



**TOWN OF FAIRFAX**  
**STAFF REPORT**  
**April 5, 2017**

**TO:** Mayor and Town Council  
**FROM:** Michele Gardner, Town Clerk *MG*  
**SUBJECT:** Acceptance of Marin Sanitary Service Annual Report 2016

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**RECOMMENDATION**

Accept the report.

**DISCUSSION**

Attached is the Annual Report from Marin Sanitary Service for the Council's review and acceptance. The report covers January through December 2016. Kim Scheibly of Marin Sanitary will be available at the Council meeting to answer any questions.

**ATTACHMENT:**

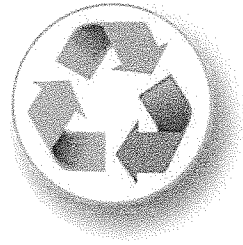
Marin Sanitary Service Annual Report 2016

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# *Marin Sanitary Service*

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CONSERVATION – OUR EARTH, OUR MISSION, OUR JOB



# FAIRFAX ANNUAL REPORT

YEAR END 2016

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# ZERO WASTE PROGRAMS AND SERVICES

## Executive Summary

### CONTINUED COMMITMENT

Marin Sanitary Service (MSS) continuously puts forth its best effort to help the Town of Fairfax in meeting its Zero Waste and greenhouse gas reduction goals. On December 1, 2011, MSS signed a Contract with the Town that added several new Zero Waste programs to the existing list of services provided to the Town. As part of this Contract, MSS is providing the Town with a comprehensive annual report for calendar year 2016.

### OPERATIONAL EFFICIENCY

The Operational Improvement Plan and Zero Waste Programs detailed in this report illustrate MSS's commitment to diverting resources from the landfill. Our goal as we learn, implement, and refine new technologies and make fleet enhancements, is to keep costs as low as possible while maintaining quality service. MSS adds new programs and/or reviews and enhances ongoing programs on an annual basis. Community Outreach and Education is essential to meeting diversion goals.

### 2016 IN REVIEW

In 2016, two new clean-up programs were implemented to help residential customers divert additional materials. More commercial and multifamily customers subscribed to organics services. The MSS 4R Planet School Programs in partnership with Zero Waste Marin continued to expanded. The plan in 2017 is to implement best practices at several schools to achieve high diversion rates.

### LOOKING AHEAD

The focus for 2017 continues to be on removing organics from landfill carts and bins in all service sectors (commercial, multifamily and residential). AB 1826 (Mandatory Commercial Organics Recycling) went into effect on April 1, 2016 with a threshold of 8 cubic yards or organics. This dropped to 4 cubic yards of organics on January 1 2017. Another pivotal organics law is SB 1383, Short Lived Climate Pollutants: Organics Waste Methane Emissions Reduction. This bill strives to reduce the landfilling of organics by 50% in 2020 and 75% by 2025. All jurisdictions will need to have an organics management plan in place per AB 876 (Organics Management Infrastructure Plan) passed in 2016. Having organics programs in place is the biggest part of this plan and MSS is proud to have organics options for all customer types.

Sincerely,

Patty Garbarino  
President, Marin Sanitary Service  
March 1, 2017

# ZERO WASTE PROGRAMS AND SERVICES

## Operational Efficiencies

In 2012, MSS underwent an extensive audit of its collection operations. From the results of the audit, a five-year Operational Improvement Implementation Plan was developed, which began in 2013. We are proud to report that we are on track with this plan and have made great progress on streamlining collection services.

Our goal as we learn, implement, and refine new technologies and make fleet enhancements, is to keep costs as low as possible while maintaining quality service. MSS is now four years into the implementation of this efficiency based plan. Route Smart, our route optimization soft-ware, combined with the use of Mobile-pak software and tablets, allow drivers and managers to continue to improve routing and customer service delivery. Four (4) of the six (6) permanent routes in the Town now have tablets in use.

Since 2013, we have decreased route hours by 150 hours per week even after adding 169 hours per week for bulky item collection and recycling and organics services throughout our entire service area. In 2013 we needed a total of 54 drivers to complete all routes. Due to consolidations, we now have 49 drivers on all routes. 10 drivers are on organics routes, 18 are on recycling routes and 21 are on garbage routes. In late 2015, we eliminated a fulltime helper on a residential garbage route due to switching to a fully automated truck. Having a single driver in a fully automated route is working well in the hills of the Town.

The following are results from the 2016 route audits that were performed in the Town. The primary purpose of these audits was to verify service at all accounts to ensure proper billing.

Service Not Billed: Three (3) accounts were not being billed for the services being provided. A letter was sent to the residences to inform them to call and set up an account to continue receiving service. All customers resumed service.

No Service: Three (3) accounts did not have any service. Letters were mailed to these residences to inform them of the services offered by MSS. All three customers called to start service.

# ZERO WASTE PROGRAMS AND SERVICES

## New Legislation for 2016

1. AB 1826 (Chesbro) Mandatory Organic Recycling Collection. This law came out of the need to decrease greenhouse gas emissions from the AB 32 scoping plan. This bill intends to capture and recycle organic waste (food scraps, yard and plant debris, landscape and pruning material, nonhazardous wood, and food-soiled paper). Commercial businesses and multifamily dwellings will be required to subscribe to composting or anaerobic digestion service for their organic waste. This law phases in the mandatory recycling of commercial organics over time.
  - a. Program details
    - i. April 2016 - Businesses generating 8 cubic yards (CY) of organics/week are required to have an organic waste recycling program. One (1) business and the Town were identified. The Town has yard waste collected from the Corp Yard and organics carts at the Town Hall. The identified business is self-hauling food waste to a farm.
    - ii. Jan 2017 – 4 CY/week of organics. One additional business is required to participate and is currently enrolled in the F2E program.
    - iii. Jan 2019 – 4 CY/week of solid waste. These businesses will be identified in 2017.
    - iv. 2020 trigger: CalRecycle can reduce the threshold to 2 CY of waste if statewide organics disposal not cut in half.
    - v. Multifamily complexes are exempt from counting food waste in their total organics per week calculation, and are required only to divert yard debris, landscaping and pruning materials.
2. AB 876 (Gordon): Organics Processing Capacity: This bill requires that jurisdictions submit plans for collecting and processing all identified organic material tonnage in the area for 15 years. Individual cities and towns in Marin are not required to have plans since this will be managed by the Marin JPA.
3. SB 1383 (Lara) Short Lived Climate Pollutants: Organics Green House Gas Emissions Reductions: This bill requires the State to divert identified organics generated by 50% in 2020 and by 75% in 2025. This law has steep fines and enforcement if goals are not met.
4. Issues and Local Government Effects
  - a. Unlike AB 341 in which volumes of municipal solid waste are the criteria for compliance, AB 1826 uses volume of organics generated as the criteria. The only way to know how much of the waste stream is comprised of organic materials would be to perform a detailed waste audit. This is a time consuming and costly process.
  - b. The Self-haul allowance in AB 1826 is problematic unless self-haulers are held to the same environmental health and safety standards as haulers and the material is hauled to a designated and permitted processing facility.
  - c. It remains unclear how the State Diversion goals for recycling and organics will be managed at a jurisdictional level.
5. Suggested Solutions
  - a. Amend the existing commercial/multifamily recycling ordinance to contain more detailed language around organics recycling that makes identification of customers easier, contains a

# ZERO WASTE PROGRAMS AND SERVICES

mechanism for enforcement, and allows MSS to educate, monitor and report progress to the jurisdictions we serve.

- b. Update municipal code to make recycling and organics diversion mandatory for residential customers.

## OUTREACH AND EDUCATION SERVICES

At Marin Sanitary Service, community involvement through education, outreach and alliance building is our greatest passion and supports our ultimate goal of Zero Waste. Our duty is to engage and educate our community in how *they too* can be part of the solution. Outreach is the most important aspect in reaching our goal of Zero Waste. In order to provide more hands-on training to customers, MSS now employs five full-time Recycling Programs Coordinators each dedicated to a customer type in addition to a full-time Household Hazardous Waste Coordinator. Their contact and program specialty is listed below.

Table 1: Outreach Contacts by Specialty

OUTREACH DEPARTMENT STAFF			
Name	Title	Email	Primary Focus
Jennifer Grenier Selvig	Recycling Programs Coordinator	<a href="mailto:Jennifer.Grenier@marinsanitary.com">Jennifer.Grenier@marinsanitary.com</a>	Large Commercial Businesses and C&D Programs
Jessica Connolly	Recycling Programs Coordinator	<a href="mailto:Jessica.Connolly@marinsanitary.com">Jessica.Connolly@marinsanitary.com</a>	Multifamily Dwellings (Apartments)
Ruben Hernandez	Recycling Programs Coordinator	<a href="mailto:Ruben.Hernandez@marinsanitary.com">Ruben.Hernandez@marinsanitary.com</a>	Food to Energy and Commercial Organics
Izzy Parnell-Wolfe	Community Outreach and School Recycling Programs Coordinator	<a href="mailto:izzy.parnell-Wolfe@marinsanitary.com">izzy.parnell-Wolfe@marinsanitary.com</a>	Tours, Recycling Education and Outreach in School, Community Outreach and Events.
Kathy Wall	HHW Coordinator	<a href="mailto:Kathy.Wall@marinsanitary.com">Kathy.Wall@marinsanitary.com</a>	Curbside and Drop-off HHW Programs
Chance Shelley	Communications Coordinator	<a href="mailto:Chance.Shelley@marinsanitary.com">Chance.Shelley@marinsanitary.com</a>	Print, Web and Social Media Content.

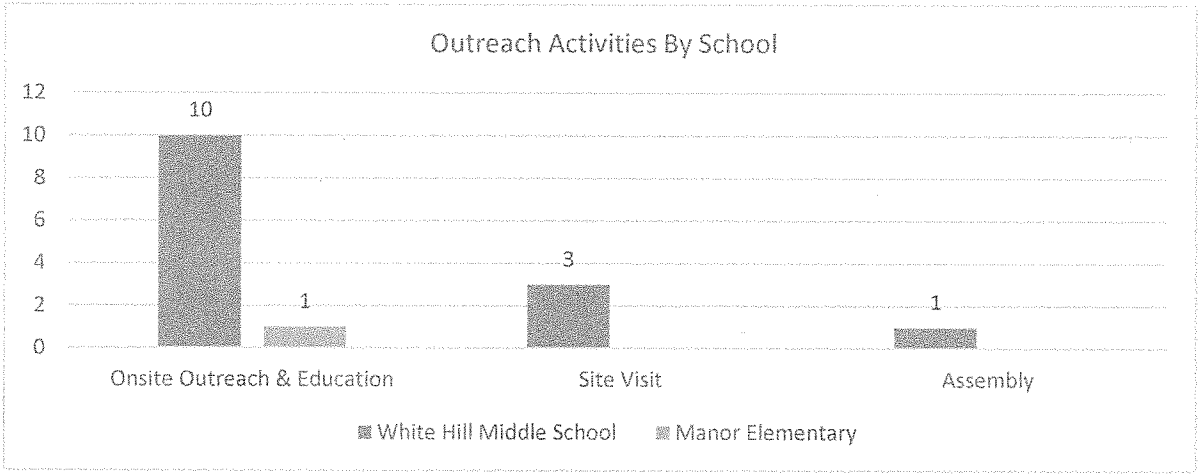
## 4R PLANET SCHOOL PROGRAM AND TOURS

During the 2016 year, White Hill Middle School (WHMS) took part in the Zero Waste Schools Program, which was run by both Zero Waste Marin (ZWM) and Marin Sanitary Service (MSS). As part of this program, WHMS received 10 onsite outreach and education visits. This visits were comprised of:

# ZERO WASTE PROGRAMS AND SERVICES

meetings with the Green Team students, monitoring the new sorting stations at lunch, and doing both a staff and a custodial training. In addition to these visits, our Education Coordinator also gave 5 classroom presentations to inform students about the new sorting stations and the importance of using them correctly, and added composting service for the students and staff at WHMS to use. As a result of WHMS's participation in the Zero Waste Schools Program, the school was able to decrease their landfill service level from a 6-yard bin picked up twice a week, to a 4-yard bin picked up twice a week. These changes resulted in the school's diversion rate increasing by 16.8 % (from 37.5% to 54.3%) as well as the school's monthly bill decreasing by about \$170/month. In 2017, Manor Elementary will be participating in the same Zero Waste Schools Program. No Fairfax schools came on a tour of MSS in 2016.

Figure 1: School Outreach Activities by Type



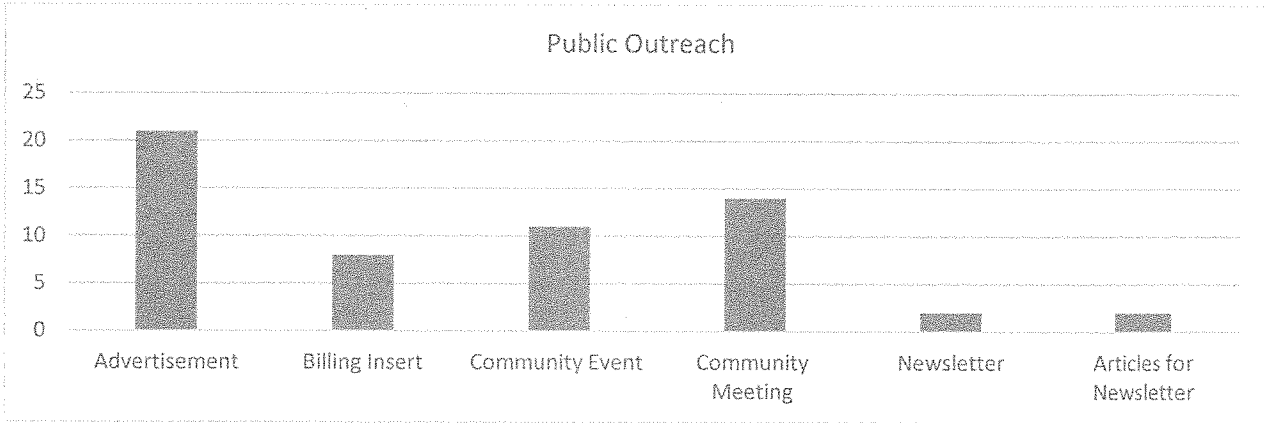
### Outreach Materials and Community Events

Public information and education is the cornerstone of the MSS Outreach Program (Figure 2). All Fairfax residential and commercial customers have received multiple direct mail pieces informing them of our programs and services. These mailings continue to educate the public on Zero Waste programs; proper recycling and composting practices; the hours of operation at all facilities; proper disposal of household hazardous waste; and the towns Mandatory Commercial Recycling Ordinance. Materials were also distributed to public libraries, town halls, Police and Fire Departments, Chambers of Commerce and Community Bulletin Boards to reach more of the community.



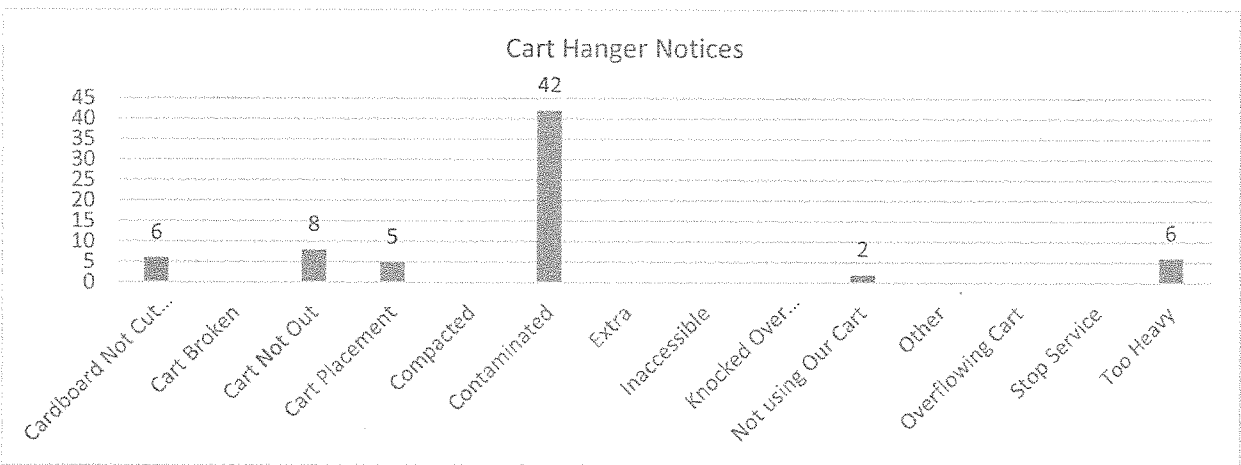
# ZERO WASTE PROGRAMS AND SERVICES

Figure 2 Public Outreach by Type (not including Schools or Mandatory Commercial Recycling)



Another important customer communication piece is the cart hanger notice. Drivers leave cart hangers on containers to notify customers of any issues they noticed. This data is analyzed and used for future newsletter articles and bill insert messages to customers (Figure 3). A total of 69 cart hangers were left in the Town. 61% were due to contamination. All customers received a phone call from customer service to educate them on proper sorting practices.

Figure 3: Reasons for Leaving Cart Hanger Notices



Nowadays, more people turn to the internet for information. The MSS website is filled with information on all programs and details on how to recycle more and subscribe to services ([www.marinsanitaryservice.com](http://www.marinsanitaryservice.com)). To keep up with this trend, MSS is increasing it's online social media presence (Figures 4 and 5). Every year we have attracted more followers and are receiving praise for the content from customers. In early 2016, we had an outside agency evaluate our content and posting strategy and were pleased to find out that our strategy is sound and the variety of postings is strong.

# ZERO WASTE PROGRAMS AND SERVICES

Outreach/Communications goal for MSS was to increase our social media presence. Instagram was added to our social media presence in January 2016. Please like us at (<https://www.facebook.com/marinsanitary>) and follow our Twitter and Instagram handles at ([mssrecycles](#))!

Figure 4 Social Media Followers Q4 2015 to Q4 2016

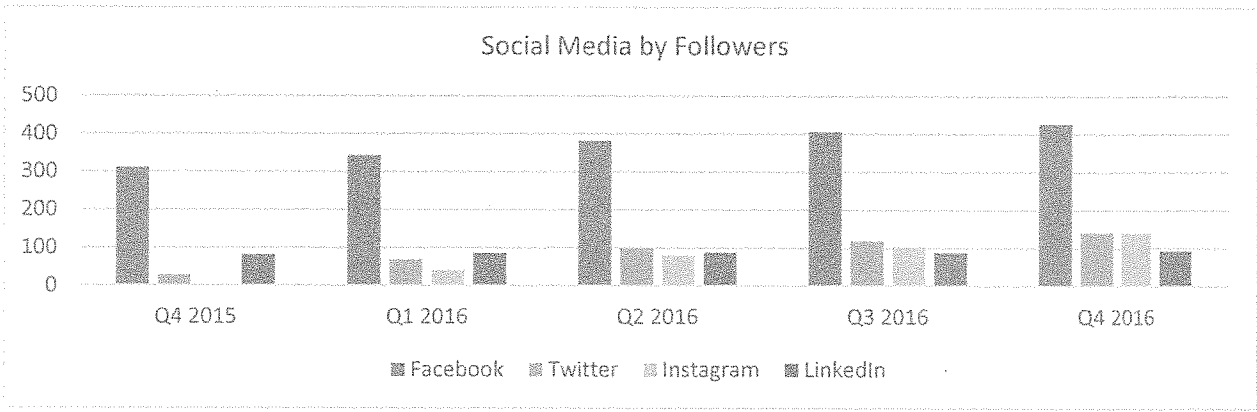
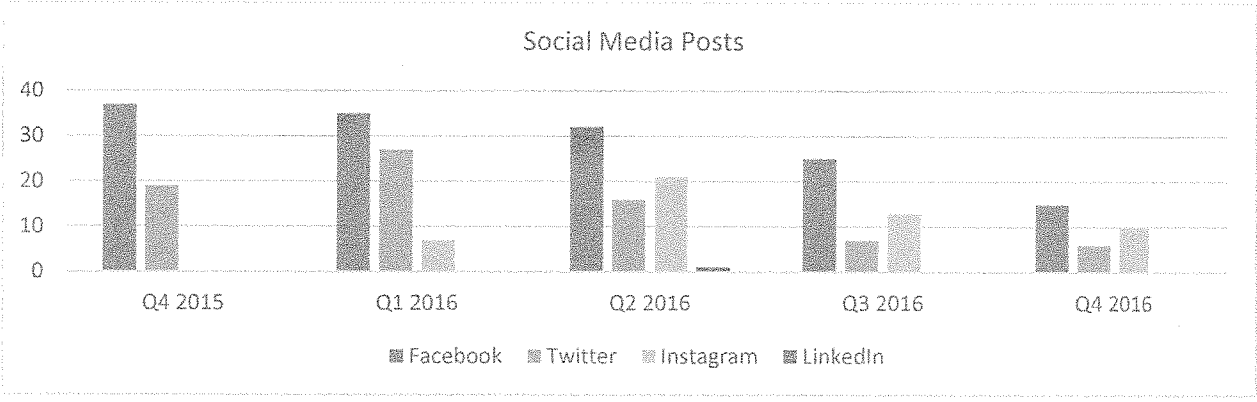


Figure 5 Social Media Posts per Quarter (Q4 2015 to Q4 2016)



# ZERO WASTE PROGRAMS AND SERVICES

## Residential Programs

### RESIDENTIAL SERVICE LEVELS

All residential customers are offered three services as part of the bundled “resource hauling” rate. This includes a gray “landfill” (garbage) cart, a dual sort split body recycling cart and a green organics cart. The bundled rate is based on the size of the landfill cart. There are 2,486 Residential customers signed up for service with MSS. Below are the residential cart subscription levels for year end 2016 compared to year end 2015. Some customers have multiple recycling and organics containers.

Table 2: Residential Cart Service Subscriptions

Residential Weekly Garbage Service			
CART size	Number of customers		
	2016	2015	% Change
20 gallon	612	579	6%
32 gallon	1761	1823	-3%
64 gallon	153	146	5%
96 gallon	13	9	44%
Total	2539	2557	-1%

Table 3: Residential Cart Service Subscription for Recycling and Organics

Residential Weekly Dual Sort Recycling Service			
CART size	Number of customers		
	2016	2015	% Change
32 gallon	1	1	0%
64 gallon	2401	2485	-3%
96 gallon	81	59	27%
Total	2482	2544	-2%
Residential Weekly Green Waste Service			
CART size	Number of customers		
	2015	2016	% Change
32 gallon	69	43	60%
64 gallon	2425	2433	0%
96 gallon	35	43	-19%
Total	2529	2519	0%

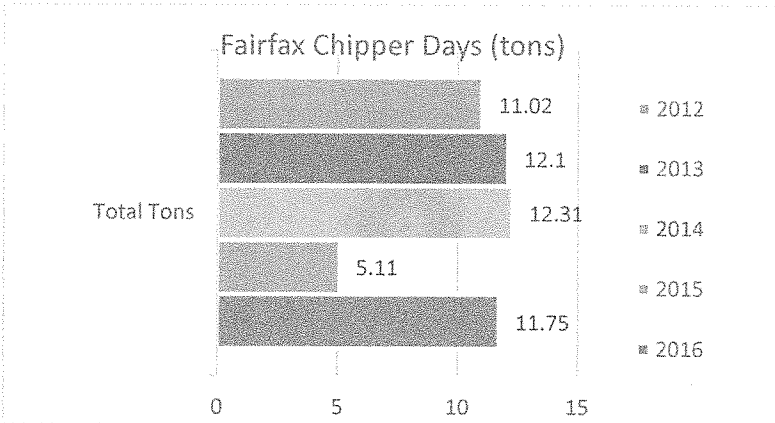
# ZERO WASTE PROGRAMS AND SERVICES

## CHIPPER DAYS

Marin Sanitary Service recognizes the importance of providing safe, efficient and reliable curbside yard waste removal on residential properties to prevent fires. MSS helped the town promote four “Chipper Days” throughout the summer in collaboration with the Fairfax Volunteer Office and the Fire Department to further reduce disposal of heavy brush that may pose a fire threat to the Town. Town residents were allowed to drop off brush at several locations around the Town during the months of August and September. At the request of the Town, an additional collection day was added in October. Tonnage is provided in Figure 6.

Residential customers received a flyer with their Resource Hauling bill informing them of the event as well as information on the MSS curbside residential organics (food scraps/yard waste) program. The “Chipper Days” program, now in its fifth year, continues to provide a valuable safety service to the residents of Fairfax.

Figure 6 Brush Collected by Year (tons)



## COMMUNITY COMPOST AVAILABILITY

Per our agreement with the Town, MSS will deliver up to a total of 45 tons of compost material to a designated bunker for distribution to the citizens of the town. 45 tons of compost was requested and delivered for 2016. 2017 dates will be advertised by the Town.

**SAVE THE DATE** for the MSS 3<sup>rd</sup> Annual Customer Appreciation Day, April 23, 2017. Customers can receive up to one 64-gallon cart of compost to use in their garden, take a tour of the recycling facility, participate in a composting workshop, and have questions answered by with local Zero Waste experts.

# ZERO WASTE PROGRAMS AND SERVICES

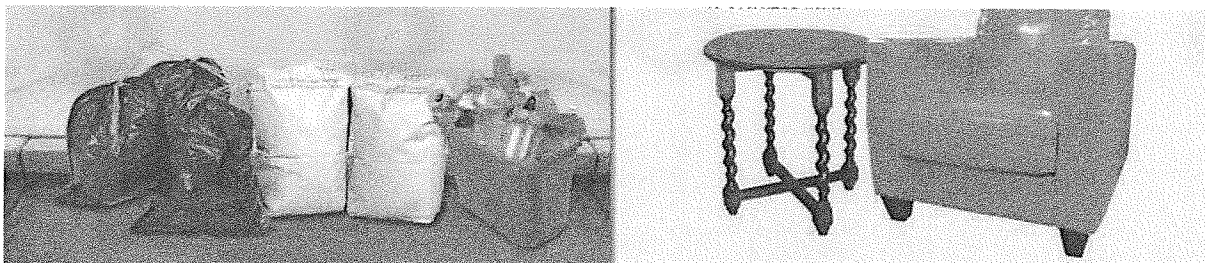
## PROMOTION OF COMPOSTING USING GREEN CARTS

All residential customers received a special compost newsletter with their bill that contained information on the importance of this program, kitchen pail purchasing, tips for collecting food scraps in the home, and a list of acceptable and non-acceptable items. In addition, the program is promoted at Town events and on the MSS website. Outreach will continue in 2017 in partnership with Zero Waste Marin, the Town, and Sustainable Fairfax. As part of the 2017 offering of services, the Town voted to include the delivery of educational materials and kitchen scrap pails to all residential customers. This will be implemented in mid to late 2017 depending on the manufacturing timeline. These 2-gallon pails are made of 100% post-consumer recycled polypropylene #5 plastic and will have a clear graphic label (to be designed by the Town) on the front.



## NEW CURBSIDE CLEAN-UP PROGRAMS

With the elimination of the curbside HHW program June 2016, the Town was able to use the funds to provide two new curbside clean-up programs to Town residents. For 2016, the participation rates for both programs were 7%. 265 bulky items were collected and an additional 8.49 tons of materials were diverted from the landfill.



1. Scheduled Curbside Clean-up of up to fourteen (14) 32-gallon bags or cans of additional garbage, recyclables, or yard waste at the curb in the fall and the spring.
  - a. SAVE THE DATES FOR 2017: May 1-5, 2017 and October 12, 2017. Information will appear with the bill.
2. On-call collection of up to two (2) bulky items twice per year.

# ZERO WASTE PROGRAMS AND SERVICES

## Commercial and Multifamily Programs

### COMMERCIAL SERVICE LEVELS

While there has been some change in subscription to the various size containers, overall landfill services remain relatively stable. The level of “diversion” services, however, continue to increase, as shown in Table 4. This is due to our partnership with Sustainable Fairfax and the enhanced commercial recycling service offerings and outreach & education by MSS. Since roll-off boxes and compactors are weighed individually, they are not covered in the overall service yardage report.

Table 4: Commercial Container Subscription Count

FAIRFAX COMMERCIAL CONTAINERS							
Commercial Weekly Garbage Service				Commercial Weekly Compost			
CART size	2016	2015	% Change	CART size	2016	2015	% Change
32 gallon	59	58	2%	32 gallon	2	2	0%
64 gallon	24	26	-8%	64 gallon	46	37	24%
96 gallon	9	11	-18%	Commercial Food 2 Energy			
1 yard	8	7	14%	CART size	2016	2015	% Change
2 yard	13	14	-7%	32 F2E	9	5	80%
3 yard	16	14	14%	64 F2E	8	5	60%
4 yard	3	2	40%				
6 yard	0	1	-100%				
Commercial Weekly Recycling Services							
CART size	2016	2015	% Change				
32 gallon	34	28	21%				
64 gallon	214	204	5%				
96 gallon	16	15	7%				
1 yard CB	4	6	-33%				
2 yard CB	21	19	11%				

# ZERO WASTE PROGRAMS AND SERVICES

## MULTIFAMILY SERVICE LEVELS

Table 5 shows the overall service collections per week for all multifamily dwellings in the Town. This does not illustrate how many containers are in service but how many times a cart/bin is emptied each week. For instance, a customer may have one 32-gallon cart but it is emptied six days per week. This would count as six, 32-gallon pick-ups. There has been a 1% increase in recycling services for this time period and a 9% increase in organics service. Landfill service decreased for the larger 96 gallon carts and there was a subsequent increase in smaller landfill carts.

Table 5: Multifamily Container Subscription Count

<b>FAIRFAX MULTIFAMILY DWELLING CONTAINERS</b>			
<b>MFD Weekly Garbage Service</b>			
CART size	2016	2015	% Change
32 gallon	153	152	1%
64 gallon	39	38	3%
96 gallon	38	39	-3%
1 yard	3	3	0%
2 yard	8	8	0%
3 yard	7	7	0%
4 yard	1	1	0%
<b>MFD Weekly Recycling Services</b>			
CART size	2016	2015	% Change
32 gallon	2	2	0%
64 gallon	222	219	1%
96 gallon	12	12	0%
<b>MFD Weekly Compost</b>			
CART size	2016	2015	% Change
32 gallon	4	4	0%
64 gallon	34	31	9%
96 gallon	2	2	0%

## MANDTORY COMMERCIAL RECYCLING ORDINANCE

MSS is working with the Town and Sustainable Fairfax to implement recycling and/or organic services at all Commercial and Multifamily Dwellings per the Town's Mandatory Commercial Recycling Ordinance, 8.08.130. Currently, all multifamily and commercial businesses are compliant with the Town's recycling ordinance as well as State Law AB 341, as outlined in Table 6. Outreach activities are detailed in Table 7. Thirty-six (36) commercial businesses are enrolled in an organics recycling program:

# ZERO WASTE PROGRAMS AND SERVICES

23 (4 schools, 3 churches, 15 businesses, and the Town Corp yard) are enrolled in the commercial compost program and 13 restaurants are enrolled in the commercial food to energy program, which are listed in Table 8. All Multifamily Dwellings (residences with 4 or more units) have recycling and 17 have organics composting service.

Table 6 Compliance: Commercial Businesses and Apartments

Customer Type	Required and NOT compliant	Required and is compliant	Grand Total
Multifamily Dwelling	0	26	26
Commercial Business	0	100	100
Total	0	119	122

Table 7 Outreach for all Commercial Businesses and Apartments

## OUTREACH ACTIVITIES FOR MANDATORY COMMERCIAL RECYCLING ORDINANCE

Compliance Packets Mailed	Phone Call or Email	Onsite Education & Training	General Recycling Info Mailed	Recycling Needs Assessment	Waste Audits	Grand Total
1	108	4	1	29	5	170

Table 8: F2E Participants

1	Mana Bowls	8	The Coffee Roastery
2	Perry's Deli	9	Taste Kitchen and Table
3	Café Lotus	10	The Hummingbird
4	Miyoko's Kitchen	11	Barefoot Café
5	Sorella Café	12	Fairfax Market
6	Grilly's Restaurant	13	Tamal
7	Red Boy Pizza		



# ZERO WASTE PROGRAMS AND SERVICES

## Zero Waste Events

ANNUAL PAPER SHREDDING, E-WASTE, AND UNUSED MEDICATION COLLECTION DAY



Another successful Zero Waste Event Partnership! Sustainable Fairfax, Conservation Corp North Bay, Marin Sanitary Service and the Fairfax Police department hosted the annual Take Back Day on April 30, 2016. **100% of all material collected was diverted!**

Table 9: Take Back Day Diversion Rates 2015-2016

Material	2016 (lbs.)	2015 (lbs.)
E-waste	4,450	4,245
Document Shredding	2,440	2,860
Pharmaceutical Waste	148	0
Landfill	0	225
<b>Diversion Rate</b>	<b>100%</b>	<b>97%</b>
Participants	193	191

# ZERO WASTE PROGRAMS AND SERVICES

## FAIRFAX FESTIVAL

In collaboration with Sustainable Fairfax, MSS was able to provide services and event waste management guidance to the town for the Fairfax Festival June 11-12, 2016. The Fairfax Festival was a huge success both in providing entertainment and activities to patrons and in diverting wasted material from the landfill (Table 10).

Festival accomplishments:

- Less landfilled material!
- More cardboard recycled!
- Increased Recycling Rate!

Table 10: Fairfax Festival Recycling Rates 2015-2016

Material	2016 (lbs.)	2015 (lbs.)
Cardboard	900	160
Compost	559	750
MSS Recycling	0*	90
CCNB Recycling	667	1582
Landfill	449	750
<b>Recycling Rate</b>	<b>83%</b>	<b>77%</b>

\*All recycling was managed by CCNB for 2016 except cardboard.

Recommendations for 2017 include:

- Streamline the signage to eliminate confusion.
- Have CCNB staff at every sorting station to educate people on what goes in which bin.
- Having booth and vendors sign contracts to not give out “swag” that may end up in the garbage.
- Ensure all vendors only serve food in beverages in truly compostable and recyclable materials.



# ZERO WASTE PROGRAMS AND SERVICES

## Diversion and Recycling Rates (Weight and Volume Based)

### STATE MANDATES

CalRecycle published two reports in 2015, The State of Recycling in California and The State of Disposal in California. Two important distinctions were highlighted regarding “diversion rates” and “recycling rates” (Table 11).

Table 11: Diversion versus Recycling Rates

	AB 939	AB 341
<b>Goal</b>	<b>50 Percent Diversion</b> (Jurisdictional Mandate)	<b>75 Percent Recycling</b> (Statewide Goal)
<b>Activities that Count Toward Goal</b>	<b><i>Diversion:</i></b> Source Reduction Composting Recycling ADC AIC Other Beneficial Reuse Transformation Credit	<b><i>Recycling:</i></b> Source Reduction Composting Recycling
<b>Activities that Do Not Count Toward Goal</b>	<b><i>Disposal:</i></b> Landfill (Including Exports) Some Transformation Engineered Municipal Solid Waste (EMSW) Green Waste ADC (Beginning in 2020)	<b><i>Disposal:</i></b> Landfill (Including Exports) Engineered Municipal Solid Waste (EMSW) <b><i>Disposal-Related:</i></b> ADC AIC Other Beneficial Reuse All Transformation Waste Tire-Derived Fuel
<b>Baseline Waste Generation and Base Years in pounds per person per day (ppd)</b>	12.6 ppd (2003-2006)	10.7 ppd (1990-2010)
<b>Statewide Disposal Target in pounds per person per day (ppd)</b>	6.3 ppd	2.7 ppd

Jurisdictional *diversion rates* are calculated based on a disposal-based indicator which is a per capita disposal rate expressed as pounds per person per day (PPD). This disposal rate uses two factors: a jurisdiction's population and its disposal tonnage, as reported by disposal facilities. Table 12 below

# ZERO WASTE PROGRAMS AND SERVICES

shows the disposal indicators and the diversion rates for the County of Marin from 2007 to 2015. 2016 numbers will be reported in August of 2017.

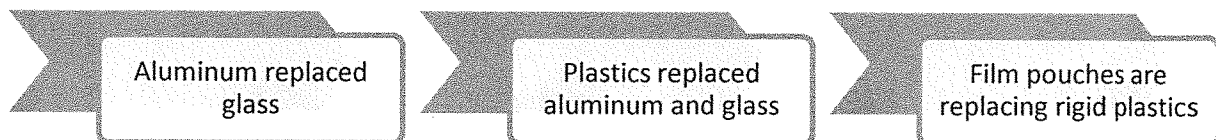
Table 12: Marin County Diversion Rates

YEAR	POUNDS PER PERSON PER DAY (PPD) DISPOSAL	DIVERSION RATE
2007	4.9	68%
2008	4.5	70%
2009	3.8	75%
2010	3.9	74%
2011	3.8	75%
2012	3.8	75%
2013	4.0	74%
2014	3.8	75%
2015	4.0	74%

For the purpose of this report, only tonnages for materials collected and processed under the Franchise Agreement with the Town are presented going forward as “Recycling Rates”. The Franchised Programs are discussed under Zero Waste Programs. **Other tonnages from residential and commercial self-hauling, construction & demolition debris box rentals, and a host of other non-franchised programs within the County and Town are not accounted for in this annual report but are reflected in the Jurisdictional diversion rate that is reported by MSS to the Marin Hazardous and Solid Waste Joint Powers Authority (JPA),** who in turn reports this tonnage information to the State of California.

## THE “EVOLVING” TON

CalRecycle published two reports in 2015, [The State of Recycling in California](#) and [The State of Disposal in California](#). Two important distinctions were highlighted regarding “diversion rates” and “recycling rates”. Why is our diversion rate decreasing even though we are recycling more by volume? This question is being repeated across the country. Jurisdictions all over the nation are seeing similar trends in recycling rates partially due to the “evolving ton”. Diversion is based on weight not volume. The types of materials in the waste stream are changing. There are fewer newspapers in print, less glass, lighter weight metals and plastics, and more film pouch packaging compared to 10 years ago. Over the years packaging has changed drastically.



# ZERO WASTE PROGRAMS AND SERVICES

Single use disposable plastic containers and plastic packaging increases more every year. Plastic bottles are thinner and weigh significantly less than they did in the past. On average, it takes 25% more plastic by volume to make the same ton today compared with 2005 (Figure 8). Though more volumes of materials are being recycled and processed, this shift combined with less overall disposal makes the recycling rates appear to be unchanged or even decreasing according to an EPA Webinar Series on “The Changing Waste Stream”, November 13, 2014. The evolving ton is making us rethink how we measure and report on diversion. The traditional method of tracking tonnage does not tell the entire story.

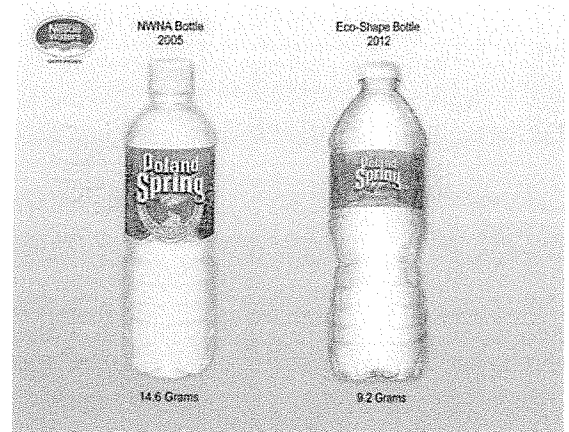


Figure 7: Light Weighting of Plastics

## RECYCLING RATES BY WEIGHT AND BY VOLUME

In 2016, MSS hired a new Director of Financial Reporting. One of the primary roles of this position is to fine tune the tonnage reporting. He has discovered misallocations of tonnage in previous reports due to a system issue. This issue has been corrected; however, for this reason, data reported previously should not be relied upon. Table 13 shows the recycling rate based on tonnage collected for the Town by sector. Table 14 shows the volumetric recycling rate by sector and is based on overall volume of service subscriptions. Figure 8 shows the historical tonnage based recycling rates from 2014-2016.

Table 13: Weight Based Recycling Rates by Sector (tons)

	Residential		Commercial/MF		Total	
	2016	2015	2016	2015	2016	2015
<b>Tons Collected:</b>						
Curbside Organics (Food waste/Yard waste)	1,530	1,521	* N/A	* N/A	1,530	1,521
Curbside Recycle (Fibers & Containers)	1,279	1,244	133	124	1,412	1,368
Transfer Station	1,386	1,426	911	844	2,297	2,270
Commercial Food Waste (F2E)	* N/A	* N/A	75	61	75	61
Commercial processed at MRRC	* N/A	* N/A	208	195	208	195
<b>Total Tons Collected</b>	<b>4,195</b>	<b>4,191</b>	<b>1,327</b>	<b>1,224</b>	<b>5,522</b>	<b>5,415</b>

\*Commercial yard waste is co-collected with residential yard waste. Tonnage is included with Residential. F2E and Processed included in Commercial.

# ZERO WASTE PROGRAMS AND SERVICES

	Weight Based Recycling Rates by Sector (tons)					
	Residential		Commercial/MF		Total	
	2016	2015	2016	2015	2016	2015
<b>Tons Diverted:</b>						
Curbside Organics (Food waste/Yard waste)	1,530	1,521	* N/A	* N/A	1,530	1,521
Curbside Recycle (Fibers & Containers)	1,279	1,244	133	124	1,412	1,368
Commercial Food Waste (F2E)	* N/A	* N/A	75	61	75	61
Commercial recovered through MRRC	* N/A	* N/A	156	146	156	146
<b>Total Tons Diverted</b>	<b>2,809</b>	<b>2,765</b>	<b>364</b>	<b>331</b>	<b>3,173</b>	<b>3,096</b>

\*Commercial yard waste is co-collected with residential yard waste. Tonnage is included with Residential. F2E and Processed included in Commercial.

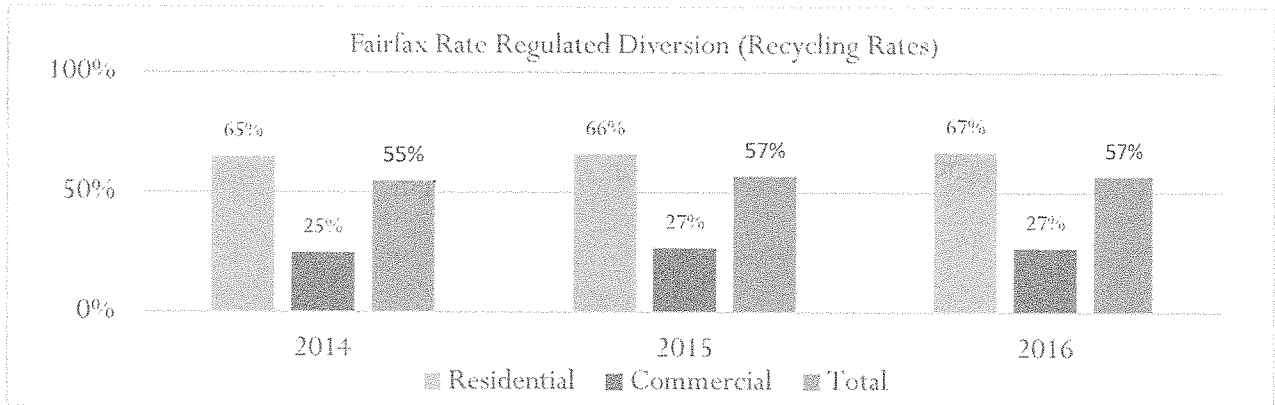
<b>Recycling Rate</b>	<b>67%</b>	66%	<b>27%</b>	27%	<b>57%</b>	57%
<b>Landfilled</b>	1,387	1,426	963	892	2,349	2,319
<b>Pounds per person per day disposal (PPD)</b>					<b>0.32</b>	<b>0.31</b>

Table 14: Volumetric Recycling Rates by Sector (Cubic Yards of Service)

	Volumetric Service Recycling Rates (Cubic Yards of service)					
	Residential		Commercial/MF		Total	
	2016	2015	2016	2015	2016	2015
<b>Service Volume Collected (Cubic Yards):</b>						
Curbside Organics (Food waste/Yard waste)	796	799	34	26	830	825
Curbside Recycle (Fibers & Containers)	799	817	293	281	1,093	1,097
Landfill	395	400	283	281	678	681
<b>Recycling Rate</b>	<b>80%</b>	80%	<b>54%</b>	52%	<b>74%</b>	74%

# ZERO WASTE PROGRAMS AND SERVICES

Figure 8: Fairfax Rate Regulated Historical Recycling Rates\*



## MARKET VALUES OF MATERIALS DIVERTED

Table 15 shows the significant changes in the scrap market values for curbside commodities. Economists have predicted that the new range of high and low values will be much lower and tighter for the foreseeable future.

Table 15: Average Market per Ton Value of Curbside Glass and Aluminum 2015 and 2016

Commodity	2013	2014	2015	2016	% Change 2013-2016
Cardboard	\$176.54	\$163.25	\$146.93	\$151.00	-14%
Newsprint	\$144.17	\$157.25	\$132.47	\$145.00	1%
Mixed paper	\$124.50	\$120.54	\$106.18	\$116.00	-7%
Office paper	\$180.83	\$192.38	\$191.46	\$222.00	23%
Aluminum cans	\$1,358.18	\$1,593.33	\$1,214.44	\$1,137.33	-16%
Glass	\$39.08	\$80.00	\$18.00	\$19.00	-51%
HDPE #2 natural	\$614.17	\$813.86	\$544.29	\$415.00	-32%
HDPE #2 color	\$402.00	\$537.00	\$395.00	\$277.92	-31%
PET #1	\$487.29	\$485.83	\$221.20	\$194.04	-60%
Mixed Rigid Plastics (#3-7)	\$23.00	\$88.00	\$20.00	\$1.25	-95%

# ZERO WASTE PROGRAMS AND SERVICES

## Household Hazardous Waste (HHW) Programs: Curbside and Drop-off

All new customers also receive a Residential Services Guide that explains the drop-off facility program. A new HHW website ([www.marinhhw.com](http://www.marinhhw.com)) has detailed information on the materials accepted, how to transport materials to the facility, and more. Due to poor participation in the Residential curbside HHW collection program, this program was discontinued as of July 1, 2016. The Curbside program had only four (4) participants this year, down from 5 in 2015. MSS continues to partner with Sustainable Fairfax to get the message out at more community event about the use of the HHW drop-off facility. Participation for the drop off program at the Marin Household Hazardous Waste Facility averaged 114 Fairfax participants per month in 2016 down from 119 in 2015 (Figure 9).

In 2016, there were 1,365 combined Residential and Commercial Conditionally Exempt Small Quantity Generators (CESQG) participants. This is down from 1,429 participants in 2015 (Table 16). The main products being collected are latex paint, batteries, and fluorescent tubes and bulbs.

Figure 9: Participants by Month to the HHW Facility

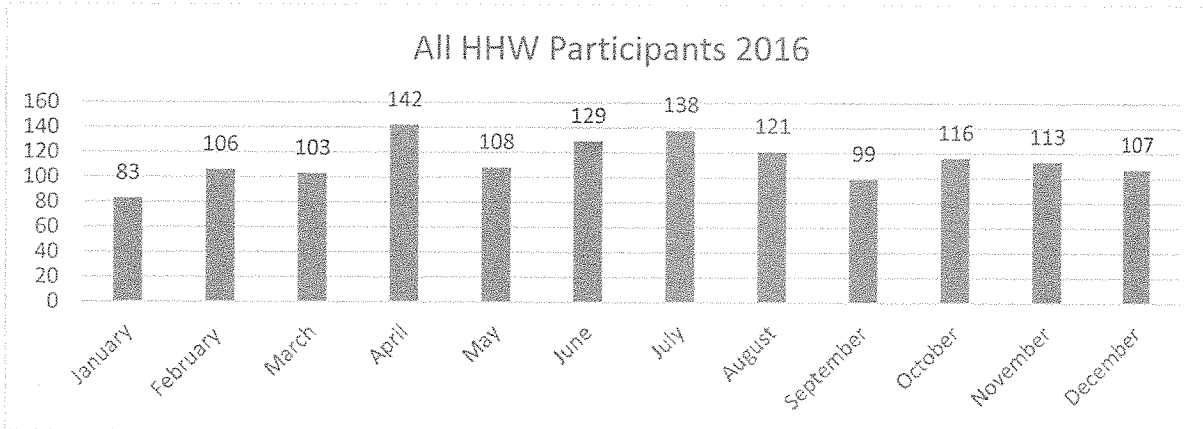


Table 16: HHW Customers by Type

Customer Type	Participants
Residential	1,340
CESQG	21
Residential Curbside Collection (RCC)	4*

\*Through June, 30, 2016



# ZERO WASTE PROGRAMS AND SERVICES

## Customer Service Logs

### RESIDENTIAL, MULTIFAMILY AND COMMERCIAL NEW STARTS FOR 2016

Table 17 details the number of new accounts and closed accounts by customer type. All new Residential customers received the Residential Service Guide that explains MSS Curbside collection services and programs, debris box rental and document shredding; Marin Resource Recovery Center drop-off information; Marin Recycling drop-off and buy-back information; and Marin Household Hazardous Waste drop-off information as well as the HHW Curbside Collection Brochure. Commercial and Multifamily new customers received information on MSS Curbside collection services and programs, debris box rental and document shredding; Mandatory Recycling & Organics laws and ordinances; and Marin Household Hazardous Waste drop-off information. In effort to increase productivity and reduce hold times, MSS implemented an online customer service feature that enables customers to ask questions, make service changes and pay their bills. So far, a total of 580 customers pay their bills online.

Table 17: New Starts and Account Closures by Type

New Starts		Closed Accounts	
Residential	175	Residential	191
Multifamily Dwellings	1	Multifamily Dwellings	1
Commercial Business	17	Commercial Business	7

### CUSTOMER COMPLAINTS

We are proud to report a 5% decrease in compliant calls (634 in 2015 and 603 in 2016). The majority of calls were for missed collections. These calls decreased by 100 in 2016 (416 in 2015 to 316 in 2016) and account for less than 0.12% of the total customer annual collection count. In most cases, the drivers were able to pick-up the missed carts on the same service day or the next business day. There were 274 calls reporting broken carts and 13 for broken bins. This is a slight increase from 2015. All carts and bins were either repaired or replaced.

Table 18: Complaint Log by Type

Misses by Customer Type		Broken Container by Type	
Commercial Garbage	20	Broken Commercial Bin	13
Commercial Recycling	13	Broken Residential Garbage Cart	121
Commercial Yard Waste	6	Broken Residential Recycling Cart	92
Residential Garbage	153	Broken Residential Yard Waste Cart	61
Residential Recycling	78		
Residential Yard Waste	46		

# ZERO WASTE PROGRAMS AND SERVICES

## REPORTS OF INJURIES AND DAMAGE TO PROPERTY

Marin Sanitary Service has an active safety committee that includes owners, supervisors, loss control and insurance personnel that meets monthly to review accidents and injuries. Each department has a tailored safety plan that includes ongoing training and review for new equipment, procedures and all OSHA required safety subjects. Documented employee safety meetings are held daily, weekly, monthly and throughout the year with written agendas and handout materials in all departments.

All accidents and injuries are investigated in an interactive process with the employee to determine what factors caused the event. Details are covered in Table 18. If it is discovered that changes to equipment, procedures, or collection location could prevent a recurrence, corrective action is taken whenever possible. If refresher training is needed, it is addressed with the entire department. Any claim of damage is investigated immediately by supervisors and the safety administrator. If the Company is liable, restitution is made to the owner/customer by either repair at the Company's expense or payment to the owner/customer. Liable automobile damage is repaired by a reputable, local business and a rental is provided if needed, or payment is made if the owner/customer prefers. There was a 44% reduction in overall reports of damage/injury for the Town in 2016 compared to 2015.

Table 19: Injuries, Accidents and Workers Compensation Claims in Fairfax 2015

Reportable Event	Description	2016 Totals	2015 Totals
<b>Preventable Damage Event</b>	Property or vehicle damage determined the fault of MSS driver.	4	9
<b>Non-preventable Damage Event</b>	Not due to driver negligence and not fault of any other party. Trees/wires snagged that are lower than allowed or damage that driver could not have avoided, malfunctioning gates closing on trucks, gate blowing shut, etc.	0	0
<b>Work comp injuries</b>	Injuries on the job defined by OSHA as work related.	1	2
<b>Other minor events that are not classified by above.</b>	Minor injury not needing medical attention, very minor damages reported by drivers, etc.	3	7
	<b>GRAND TOTAL</b>	<b>8</b>	<b>18</b>

# ZERO WASTE PROGRAMS AND SERVICES

## Contact Information

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## Company Information

*Marin Sanitary Service*

CONSERVATION – OUR EARTH, OUR MISSION, OUR JOB



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