



City of Jacksonville
Comprehensive Ten Year
Solid Waste Management Plan
3-Year Update

September 2012

Attachment

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City of Jacksonville Solid Waste Management Plan

Introduction

This plan was prepared in accordance with North Carolina General Statute 130A-309.09A (b) for the purpose of meeting local solid waste needs and protecting public health and the environment. The sections of the plan are ordered as listed in the general statute.

Through implementation of the comprehensive Solid Waste Management Plan and the updates that will follow every three (3) years, the City of Jacksonville provides for the management of solid waste and its reduction for the next ten (10) years. The planning area is limited to the city limits of Jacksonville, North Carolina.

The City of Jacksonville's long range solid waste management plan provides for a comprehensive waste management program that best meets the needs of our citizens and our environmental quality. This plan will provide collection services, and waste reduction programs to the citizens of Jacksonville, North Carolina by the implementation of the following goals:

1. To provide the residents of Jacksonville, North Carolina with waste collection services and waste reduction opportunities.
2. To increase the efficiency and cost effectiveness of the City's Solid Waste Program.
3. To meet City established waste reduction goals.
4. To decrease improper waste disposal and to protect public health and environment.

Geographic Area:

This 2012 revision of the solid waste management plan covers all areas within the city limits of Jacksonville, North Carolina, but excludes Camp Lejeune, Camp Johnson and MCAS New River. Although these areas are considered inside the City limits of Jacksonville, we provide no services inside the military bases.

The City of Jacksonville, North Carolina has a total population of approximately 77,343, of which 27,759 represents on Base population and 49,584 represents off-Base population as estimated by the State of North Carolina July 1, 2010. The population of Jacksonville is approximately 37,760 and the Sanitation Division services 11,763 households and small businesses.

Section 1

Local Contacts for City of Jacksonville

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Disposal site used
-Onslow County Landfill
-Eastern Excavating, Incorporated

Emergency debris staging sites
-Northeast Creek Park
-Old Onslow Inn Site (across from Public Safety Bldg on North Marine Blvd)

Section 2 Public Participation

In 1997, in the initial planning stages for this 10-year Comprehensive Solid Waste Plan, the Recycling & Solid Waste Advisory Board for the City, met and set the goals for this Plan.

Due to changes in the City of Jacksonville's advisory committee structure, the plans and goals in this 2012 revision of the 10 year Solid Waste Management Plan were established by the Sanitation Division. However, the public was given an opportunity to review and comment on the plan. A notice for a public input session was published in the local newspaper. (See Notice of Public Input below)

NOTICE OF PUBLIC INPUT SESSION

The public will take notice that the City of Jacksonville, North carolina will hold a Public Input Session on Wednesday, the 5th day of September 2012 from 5:00 until 5:30 PM at the Jacksonville Public Services Complex, 350 A South Marine Blvd. to receive public comment regarding the revisions to the Jacksonville, North carolina's section of the Comprehensive Solid Waste Management Plan. Copies of the revised updates can be viewed at the City Clerk's Office.

You may request an accommodation for a disabling condition in order to attend this Public Input Session. If you have not already made a request prior to the meeting, you may do so with the City of Jacksonville's ADA Meeting Coordinator, carmen K. Miracle at 938-5224 or TOO 455-8852. Such request should be made at least twenty-four hours prior to the meeting.

Carmen K. Miracle, City Clerk

Publish: Friday, August 31, 2012

Section 3

Waste Characterization

Waste Stream Evaluation:

In this plan, residential waste refuse refers to waste generated by residential households, small businesses and multi-family dwellings of less than (8) units). The term non-residential refers to waste generated from commercial businesses, industrial and institutional activities as well as multi-family dwellings of (8) units or more. Construction waste is generated from construction activities, part of which is picked up on regular sanitation collection routes and through our Dial-A-Truck Program. Outlined below is a snap shot of what we estimate the waste stream to be for the City of Jacksonville.

The City has not conducted a study of its residential or commercial waste stream. These figures come from the landfill tickets we receive from the Onslow County landfill as well as cubic yard estimations we do to determine yard waste totals that are taken to Eastern Excavating, Incorporated.

The City of Jacksonville along with our Commercial Dumpster contractor collected 41,335 tons of waste in FY2011-2012. All solid waste collected by City personnel and our commercial dumpster contractor is taken to the Onslow County Landfill. The majority of the yard waste debris is taken to Eastern Excavating, Incorporated located at 143 Penguin Lane here in Jacksonville.

Table 1

Jacksonville Section

Waste Stream Percentages for Jacksonville FY11-12

Type of Waste	Tonnage	Percentage of Waste Stream
Residential	19,776	48%
Non-Residential (Commercial)	20,686	50%
Construction/Demolition	873	2%
Totals	41,335	100%

Section 4

Waste Reduction Goals

As you can see from Table 1, 48% of the waste stream is from the residential sector, 50% from commercial sources and 2% from construction/demolition. State law requires that each local government establish waste reduction goals. The City primarily based reduction or diversion goals on what we were doing in our recycling program, because at that time that area of our collection efforts was an area we felt we could greatly influence and control. However, since that time we have developed more sophisticated communication tools to educate and inform customers about recycling and State bans on used oil, rigid plastics, wooden pallets, oyster shells, oil filters from being disposed on in the landfill.

In 2009, the year of the last revision process, the City established a waste reduction goal of 4% for FY2011-2012. Based on recycling tonnages, which accounts for approximately 5% of the total waste stream, the City has met both goals.

In this 2012 update to the Solid Waste Management Plan the City will be looking at establishing a more aggressive waste reduction/diversion plan targeting recycling, televisions, computers, pallets, yard waste and fluorescent lighting. The 2012 Solid Waste Management Plan is designed to reduce or divert the City of Jacksonville's waste by 6.5% for FY2015-2016, 9% by FY2018-2019 and 10% by FY21-22

The waste reduction goals can be converted from percent to tons diverted by examining population estimates and past waste disposal figures. The base line year (FY1991-92) disposal rate was 1.04 tons per capita; however, that figure has since been revised downward in order to meet our projected goals for the coming three year updating intervals.

Table 2
 Jacksonville Section
 Waste and Population Projection

Fiscal Year	Population	Waste Disposal Tonnage	Per Capita Disposal Rate Tonnage
Base Line Year 91-92	30000	31200	1.04
FY98-99	44 462	42819	.96
FY01-02	34,074	35,783	1.05
FY04-05	33,580	42,819	1.27
FY07-08	34,397	42,184	1.23
FY10-11	37,760	38,775	1.03
FY11-12	37760	41335	1.09
Year	Projected Population	Projected Waste Disposal	
FY15-16	38400	37,248	.97
FY18-19	39,360	37,392	.95
FY21-22	40344	37,923	.94

With our 2012 revised goal of 6.5% per capita waste reduction for FY15-16, 9.0% per capita waste reduction for FY18-19, and 10% per capita waste reduction for FY21-22 the City of Jacksonville must reduce its per capita disposal rate to .97% in FY15-16, .95% in FY18-19 and .94 in FY21-22. Using the new per capita rates the target annual tonnage remaining for disposal by the City of Jacksonville would be 37,248 tons in FY15-16, 37,392 tons in FY18-19 and 37,923 tons in FY21-22. In other words, 2,688 tons of future annual waste must be diverted from the landfill in FY15-16, 3,542 tons in FY18-19 and 4,035 tons in FY21-22.

Table 3
 Jacksonville Section
 Targeted Waste Reduction FY2014-2015 and FY2017-2018

Calculations	FY15-16	FY18-19	FY21-22
Baseline year Tonnage per capita disposal rate	1.04	1.04	1.04
Percent waste reduction goal.	6.5%	9%	10%
Targeted Tonnage per capita disposal rate FY15-16//FY18-19jFY21-11 (Subtract the percent goal from 1.0, then multiply by line 1)	.97	.95	.94
Estimated population for July FY15-16/FY18-19/FY21-22	38,400	39,360	40,344
Projected tonnage for disposal in FY15-16/FY18-19jFY21-22 Multiply line 1 by line 4	39,936	40,934	41,958
Targeted annual tonnage for disposal in FY15-16/18-19/FY21-22 at targeted goal (multiply line 3 and line 4	37,248	37,392	37,923
Targeted annual tonnage to reduce FY15-16/FY18-19/ FY21-22(subtract line 5 from 6)	2,688	3,542	4,035

Meeting the Basic Reduction Goals

The 2012 revised plan is designed to reduce the City of Jacksonville's waste by 2,688 tons in FY15-16, 3,542 tons in FY18-19 and 4,035 tons in FY21-22. As indicated below, this plan targets the present recycling program, and materials that have been banned from landfill disposal such as pallets, electronics and appliances within the City of Jacksonville. We feel that continued dissemination of educational information concerning recycling and banned landfill materials will merit greater participation in achieving our goal by residential and commercial customers.

In September 2010, the City of Jacksonville implemented a commercial recycling program consisting of a combination of dumpster and roll-out container collections. This program initially was offered to commercial restaurants and now has been offered to some housing complexes that are willing to monitor the recycling efforts of their customers.

The City of Jacksonville continues to purchase and distribute 64-gallon recycling containers to residential customers instead of the smaller recycling bins in an effort to increase volume as well as participation in recycling. We have limited the number of refuse containers a customer can have to two (2) and have placed educational information concerning recycling and garbage on the City's G10 television station as well as the City's website.

July 2011, brought about the banning of televisions and computer equipment by the State from being disposed of in the landfill. The City of Jacksonville began collecting these items separately and we now take these items to the Onslow County landfill to be recycled.

The City has also placed on G10 and the City's website information concerning computer, television and pallet collections in an effort to keep customers informed and to keep these items from being thrown in with the regular household garbage.

In October of 2011, the City of Jacksonville signed a contract with Sonoco Recycling for the processing of recyclable materials taken to the recycling facility they now operated in Onslow County. In doing so, this greatly expanded the recycling materials that were accept in our recycling curbside program and aided in the increased tonnage collected in FY2011-2012.

Table 4

Jacksonville Section

Aoosroximate Waste Reduction by Sector FY15-16/FY18-19/FY21-22

Waste Type	Targeted Tons to Reduce by FY15-16	Targeted Tons to Reduce by FY18-19	Targeted Tons to Reduce by FY21-22
Residential	2,188	2,842	3,285
Non-Residential	500	700	750
Construction & Demolition	0	0	0
Goal	2,688	3,542	4,035

Residential Waste

The plan targets 2,188 tons by FY15-16, 2,942 tons by FY18-19 and 3,175 tons by FY21-22 for reduction in residential sector waste. Table 5 summarizes the residential waste methods to be used to meet the local goals.

Table 5

Jacksonville Section

Targeted Residential Waste Reduction FY15-16/FY18-19/FY21-22

Reduction Method	Targeted Material	EST. TONS FY15-16	EST. TONS FY18-19	EST. TONS FY21-22
Residential/Commercial Recycling	Recyclables-cardboard, magazines, catalogs Plastics, etc.	2,088	2,792	3,000
Composting	Limbs, leaves, pine straw, bushes and logs	a	a	a
Reuse	Scrap metal, white goods, electronics	100	150	175
Total		2,188	2,942	3,175

Non-residential Waste

In the non-residential sector this revised plan targets commercial recycling waste for reduction. The plan targets 485 tons for reduction in FY15-16, 580 tons for FY18-19 and 800 tons for FY21-22 in the non-residential sector.

Table 6

Jacksonville Section

Targeted Non-Residential Waste Reduction FY15-16/FY18-19/FY21-22

Reduction Methods	Targeted Material	EST. TONS FY15-18	EST. TONS FY18-19	EST. TONS FY21-22
Source Reduction				
Recycling	Recyclables- cardboard, plastics, magazines, aluminum etc.	485	580	800
Reuse	Scrap metal, white goods, electronics	a	a	a
Total		485	580	800

Construction and Demolition Waste

Construction and Demolition accounted for approximately 2.0% of the total waste stream in 2012. We feel that with the ban on pallets being disposed of in the landfill as well as established set out limits implemented by the City that 15 tons can be diverted by FY15-16, 20 tons by FY18-19 and 60 tons by FY21-22.

Table 7

Jacksonville Section

Targeted Waste Reduction FY15-16/FY18-19/FY21-22

Reduction Methods	Targeted Material	EST. TONS FY15-16	EST. TONS FY18-19	EST. TONS FY21-22
Recycling	Pallets/construction	15	20	60
Reuse	Concrete	0	0	0
Total		15	20	60

**Section 5
Waste Handling Characterization**

A. Municipal Solid Waste

The City uses municipal crews to collect solid waste from residential customers and small businesses. Presently, there are six (6) refuse collection routes and four (4) of those routes are automated. For some small businesses and apartment complexes where space is at a premium, the City uses rear loading trucks. Refuse collections take place once a week on Mondays, Tuesdays, Thursdays and Fridays. All of the collected refuse is taken to the Onslow County Landfill for disposal.

Recycling collection is also done by municipal crews in rear loading trucks once a week. The City utilizes three (3) collection routes that collect four days a week on Mondays, Tuesdays, Thursdays and Fridays. All collected recyclables are taken to the Material Recovery Facility, which is operated by Sonoco Recycling at the Onslow County Landfill for processing.

Larger commercial customers that have dumpsters for their refuse are collected by an outside contractor that has a contract with the City for this collection service. Collection is five (5) days per week and collection service ranges from twice per week to five days per week. Collected refuse is taken to the Onslow County landfill for disposal.

Commercial recycling collections are also done by the contractor once per week on Thursdays. Commercial customers can have a recycling dumpster or the 64-gallon roll-out recycling containers for recycling. All collected recyclables are taken to the Material Recovery Facility at the Onslow County landfill for processing.

B. Construction and Demolition Waste

It becomes increasingly difficult to separate this type material from the regular household garbage. However, with pallets being banned from the landfill, we are attempting to collect pallets separately in order to remove this type material from the construction/demolition waste. This collection takes place once a week on Thursdays and all of the material is taken to the Onslow County Landfill.

C. Land Clearing and Inert Debris

Yard waste material, vegetation basically falls into this category. The City generally collects yard waste on Wednesdays. However, larger piles are collected during the week based on the City's set-out limit. The City charges residential customers for yard waste piles in excess of a cord. All yard waste material is taken to Eastern Excavating, Incorporated located in Jacksonville.

D. White Goods/Tires/Electronics

Each of these items are collected separately and taken to the Onslow County landfill for recycling. These items are collected once a week on a call-in basis either by the residential customer or the refuse/recycling collection crews in the area. No charge is passed to the customer for this service.

Section 6 Assessment & Actions

Residential Refuse Collection Service

-The City of Jacksonville presently provides once a week curbside refuse collection services to approximately 11,300 households and 463 small commercial businesses. Curbside refuse collection is mandatory, however we also allow exemptions when residential customers can not get their cans to the curbside due to medical reasons or when they have reached the age of 70. Residential customers are billed \$5.00 per month for the disposal cost the City pays to the landfill and small commercial customers are billed \$6.10 per month for disposal cost.

Actions: The City will continue to implement automated collection service in an attempt make the service more efficient and reduce overall collection cost.

Commercial Dumpster Collection Service

-Dumpster collection service is provided by the City through a contractor. Service ranges from twice per week to five (5) days per week depending on the request of the business. Commercial charges are dependent on size of dumpster and frequency of collection.

Actions: The City will continue offering commercial dumpster collection service. We feel that collectively, the best rates are obtained for our commercial businesses for this service.

Residential Recycling Collection Service

-The City of Jacksonville also provides residential recycling collection once per week curbside for its residential and small business customers at no charge to the customer. Previously, the City purchased recycling bins but since July of 2008 we have purchased only the 64-gallon recycling containers in an effort to increase recycling participation. All recycling materials are taken to the Materials Recovery Facility at the Onslow County landfill.

Actions: The next phase of the City's efforts to automate collection services is the possible implementation of an automated recycling collection system. There are several challenges as it relates to cardboard collections that have to be worked out in this process.

The table below is a snap shot of the recycling stream in the City of Jacksonville for residential and commercial recyclers. Since recycling is now collected co-mingled, percentages breaking down the individual materials are based on percentages used by Waste Management when they collected the City's recyclable materials.

Table 8

Jacksonville Section

Reevclable Materials Collected Residential and Commercial FY11-12 (tons)

Materials	Tonnages
Newspaper/Cardboard	1436
HDPE	48
PET	71
Aluminum	57
Tin	147
Clear Glass	332
Green Glass	128
Brown Glass	166
Total	2,385

Commercial Recycling Collection Service

-In September 2010, the City of Jacksonville started a commercial recycling program that was operated by the commercial dumpster contractor with the City. The program has two (2) separate type customers. One group, that consist of approximately 40 customers have recycling dumpsters that are collected once a week. The second group, consists of 167 customers that the City provides 64-gallon roll-out containers to and they are collected by the commercial dumpster contractor. Collection services are on Thursdays each week. As with the residential recycling, all recyclable materials are taken to the Materials Recovery Facility at Onslow County landfill.

Actions: The City's long range plan is to continue to focus on increasing the recycling of the commercial sector of the waste stream. This can be done by partnering with our commercial dumpster contractor and Sonoco Recycling in developing and distributing educational and promotional information to the commercial sector of our waste stream.

Yard Waste Collection Service

-The City of Jacksonville provides once a week yard waste collection, except when there is a holiday. Residential customers are allowed to set out no more than one (1) cord of limbs per week and an unlimited number of compost bags or trash cans. Limb piles in excess of the set-out limit are subject to an additional fee of \$20.00 per cord after the first cord.

Actions: The long range plan of the City is to eventually automate yard waste collection service. However, this is approximately 5-years out and our next step is to possibly restrict the number of cans, etc. placed out for collection and providing containers for yard waste disposal. .

Bulky Waste Collection Service

-Bulky waste collection consists of white goods/appliances, pallets, mattresses, play equipment and furniture. These items are collected by municipal crews once a week and taken to the Onslow County landfill for disposal.

Actions: Continued collection of these items by municipal crews which at this time is the most cost effective manner.

Scrap Tires

-The City does not have a facility for residential customers to bring old tires to. Municipal crews collect tires once per week on a call in basis. These tires are stored at the Fleet Maintenance Facility then taken to the Onslow County Landfill on Thursdays.

Actions: Once a week collection of tires helps to reduce fuel cost and maximizes the use of our collection vehicle. Presently there are no plans to expand this collection service.

Electronics Collection

-Recently in October 2011, the City started collecting electronics (computers, televisions and other electronics devices) with municipal crews once per week. Electronics are collected separately from regular household garbage based on the ban by the State on dumping these items into the landfill. Collected electronics are taken to the Onslow County Landfill and the City receives a landfill ticket indicating the number of electronics delivered to the landfill.

The City, operating through the GIO television network, notified customers of the upcoming ban. This prepared customers for this change in collection service and demonstrated how to prepare these items for collection.

Collections of these electronic items are tracked through the landfill tickets we receive from the Onslow County landfill. These tickets only show the cost we pay per item and we work with the County to acquire tonnages for these items.

Actions: We will continue collecting these items separately and take them to the Onslow County Landfill for recycling. Consideration in the future will be given to possible looking at a drop-off site for these items.

Household Hazardous Waste

Presently, City crews collect used motor oil and tires. The City does provide for the recycling of oil filters, used motor oil and anti-freeze through a contractor. The location is our fleet maintenance facility. Used motor oil is also picked up by Sanitation Division residential crews.

Actions: For FY12-13, the City has budgeted for an annual household hazardous waste collection event to be held in the fall/winter time. We are looking at a one day event for 4-5 hours at one location. We are consulting a number of contractors to determine the best methods for holding such an event. Depending how successful this event is will determine if it will be a permanent annual event.

Other Special Waste

Fluorescent lighting recycling for public governmental buildings is done by city crews. The lighting is collected and stored at City's Facilities Maintenance Division. Shipping boxes are provided by the Sanitation Division through Lampmaster and then sent to Lampmaster for recycling.

Actions: Continue to use of Lampmaster for fluorescent lighting recycling.

Section 7 Solid Waste Management Cost

Assessment of Solid Waste Collection Figures

Full Cost Analysis					
Fiscal Year FYII-12	Program Category				
	Total MSW Budget	S W Collection Residential	SW Disposal Residential	Commercial Disposal Cost	Commercial Collection Service
Employees	41	0	0	0	0
Salaries & Benefits	\$1,555,061	\$1,555,061	0	0	0
Operating Expenses	\$1,006,162	\$1,006,162	0	0	0
Capital Outlay	\$353,477	\$353,477	0	0	0
Contracted Services	\$677,043	0	0	0	\$677,043
Tipping Fees	\$1,626,826	0	\$628,694	\$998,132	0
Yard Waste	\$44,150		\$44,150		
Total	\$5,262,719	\$2,914,700	\$672,844	\$998,132	\$677,043

The above cost information outlines the total cost associated with the collection and disposal of solid waste inside the city limits of Jacksonville. As you can see it includes residential and commercial collection and disposal services as well as the purchase of capital equipment to perform the various collection services provided by the City.

Residential and small business collection and disposal services are financed through property taxes and a monthly tipping fee charge of \$5.00 (for residential customers) and \$6.10 (for small commercial customer). However, during the budget deliberations for FY12-13, the City will begin to move towards an enterprise fund for residential and small business customers. Effective July 2012, a collection cost fee of \$5.00 will be added to the billing charge for these customers.

Commercial collections that the City provides through a contractor operate on an enterprise fund basis. Commercial customers pay a collection fee as well as a disposal fee for refuse dumpster collection services. The monthly disposal cost depends on the size dumpster and the number of days collected. The collection fee is set by the contract we have with the collecting contractor.

Section 8 Emergency/Disaster Debris Management

The City has a contract with CrowderGulf for debris collection and removal during an emergency situation or disaster. For initial response to disaster type situations, municipal crews are equipped to handle the clearing of streets and removal of debris to the staging areas located at Northeast Creek Park and the property across from the public safety building or the Onslow Inn property. The link for the City's Emergency Operations Plan is <http://cojinternal!pages!default.aspx>.

Section 9 Resolution attached (See below)

RESOLUTION (2012-33)

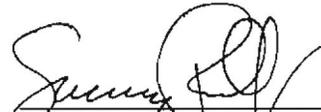
RESOLUTION TO APPROVE THE CITY OF JACKSONVILLE UPDATES
OF THE 10-YEAR SOLID WASTE PLAN

WHEREAS, better planning for solid waste will help protect public health and the **environment**, provide for an improved solid waste management system, better utilize our natural resources, and control the cost of solid waste management; and

WHEREAS, North Carolina General Statute 130A-309.09A (b) requires each unit of local government, either individually or in cooperation **along** with other units of local government, to develop a 10-year comprehensive solid waste management plan; and

NOW, THEREFORE, BE IT RESOLVED that the City Council of the City of Jacksonville hereby approves the update of the Onslow County Comprehensive Solid Waste Management Plan.

Adopted by the Jacksonville City Council in regular session this 18th day of September 2012.


Sammy Phillips, Mayor

AITEST:


Carmen K. Miracle, City Clerk

Section 10 Ordinances

The City of Jacksonville has municipal codes dealing with solid waste and littering. The link below can take you to the codes mentioned above.

[http://www.ci.jacksonville.nc.us/Government---City-Services|City-Clerk/Links/City-Municipal-Code-\(I\).aspx](http://www.ci.jacksonville.nc.us/Government---City-Services|City-Clerk/Links/City-Municipal-Code-(I).aspx)

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