

Litter Gitters, Critters and other things in the Water

Rosemary Ginn, PE - City of Mobile
September 20, 2023



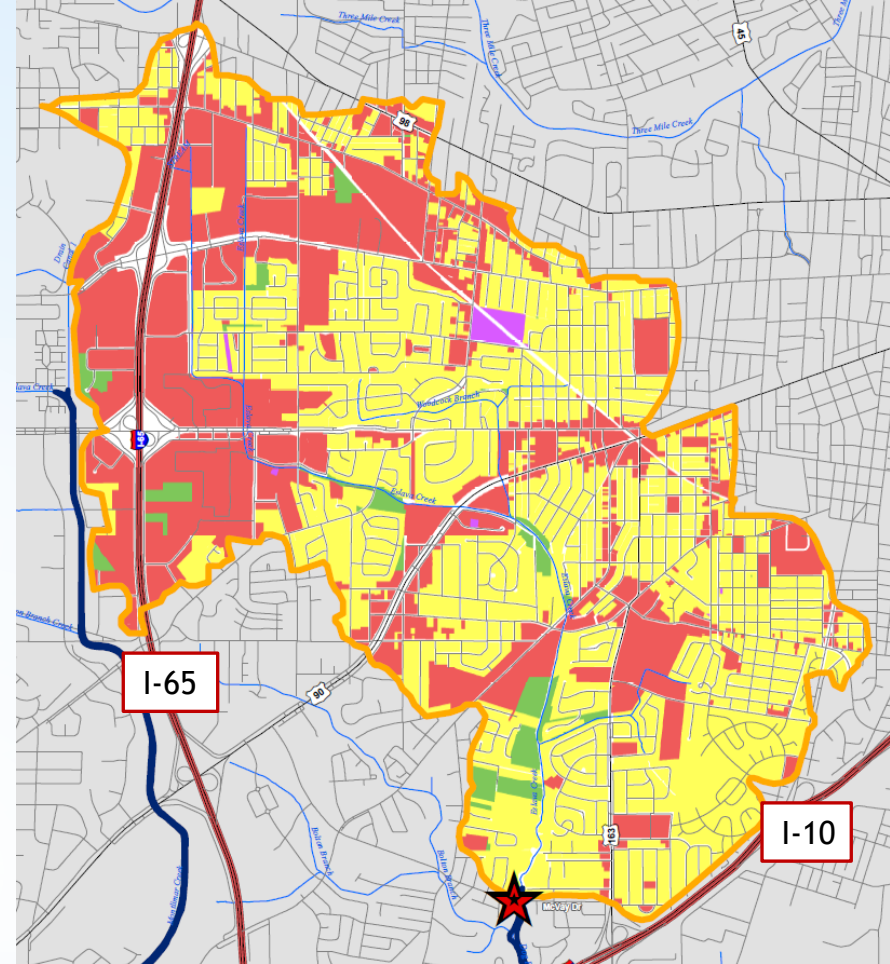
Our Game Plan

- ❖ Developed and Revised Ordinances
- ❖ City Activities Focused on Preventing Litter from Reaching the Waterways
- ❖ Activities for Cleaning-up the Litter that does Reach the Waterways
- ❖ 2017-Present → Partnerships for multiple grant opportunities
- ❖ Storm Water Fee Implemented in FY19
- ❖ 2019-present → Using Private Resources



Litter Trap

- Located on Eslava Creek @ McVay Drive
- Contributing drainage area is approximately 8.7 sq. miles
- High Litter Area/Waterway
- Waterway Geometry & Flow
- Permitting
 - USACE compliance – Could not restrict navigation
 - ADEM Coastal
 - State Lands



MS4 LITTER TRAP DRAINAGE

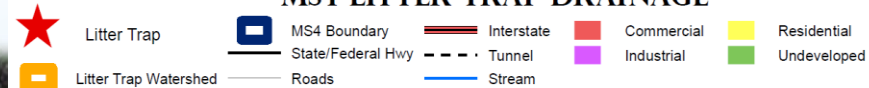


Photo credit - Gulf Equipment



Litter Trap Maintenance



- Osprey uses kayaks & jon boat
- Takes 3-4 men 4-6 hours to empty
- 2019 - Present - by Osprey



Litter Boats 2014 - 2019

Waterway	Average Frequency/Week	Typical Equipment Used
Dog River	2	Carolina Skiff
One Mile/Three Mile	1	Jon Boat



Litter Boats 2019- Present

- **Osprey Initiative**

- Osprey provides data – location of hot spots, type of litter being removed (legacy vs recent)
- Osprey's approach is data driven
- Utilizing the EPA's Escaped Trash Assessment Protocol (ETAP) Method

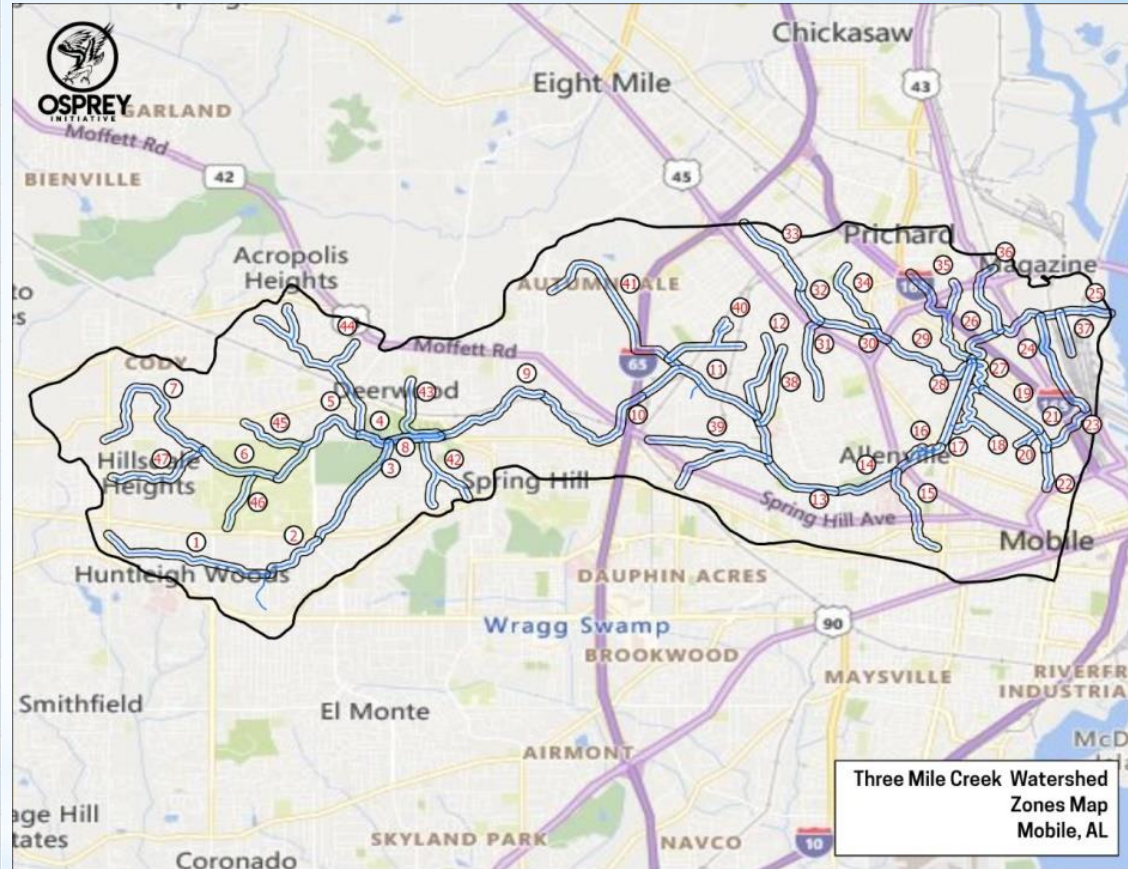


2019 - Present



Litter Data Collection via Zones/Map

Zone	Recycle (lbs)	Dispose (lbs)	Total (lbs)
Zone 03	97.21	256.91	354.12
Zone 04	124.56	656.47	781.03
Zone 08	40.15	607	647.15
Zone 09	24.57	628.18	652.75
Zone 10	101.9	155.13	257.03
Zone 11	153.34	608.14	761.48
Zone 13	49.33	221.25	270.58
Zone 14	234.57	799.65	1034.22
Zone 16	259.27	674.55	933.82
Zone 17	192.72	738.63	931.35
Zone 18	24.98	105.35	130.33
Zone 19	58.12	216.55	274.67
Zone 20	88.86	285.71	374.57
Zone 21	128.03	469.44	597.47
Zone 22	17.97	61.85	79.82
Zone 23	11.41	103.62	115.03
Zone 26	697.93	3300.64	3998.57
Zone 27	74.21	198.79	273
Zone 28	256.97	1498.22	1755.19
Zone 29	443.64	2163.58	2607.22
Zone 30	25.21	127.42	152.63
Zone 32	23.47	586.7	610.17
Zone 39	19.95	355.28	375.23
Grand Total	3148.37	14819.06	17967.43



Escaped Trash Assessment Protocol (ETAP)

Escaped Trash Data Card Date 6/4/19 Initials CT Site ID 3MC-1MC@Lawrence Primary

	Item List	Item condition			Item Notes Identifying features: Product, Language, Event, etc.) <i>Please add more info on back of sheet</i>
		Intact/ Un-fouled	Partially Intact/ Partially Fouled	Degraded/ Heavily Fouled	
PAPER	Cardboard				
	Bags				
	Newspaper, Junk Mail and Office Paper				
	Cups				
	Beverage and Food Packaging				
	Receipts				
	Other Paper				
GLASS	Beverage Bottles and Containers	3			Arbor Mist, MD20/20, Hennessy.
	Food Packaging				
	Other Glass				
METAL	Beverage Cans and Containers	2			Nat. Light, Faygo
	Bottle Caps				
	Food Packaging				
	Other Metal				
PLASTIC	Beverage Bottles and Containers	36	1		Powerade(4), Gatorade(5), Faygo(2)
	Water Bottles	25			Dasani(2), Deer Park(2), Clover Valley(4)
	Straws and Stirrers	1			
	Bottle Caps				
	Cup Lids				
	Food Wrappers	2	2	2	Cheez-it, Reeses,
	Chip Bags	8	1		Fri to Lay (6), Rap Snacks, Golden Flake
	Styrofoam Cups				
	Styrofoam Pieces				
	Other Styrofoam Fast Food Items		13	6	
	Other Fast Food Service Items				
	Food and Drink Pouches	3	2		Kool-aid(4), Capri Sun
	Other Food Packaging				
	Bags/ Film		8		
	Hard Fragments		2	3	
Other Plastic					
OTHER	Cigarettes/Tobacco and Packaging	7	1		Swisher(6), Pom Pom(2)
	Entertainment Items/ Electronics				
	Fishing Gear/ Rope				
	Textiles and Shoes				
	Toiletries/Personal Hygiene Products	2	2	1	
	Medical Waste				
	Paint and Other Hazardous		1		
	Bulky Items				
	Vehicle Related				
	Sports Equipment	9	15	2	
Illegal Dumping - Whole Bags of Trash					

Beverage Bottles and Containers	36	1		Powerade(4), Gatorade(5), Faygo(2)
Water Bottles	25			Dasani(2), Deer Park(2), Clover Valley(4)
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Other Plastic				



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Public/Private Partnerships - EPA Gulf of Mexico Program Grant



Project: Litter Gitters in TMC Watershed for 2018-2019

Summary: 6 strategic locations



Project: Litter Gitters in Dog River Watershed for 2019-21

Summary: 6 strategic locations



Public/Private Partnerships - EPA Gulf of Mexico Program Grant

Project: Litter Gitters in TMC
Watershed



Catch Basin Protection

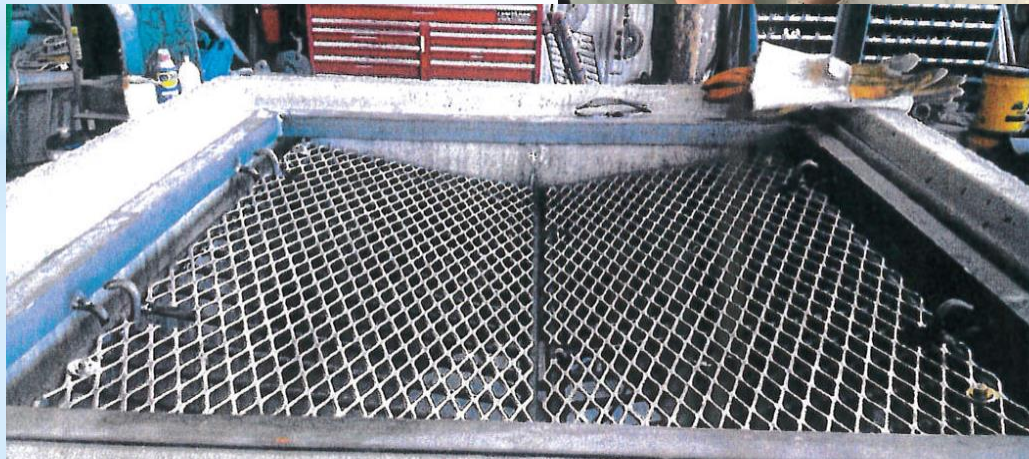
The Party that Goes Down the Drain

- ❖ 139 catch basin screens installed at 150 catch basins along Mardi Gras Parade Routes
- ❖ 20 parades roll through downtown

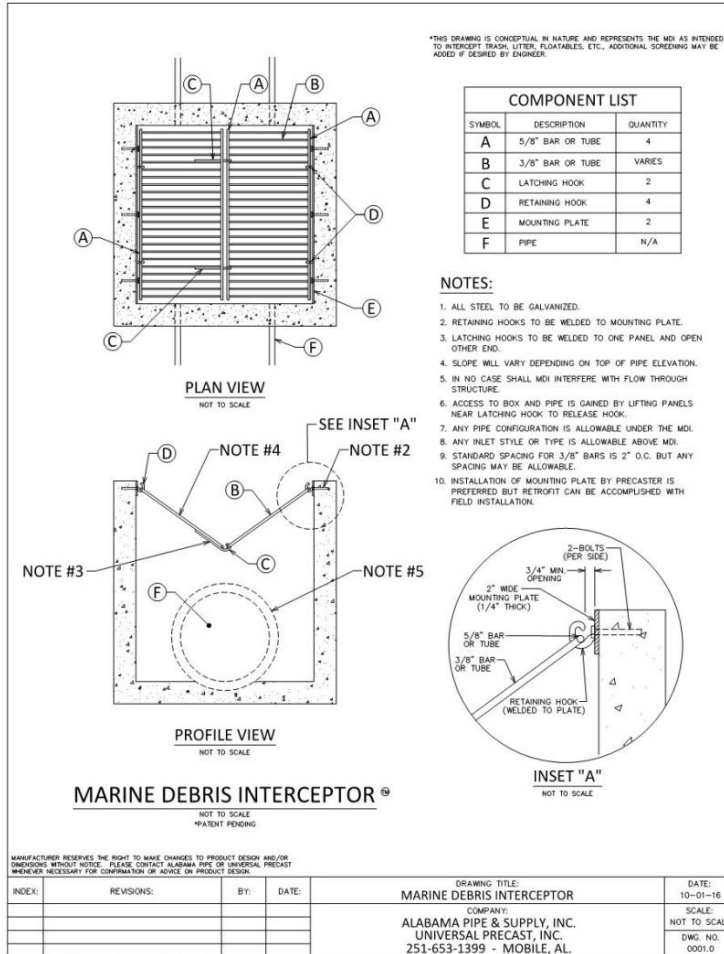


- Pilot Project – 7 installs
- Mardi Gras Park
- Led to Capital Project Inspected routinely by City

Litter Interceptor Devices

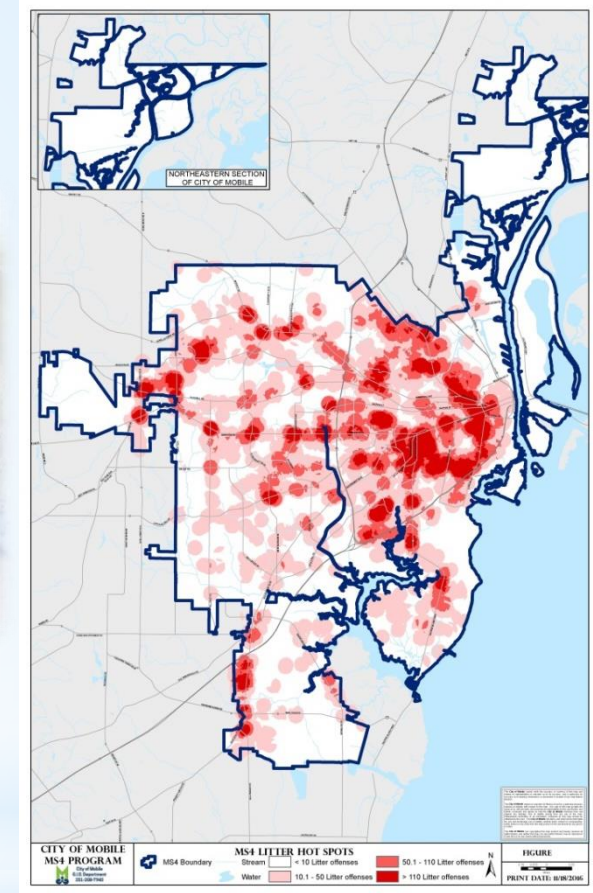


Litter Interceptor Devices



Litter Interceptor Devices

- 79 LI Devices installed
- Retrofitted in concrete or masonry catch basins
- Devices in all 7 City Council Districts
- \$165,000 expended
- Located based on Litter Hot Spot Map
- Inspected routinely by City



Public/Private Partnerships - EPA Gulf of Mexico Program Grant

- ❖ EPA Grant Objectives:
 - ❖ Upgraded all six (6) existing Litter Gitter sites to the newer heavy-duty, aluminum Litter Gitters
 - ❖ Continued collecting litter data from the Litter Gitters using the ETAP methodology
 - ❖ Installed ~30 LIs in the TMC Watershed (prevention) and utilized the ETAP methodology on these devices
 - ❖ Team rolled out a public education/outreach campaign in the TMC Watershed – including going to schools and businesses with the goal of behavioral change
 - ❖ Identify long-term sponsors/partnerships for the continued operation of the Litter Gitters after the grant



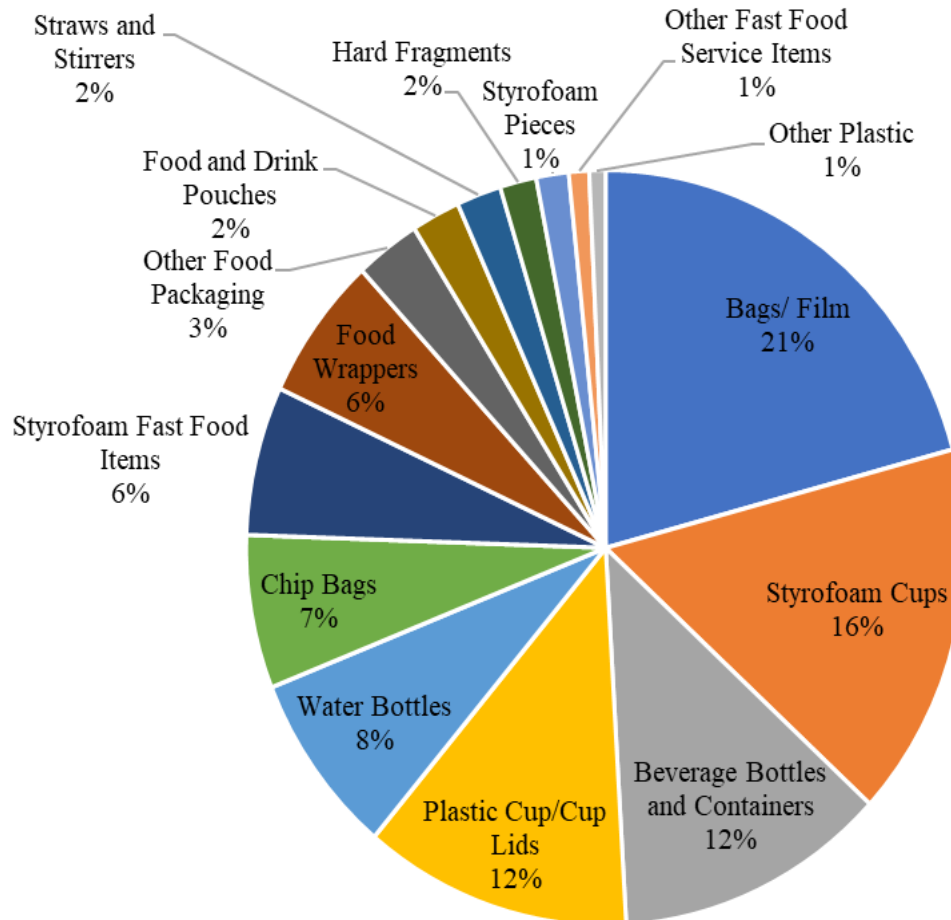
Litter Interceptor Install



Litter Interceptor Collection Data



City of Mobile EPA TFW: Litter Interceptors
July 2020 - March 2022 Plastic and Styrofoam Breakdown



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Litter Interceptors/ Catch Basin Screens



CITY OF MOBILE MS4 PROGRAM **FIGURE 2-23**

Public/Private Partnerships - ADEM GOMESA Grant

- ❖ ADEM Grant Objectives:
 - ❖ Install litter boom at eight (8) locations
 - ❖ Collect litter data using the ETAP methodology
 - ❖ Install ~ 20 LIs City-wide and utilize the ETAP methodology on these devices



Litter Dashboard - Pilot Project



Litter Dashboard

This dashboard shows data about the **litter collected** by members of the Community, the City of Mobile Public Services Litter Crews and the Osprey Initiative.

Community
Litter Collection tallied by Community Groups or Individuals. Data is reported using a web-based application/tool for each event. For more information on scheduling a Community Clean-up or reporting an Individual clean-up click [here](#).

City of Mobile Public Services Litter Crew
Litter Collection data reported by the City's Litter Crew includes litter removed from the city's rights-of-way in areas regularly monitored and areas reported by citizens via the City of Mobile's 311 request system.

City of Mobile Partners
Ransom Ministries has a team that does litter clean ups regularly around the city. The Ransom Ministries team weighs the litter they collect by hand. The **Alabama Department of Transportation** team measures in cubic yards and their data is reported with the following conversion, 1 cubic yard = 20 lbs. of litter.

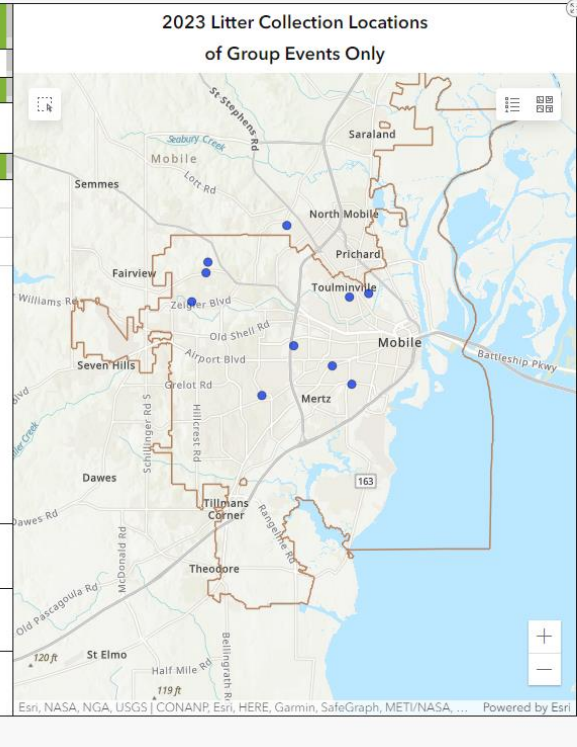
Osprey Initiative
Data reported by the City of Mobile's contractor, **Osprey Initiative**. They catch and remove litter from the waterways within the city using litter collection devices and tactical clean-ups.

For more information on the City's Litter-Free Mobile campaign, click [here](#).

For more information on the City of Mobile's storm water management, click [here](#).

Click [here](#) to become a partner or see a list of partners.

Community Litter Collection					
Group Events			Individual Events		
2022 Totals			2022 Totals		
12.9k Pounds	540 Volunteers	46 Hours	668 Pounds	46 Volunteers	124.3 Hours
2023 Group Events			2023 Individual Events		
• 241 lbs / 47 Volunteer(s) / 3.0 hrs			• 96 lbs / 5 Volunteer(s) / 5.0 hrs		
• 1,075 lbs / 45 Volunteer(s) / 3.0 hrs			• 134 lbs / 5 Volunteer(s) / 4.0 hrs		
• 126 lbs / 12 Volunteer(s) / 2.0 hrs			• 106 lbs / 6 Volunteer(s) / 5.0 hrs		
• 215 lbs / 17 Volunteer(s) / 2.5 hrs					
• 450 lbs / 7 Volunteer(s) / 4.3 hrs					
• 6,600 lbs / 90 Volunteer(s) / 2.5 hrs					
• 249 lbs / 55 Volunteer(s) / 1.0 hrs					
8,956 Pounds			336 Pounds		
273 Volunteers			16 Volunteers		
18.3 Hours			14 Hours		
Community	City of Mobile	City Partners	Osprey	Information about the data collection	



Community 13.6k Total Pounds 2022	Community 9.3k Total Pounds 2023	City of Mobile 55.2k Total Pounds 2022	City of Mobile 27k Total Pounds 2023	City Partners 163.6k Total Pounds 2022	City Partners 96.3k Total Pounds 2023	Osprey Initiative 24.4k Total Pounds 2022	Osprey Initiative 15.6k Total Pounds 2023
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<https://www.cityofmobile.org/organizing-a-litter-clean-up-1/>



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Road to Work Program

Ransom Ministries



<https://www.ransomministries.com/ransom-staffing>

<https://www.youtube.com/watch?v=CuVsYaXYhG0>

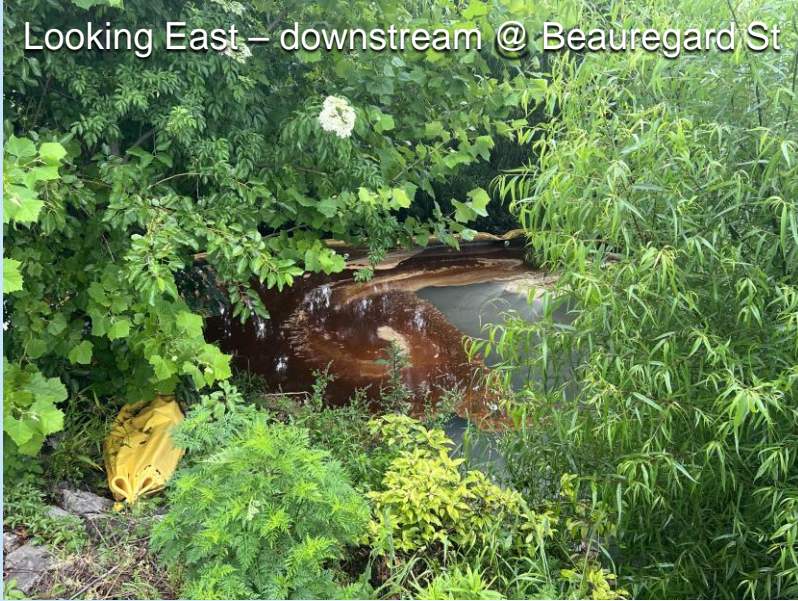


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Secondary Benefit of Litter Gitters

Chicken Grease “Bandit”

Looking East— downstream @ Beauregard St

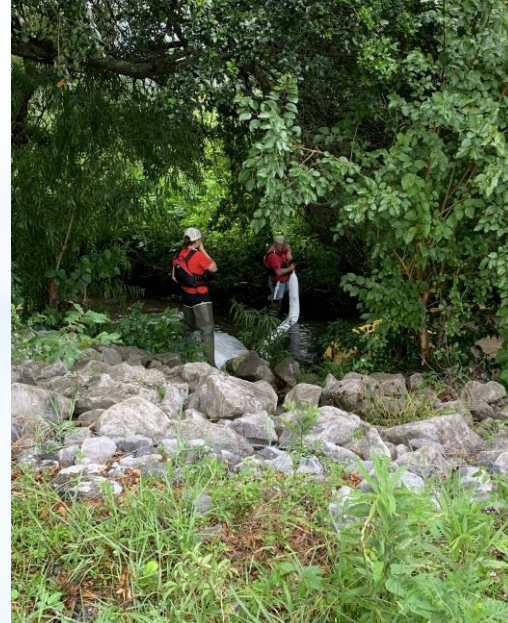


Downstream at Dr. Michael Jackson Blvd.



Secondary Benefit of Litter Gitters

Chicken Grease "Bandit" (CGB) Response



Questions?



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City of Mobile Storm Water Webpage
www.stormwatermobile.org

