential. The following sub-sections explain the training barrack and GPW building types and why it is likely to find recoverable MSW materials in their waste stream.

<table>
<thead>
<tr>
<th>Building Type</th>
<th>Tons/Year</th>
</tr>
</thead>
<tbody>
<tr>
<td>DFAC</td>
<td>416.7</td>
</tr>
<tr>
<td>HOSPITAL</td>
<td>110.2</td>
</tr>
<tr>
<td>TRAINING BARRACKS</td>
<td>90.4</td>
</tr>
<tr>
<td>GPW</td>
<td>58.1</td>
</tr>
<tr>
<td>RESTAURANT-QUICK SERVICE</td>
<td>55.5</td>
</tr>
<tr>
<td>RETAIL-_STRIP MALL</td>
<td>34.9</td>
</tr>
<tr>
<td>UEPH</td>
<td>32.0</td>
</tr>
<tr>
<td>OHC</td>
<td>30.2</td>
</tr>
<tr>
<td>RETAIL-SUPERMARKET</td>
<td>22.1</td>
</tr>
<tr>
<td>PX</td>
<td>14.2</td>
</tr>
<tr>
<td>CDC</td>
<td>12.3</td>
</tr>
<tr>
<td>SCHOOL-PRIMARY</td>
<td>9.2</td>
</tr>
<tr>
<td>TEMF</td>
<td>7.0</td>
</tr>
<tr>
<td>GIB</td>
<td>4.6</td>
</tr>
<tr>
<td>COMMON SPACE</td>
<td>4.3</td>
</tr>
<tr>
<td>OFFICE-LARGE</td>
<td>2.7</td>
</tr>
<tr>
<td>ARC</td>
<td>2.2</td>
</tr>
<tr>
<td>PFF</td>
<td>0.2</td>
</tr>
<tr>
<td>OFFICE-SMALL</td>
<td>0.0</td>
</tr>
<tr>
<td><strong>Grand Total</strong></td>
<td><strong>906.9</strong></td>
</tr>
</tbody>
</table>

*Table 9  Installation Wide MSW Generation by Building Type*
8.2.1 Training Barracks

There are 48 buildings categorized as training barracks on the installation with a total of 4,697,810 square feet of space. As shown in Figure 13, these buildings generate an estimated 90.4 tons of MSW per year into the waste stream.

![Training Barracks Material generation by Waste Component](image)

*Figure 13 Installation Wide Materials Generated by Training Barracks*

Training barracks are temporary homes for personnel while they are on installation. The soldier population in these buildings is constantly fluctuating. At any given time throughout the year, some barracks are left vacant while others are filled to capacity. It is these large moving events, where soldiers quickly leave the barrack that is at the source of much of the non-recyclable MSW found in the waste stream.

For instance, soldiers who have been stationed at a training barrack for 6 months, have gotten cozy, accumulated some furniture and other personal items could be called to pick up their things to relocate at any time. The CERL team came across one instance at Fort Gordon, where a unit was relocated and each soldier was only allowed two bags of belongings – everything else had to stay. So, soldiers packed up their most valuable belongings and tossed away everything else. Here, the CERL team saw very lightly used shoes, clothes, electronics, furniture, and other appliances tossed away and headed to the landfill.
Donation programs for barracks will depend heavily on the personnel’s abilities and willingness to cooperate with collection policies for donation cleared materials. It may not be easy to create and coordinate drop off locations for personal property that cannot travel with a soldier being related. Further, installation personnel will need to encourage soldiers to buy products that are durable. The temporary living conditions generally encourage personnel to purchase disposable items instead of durable ones. These dynamics are large drivers of MSW in training barracks. Temporary living situations are necessary for completing Army missions, but with the right management, promotion and subsequent culture, training barracks offer an area of significant improvement in terms of MSW generation.

8.2.2 General Purpose Warehouse (GPW)

There are 218 buildings categorized as GPWs on the installation with a total of 1,595,361 square feet of space. As shown in Figure 14, these buildings generate an estimated 58.1 tons of MSW per year into the waste stream.

![Figure 14 Installation Wide Materials generated by GPWs](image)

GPWs are generally used for storage of all types of military property. Some GPWs are used for the storage of ammunitions, classified documents, artillery, and other highly sensitive stocks. The buildings that can be targeted for a donation programs will likely need to be void of all sensitive materials. The Department of Public Works likely operates a number of its own GPWs with non-sensitive materials that can be focused on initially.
Similar to the training barracks, GPWs are prone to large dumping events. The large quantity of storage spaces can lead to items being kept for long periods of time. As time passes, these materials are no longer needed or have become obsolete and unnecessary. This dynamic leads to the disposing of furniture, clothing, shoes, sheets and blankets, raw materials, and other items through municipal waste even though they still hold value to many civilian organizations.

GPWs are somewhat less likely to be the sites of donation programs. The generation of non-recyclable MSW is more of a function of these sites because the items in these buildings are not personal property, but are property of the US federal government. There may be situations where protocols change, missions change, or priorities change for a government agency, so they must get rid of a large number of items that previously held value to the government but now do not. Never the less, these buildings and their inventory is managed by Fort Benning personnel. If coordinated correctly, GPW managers can notify DPW donation program managers to set up the drop off of items with potential for donation before a dumping event. GPWs that are facing dumping events should notify DPW and drop off items with donation potential to the designated DPW drop-off site. In this way, a donation program would reduce the amount of materials lost because of time and the eventual devaluing of stored items.

9 Leverageable Assets

9.1 Benning Assets (Commissaries, Dining Facilities, Landfills, Lumber Yards, etc.)

There are an estimated 240 sites at Fort Benning that should be considered for donation programs. These sites are the Fort Benning Commissary, 25 dining facilities, and 214 general purpose warehouses.

The Fort Benning Commissary is located at 8150 Marne Rd, Fort Benning, GA 31905.

There are 11 main dining facilities at Fort Benning. The units they serve and their building numbers are:

- 1st Battalion, 507th Parachute Infantry Regiment DFAC (Building 2745)
- 75th Rangers Battalion and 11 Engineer Battalion DFAC (Building 2943)
- Naro Noncommissioned Officer Academy DFAC (Building 200)
- 2/58th Infantry Battalion DFAC (Building 3110)
- 30th Adjutant General Battalion DFAC (Building 3009)
- 2/54th, 2/47th, 3/47th Infantry Battalion DFAC (Building 3400)
- 1/50th Infantry Battalion (Building 3500)
- 2/19th Infantry Battalion (Building 3235)
- 198th Infantry Brigade (Building 3460)
Additionally, there are 12 other dining areas identified during the Fort Benning waste characterization. These buildings should also be considered potential assets for donation programs.

In terms of the 214 GPWs, DPW will need to identify each building, contact the building manager, and analyze it for its suitability as a donation drop-off center, or as a site for item reclamation. GPWs that are facing dumping events should notify DPW and drop off items with donation potential to the designated drop-off site.

Each building will need to have a quick analysis done to identify the following criteria:

- Accessibility to donees in terms of distance or obstacles.
- Ability of the building to store/handle the types/quantities of food being donated.
- Confirmation that the kitchen/building personnel have the capacity for training in the safe handling, preparation, and distribution of food and other items.
- Availability and suitability of containers and transfer sites for item transport.

9.2 **Columbus Assets**

The Columbus MSA has a wealth of non-profit organizations, food banks, and charities. A map listing some of these organizations is included below (Figure 15).

Highlighted organizations that put specific interest on black female youth in the Columbus MSA. These four agencies have been contacted with the intent of ensuring that they are still operating in the Columbus MSA, and are in fact 501(c) organizations. The suggested community partner organizations to be reached out to are:

**Tears Inc.**
1011 S Railroad St, Phoenix City, AL 36867
[www.tearsinc.org](http://www.tearsinc.org)
+1 334-291-6363

**Macon Russell Community Action**
1106 E 280 Byp, Phoenix City, AL 36867
[mrcaa.org](http://mrcaa.org)
+1 334-298-6610

**Girls Inc.**
Though the population being served is incredibly important to address. The receiving organizations of Fort Benning's donated items are subject to a number of additional considerations. These considerations include:

A. Distance from the Donor food service facility.
B. Ability of the organization to receive the types/quantities of items generated at the specified times.
C. Confirmation that the Receiving Organization is a nonprofit agency, and that personnel have been adequately trained in the safe handling, preparation, and distribution of food and other items.
D. Availability and suitability of containers and/or vehicles for item transport.
Figure 15 Asset Map for 501(c) organizations in the Columbus MSA
10 The Donation Process

As previously stated, Food Donation Programs are extremely and consistently encouraged by federal, DoD, and State bodies. This encouragement generally comes for two reasons. First, donation is incredibly valuable to communities for the purpose of feeding and supporting the needy and relieving some stress in the lives of the most vulnerable citizens among us. Secondly, donation functions as a key strategy for furthering efforts toward meeting the Army’s Net Zero Waste and Federal solid waste diversion goals.

Donating food and non-food items is an issue that is defined by its logistical difficulty. Each time that a donor agency wishes to donate an item or set of items, they must find the space, time, and staff to handle the distribution of that item while the receiving organization does the same thing. Coordinating donation programs must be a very individualized task that is set for the specific site, personnel, time frame, and item(s) in question.

This section seeks to provide initial guidance to Fort Benning personnel for enacting food and non-food donation programs throughout applicable departments installation wide. The first subsection is on food donation programs and the second is on non-food donation programs. Each section will begin with a look at some of the main documents and considerations that will need to be referenced when creating programs at Fort Benning. These documents are all public and can be accessed on the internet by searching the titles that are written in bold font. This section does not seek to rewrite or summarize the referenced literature, but instead, will pull out some key information that should give the reader a basic understanding of the work involved in creating these donation programs such that they know where to start.

10.1 Food Donation Programs

10.1.1 Background

Fort Benning can be assured that risk and potential liability for donating food has been eliminated except in cases of gross negligence and intentional misconduct.

Public Law 104-210: establishes the Good Samaritan Food Donation Act of 1996 as permanent law. This law relieves food donors from liability arising from the nature, age, packaging, or condition of apparently wholesome food or an apparently fit grocery product.
that the person or gleaner donates in good faith to a nonprofit organization for ultimate distribution to needy individuals. This can be found online at:

10.1.2 Army Food Program

Food and DFACs are the concern of the Army Food Program, which is overseen by the Food Program Manager (FPM) on the installation. Comprehensive guidance on the Army Food Program is found in Department of the Army Pamphlet 30-22 (DA PAM 30-22).

**Department of the Army Pamphlet 30-22**: details the Operating Procedures of the Army Food Program. This pamphlet applies to all Active Army, Army National Guard of the United States, and U.S. Army Reserve units. Section 3-68 states that the Food Program Manager will operate a food recovery program guided by the U.S. Department of Agriculture’s “Citizen’s Guide to Food Recovery”. Further, Department of the Army Form 3161 will be prepared listing the donating activity, the receiving activity, the items being donated, and the dollar value of the donation. A memorandum with the following statement will be attached:

"I, ________, an authorized agent for , do hereby acknowledge receipt of subsistence items listed on the referenced document, with an approximate value of from the and hereby release and discharge the said unit, the U.S. Army, DOD, and the U.S. Government from all claims, demands, grievances, and causes of action of every kind whatsoever and including, but without limitation of the foregoing, all liability for damages of every kind, nature, or description which may hereafter arise from or out of injuries or damages that may result from the ingestion of the referenced list of donated food items. I agree that the food will be used for immediate consumption. I have read and fully understand this release."

This can be online found at:

Defense Commissary Agency Manual 40-5.1 details Grocery Department Operations for installation commissaries. This manual applies to DeCA activities. Chapter 13 outlines DeCA’s Food Donation Program.

**Defense Commissary Agency Manual 40-5.1**: The Food Donation Program allows for distressed foods that are headed for disposal due to a number of issues to be donated to authorized charitable agencies and non-profits or Veteran’s Associations. Commissaries should also work with vendors to donate food that has become unmarketable due to vendor actions. He Vendor Product Donation Authorization Form is used to track donation of items of which value has been reimbursed to the commissary, and all commissary and vendor donations are tracked using DeCA Form 70-20. This can be found at:
Comprehensive guidance for creating food donation programs at Fort Benning is found in Department of the Army Memorandum on Army Food Donation Procedures. This memorandum lays out the necessary information for donating food from DFACs; field rations; Morale, Welfare, and Recreation (MWR) operations; medical food service operations and tenant organizations such as Defense Commissary Agency and Army and Air Force Exchange Services.

**Department of the Army Memorandum, Army Food Donation Procedures, 31 July 2014:** establishes procedures for providing food to food recovery and distribution organizations. This applies to Army installations in the United States and Joint Bases. This memorandum provides definitions of food related terms, responsibilities of installation personnel, guidelines for proper food protection and storage, and detailed procedures for setting up donation programs on Army installations. Steps include:

- A. Survey Food Service Operations
- B. Coordinate Program Internally
- C. Identify Receiving Organizations
- D. Establish and Document Procedures
- E. Educate Staff
- F. Conduct a Trial Run
- G. Periodically Review Operations

Also, important and found in this memorandum, is reference to Technical Bulletin (TB) Medical (MED) 530 (Occupational and Environmental Health Food Sanitation), which issues guidance for food protection and screening by US Army Preventive Medicine and Veterinary Services. The use of these organization is justified with Army Regulation 40-656 and Army Regulation 40-657. These organizations must inspect all packaged foods before they are donated including products approaching the manufacturers’ recommended shelf life, products that have exceeded the manufacturer’s shelf life, and packaged components of operational ration modules.


Food donation programs on Army Installations will start with the food service facility in question. Section 10.1 above details a number of Fort Benning’s dining facilities and the single commissary on the installation. Each establishment must establish site-specific procedures for excess food handling, storage and transfer, documented via a written and signed memorandum of agreement (MOA) between the donating food service organization (Donor) and the Receiving Organization.
Donor organizations are encouraged to seek out eligible local organizations to receive donated food. If an organization is not a 501(C) organization, the FPM can petition to have them added to the list of donors approved by the state. Section 10.2 provides a list of donor organizations that can be reached out to by the installation’s Food Program Manager (FPM) so as to create partnerships for the food donation program. Otherwise, FPMs can reach out to State Agencies for Surplus Property (SASPs), who will set up partnerships on their behalf; or the U.S. Department of Agriculture, to find eligible food banks and charitable agencies in their area. Eligible SASPs can be found at www.nasasp.org.

10.2 Non-food items

The authority to transfer excess property or donate it is found in 32 Code of Federal Regulations (CFR) 273.8 and Department of Defense Initiative 2030.08.

The DoD Manuals that provide guidance for donation programs are the numerous volumes of DoD Manual 4160.21. The pertinent volume depends on what you are trying to donate.

32 CFR 273.8 provides for the ability to dispose of excess property through GSA (https://www.gsa.gov/portal/category/21179). On the right-hand side of the web page there are links to the various excessing/disposal mechanisms.

10.2.1 Becoming a Donor

If the Department of Public Works (DPW) at Fort Benning chooses, they are capable of becoming a “holding agency”, which fulfills requests by State Agencies for Surplus Property (SASPs) for donated materials. DPW may direct materials into their care that have a high potential of entering the waste stream. This can be done by designating a general purpose warehouse (GPW), or other open site, for donation drop-off. As personnel move on and off base, drop off their furniture, cars, hardware and appliances, clothing, and food at this location to be donated. These items can be donated on an ongoing basis to local, state, and national agencies that will distribute them to citizens in need.

To do this, the DPW will need to work with the US General Services Administration (GSA) to set up a specific program for Fort Benning. GSA is responsible for supervising and directing the donation of surplus personal property. In addition to providing guidance on the donation of personal property, GSA:

- Determines when property is surplus to the needs of the Government;
- Allocates and transfers surplus property on a fair and equitable basis to State Agencies for Surplus Property (SASPs) for further distribution to eligible donees;
Oversees the care and handling of surplus property while it is in the custody of a SASP;
Coordinates and controls the level of SASP and donee screening at Federal installations;
Imposes appropriate conditions on the donation of surplus property having characteristics that require special handling or use limitations (see § 102-37.455); and
Keeps track of and reports on Federal donation programs (see § 102-37.105).

As the holding agency, the department in question has possession of, and accountability for, the materials in question. As materials are made available, holding agencies and approved SASPs have 21 days to screen those materials so as to discern the eligibility of the material for donation.

### 10.2.2 Finding Donees

Most often, the SASP acts as an intermediary to donate property to public and eligible nonprofit organizations. Each state has a list of SASPs. Eligible SASPs can be found at [www.nasasp.org](http://www.nasasp.org). SASPs are responsible for determining eligibility of applicants; fairly and equitably distributing donated property to eligible donees within their State; assuring donees comply with donation terms and conditions; and when requested by donee, arranging for or providing shipment of property from the federal holding agency directly to the recipients.

It is possible to bypass the SASPs and create partnerships directly with non-profit and charitable organizations. Section 10.2 provides a list of donor organizations that can be reached out to by the Fort Benning personnel enacting the donation program. Agencies that are eligible to be partnered with include:

- Medical institutions, hospitals, clinics, and health centers.
- Drug abuse and alcohol centers.
- Providers of assistance to homeless individuals.
- Providers of assistance to impoverished families and individuals.
- Schools, colleges, and universities.
- Schools for the mentally and physically disabled.
- Child care centers.
- Radio and television stations licensed by the Federal Communications Commission as educational radio or television stations.
- Museums attended by the public.
- Libraries providing the resident public (community, district, State, or region) with free access.
• State and local government agencies, or nonprofit organizations or institutions. 42 U.S.C. 3015 and 3020 authorizes donations of surplus property to State and local government agencies, or nonprofit organizations or institutions that receive federal funding to conduct programs for older individuals.
• States and territories.

10.2.3 Transferring items from Donor to Donee

Once materials are approved for donation, holding agencies and SASPs can find transferees to come pick up the materials. Transferees have 15 days to pick up, or decline, approved materials before those materials are released back to GSA to be claimed by another SASP. If no other SASP requests the materials, those materials will enter the waste stream for disposal.

Defense Logistics Agency (DLA) Disposition services is generally used to distribute the materials that have been approved for transfer. SASPs or the approved transferee are required to pick up materials from the DLA site. At no time is the installation in question allowed to take on expenses for the transportation of donated materials. The role of DLA is facilitating the removal of donated materials from the pick up site and keeping record of the transferee that has received the material. This role is further detailed below:

(i) All transportation arrangements and costs are the responsibility of the SASP or designated donee. The DLA Disposition Services site may not act as agent packager or shipper. Until release, each holding agency is responsible for the care and handling of its property.

(ii) The SASP or designated donee will only pay for direct costs of care and handling incurred in the actual packing, crating, preparation for shipment, and loading. The price will be the actual or carefully estimated costs incurred by DoD traffic management activities for labor, material, or services used in donating the property.

(iii) Advance payment for care and handling costs will normally be required; however, State and local governmental units may be exempted from this requirement and authorized to make payment within 60 days from date of receipt of property. Advance payment may be required in any case where prompt payment after billing has been unsatisfactory.

(iv) Donees must schedule removal of property with the DLA Disposition Services site. Upon arrival, the individual must provide identification and must sign the DLA Disposition Services Visitor or Vehicle Register, indicating the purpose of the visit.

(v) The individual must provide an approved SF123 as authorization for removal.

(vi) DLA Disposition Services sites will release surplus property to authorized donees upon receipt of a properly completed and approved SF 123 or MRO.
11 Case Study

The Logistics Readiness center at Fort Jack, South Carolina recently initiated a Food Donation Program that has been very successful at providing safe food to the Transitions Homeless Recovery Center, a charity that provides homeless people a place to stay as they transition from the streets to permanent housing.

Fort Jackson issued a memorandum that provides comprehensive guidance on their installation’s Food Donation Program referenced as DA Memorandum, Army Training Center and Fort Jackson Food Donation Program Policy, 23 February 2017. This memorandum provides similar information to the DA memorandum on all Army Food Donation Programs but it has been tailored to Fort Jackson specifically. Specifically, useful to Fort Benning will be looking at the defined responsibilities for installation personnel, which can be mimicked.

Fort Jackson was able to create donation programs at their 369th Adjutant General Battalion and U.S. Army Drill Sergeant Academy dining facilities. Three days a week, the Transition Homeless Readiness Center stops at Fort Jackson to pick up food donations to serve to their clients. In just two months, Fort Jackson had donated 1,100 pounds of food to the center.

12 Recommendations

12.1 Identify plausible DFACs for donation programs and create a pilot program

Findings: There are 25 dining facilities identified in the Fort Hood Building List. Some of these locations may be cafeterias and smaller facilities that are not likely to initiate food donation programs. Fort Jackson, and all other installations, started with a smaller subset of buildings to use for a pilot program that got the donation program off the ground and proved the usefulness of the efforts.

Recommendation: Create a pilot program for food donation in DFACs using a subset of the total number of feasible buildings on installation.

Action items:

2. Audit and Evaluate each dining facility in terms of their food waste output.
3. Determine which buildings are most feasible and will benefit most, in terms of waste diversion, from a donation program.
4. Evaluate the building in terms of the following:
   a. Accessibility to donees in terms of distance or obstacles.
b. Ability of the building to store/handle the types/quantities of food being donated.

c. Confirmation that the kitchen/building personnel have the capacity for training in the safe handling, preparation, and distribution of food and other items.

d. Availability and suitability of containers and transfer sites for item transport.

5. Create a food donation pilot program at the most feasible buildings, using Section 11 of this study as a launch pad.

6. Write a Department of the Army Memorandum on the specifics of the Fort Benning Food Donation Program and distribute this widely.

12.2 Donation programs in training barracks and GPWs

Findings: The combination of the transient nature of soldier stationing and the typical culture of buying disposable items when given the choice results in large dumping events at training barracks when units move out. The result of these dumping events is the flooding of lightly used shoes, clothes, electronics, furniture, and other appliances into the landfill. In general purpose warehouses, materials often find their way into the waste stream after they have lost their value to the US government, and thus must be discarded to make room for other things. These situations can be lessened or avoided completely by initiating a donation program for items that have lost value to the US government.

Recommendation: Work with the General Services Administration to develop a highly tailored program for material donation from training barracks and GPWs.

Action Items:

1. Create a donation program for Fort Benning through GSA.
2. Establish DPW as a holding agency for surplus property.
3. Staff a donation program manager.
4. Secure a site as a drop-off location for soldier personal property.
5. Widely publicize the drop-off location and create a real culture at Fort Benning for buying durable materials and donating items.
6. Reach out to specific local agencies that will benefit most from the items collected.

12.3 Communicate and partner with organizations that focus on or are located in black and youth impoverished communities.

Findings: Economic well-being follows lines of race, gender, and geography. In the Columbus MSA, black females under the age of 18 are a subset of the population that has an
extreme concentration of poverty. The demographic analysis in Section 7.2 helped to illustrate this reality and pinpointed a number of census tracts along the Chattahoochee River where black citizens and poverty are most concentrated. This population is specifically served by a number of non-profit organizations in the Columbus MSA. These organizations are all eligible partners for food and non-food donation programs.

**Recommendation:** Reach out to as many organizations in the Columbus MSA as possible, searching with intentionality for groups concerned with the most vulnerable populations.

**Action items:**

1. Begin by contacting the local non-profit organizations identified in this study in Section 10.2. You will find a link to an interactive map containing each organization's contact information at the end of that section.
2. Create partnerships with these organizations by signing memorandums of understanding (MOA) and helps both parties agree to the terms of the relationship.
3. Request to have ineligible charitable organizations approved for receiving donations by contacting appropriate personnel in the Department of the Army