

# Tracking the Poo-llution

Using picture geotags to track and manage dog waste

Maine Stormwater Conference  
November 2, 2022



# Audience Survey



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# Why Focus on Pet Waste?

- Stormwater pollutant & health hazard
- Nationally, 40% of dog owners DO NOT pick up their dog waste
- Urban areas v. rural areas
- Pet food is rich in nutrients
- **Water flushes contaminants into water bodies and seeps into groundwater**

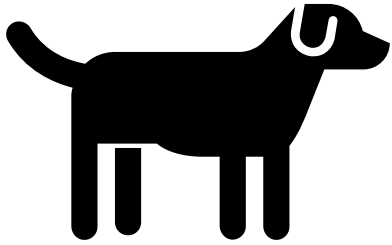
# 2022 Maine MS4 permit

- Requires MS4 permittees to change two behaviors
  - Satisfy 2 of 6 MCM's
  - Greater Portland and Saco permittees: Track dog waste and user profiles
  - Think Blue Maine website
- Pet waste tracking started in 2021 to get ahead of the permit's outreach requirements and to involve the public



# Who Let the Dogs Out?

Over 25, 800



52 dogs/mile<sup>2</sup>



3,500 tons/year



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# If most people want to do the right thing...

- Lack of understanding of dog waste impacts (ex: signage)
- Nowhere to put the waste (trash cans)
- No way to pick up the waste (no bags)

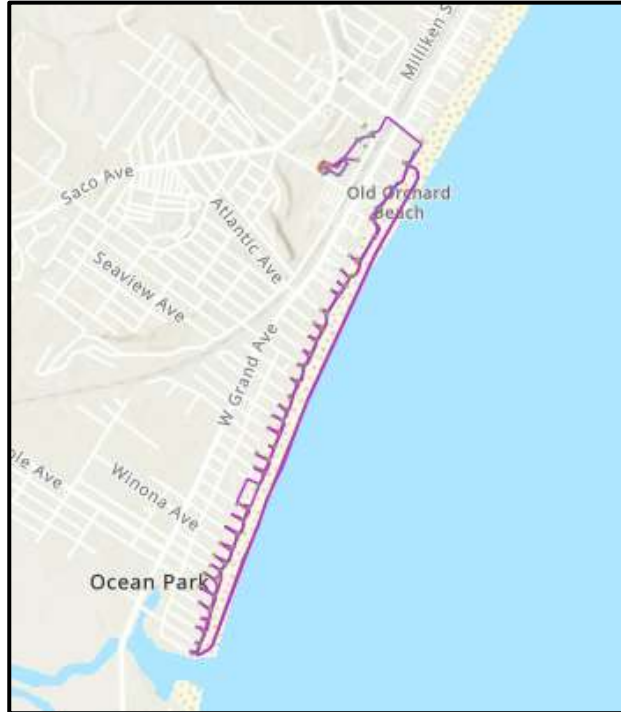


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# Field Methods



**Pet Waste Survey**

Capture

Bagged	Unbagged
Bag Station	Trash Can
Litter Sign	Simple Sign
Education Sign	Ordinance Sign
Porta Potty	Bathroom

Entrance

Transect

Track

**Pet Waste Site Check**

Please complete for each site survey.

Site Name \*

Date & Start Time \*

End Time \*

Weather \*

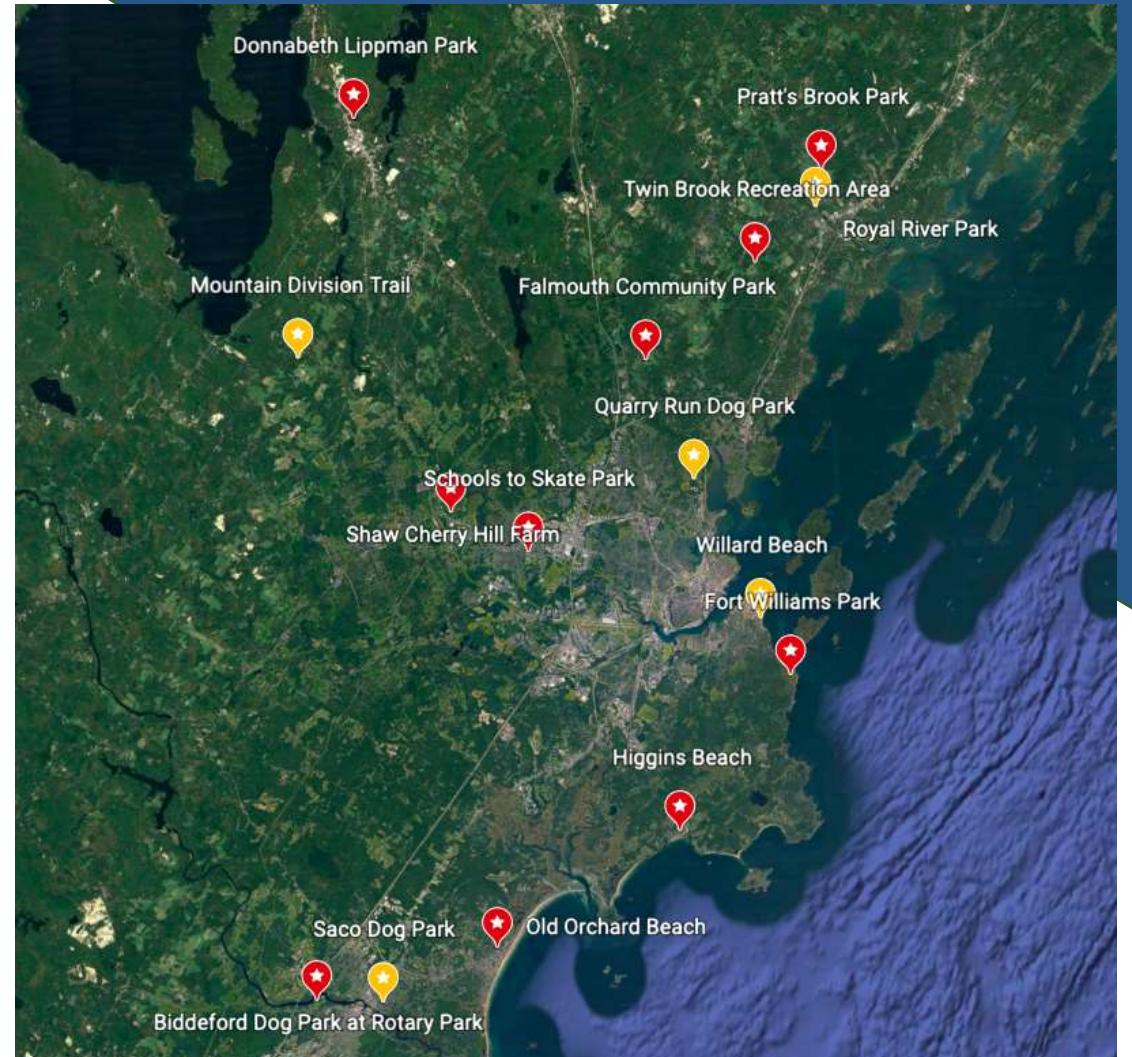
Notes



# Sites Surveyed

## Sites Also Observed

- Ocean Ave Recreation Area & Quarry Run Dog Park, *Portland*
- Saco Dog Park, *Saco*
- Willard Beach and Spring Point Trail, *South Portland*
- Mountain Division Trail, *Windham/Gorham*
- Royal River Park, *Yarmouth*



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# South Portland

	Survey 2	Annually	Town Dogs (1,180)
Number of Deposits	13	338	1.3 Million
Pounds of Pet Waste	3.9	101.4	323,320
Fecal Bacteria	40 Billion	1 Trillion	3 Quadrillion



# Portland

	Survey 2	Annually	Town Dogs (1,857)
Number of Deposits	65	1,690	2 Million
Pounds of Pet Waste	19.5	507	508,818
Fecal Bacteria	203 Billion	5 Trillion	5 Quadrillion



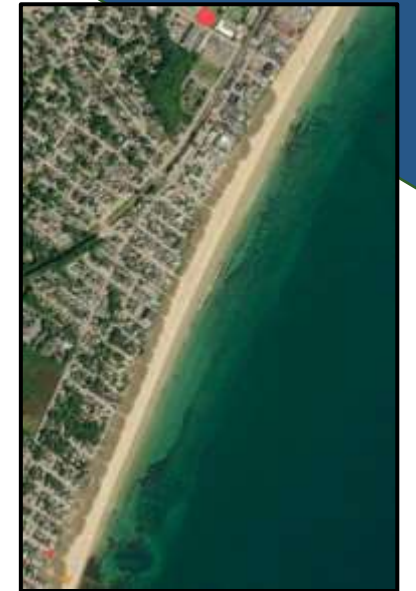


# Old Orchard Beach

- Unbagged
- Bagged
- Simple Pet Waste Sign
- Ordinance Pet Waste Sign
- Litter Sign
- Bag Station
- Educational Pet Waste Sign
- Porta Potty
- Trash Can
- Bathroom



	Survey 2	Annually	Town Dogs (1,232)
Number of Deposits	24	625	1.3 Million
Pounds of Pet Waste	7.2	188	337,568
Fecal Bacteria	75 Billion	1.9 Trillion	3.5 Quadrillion





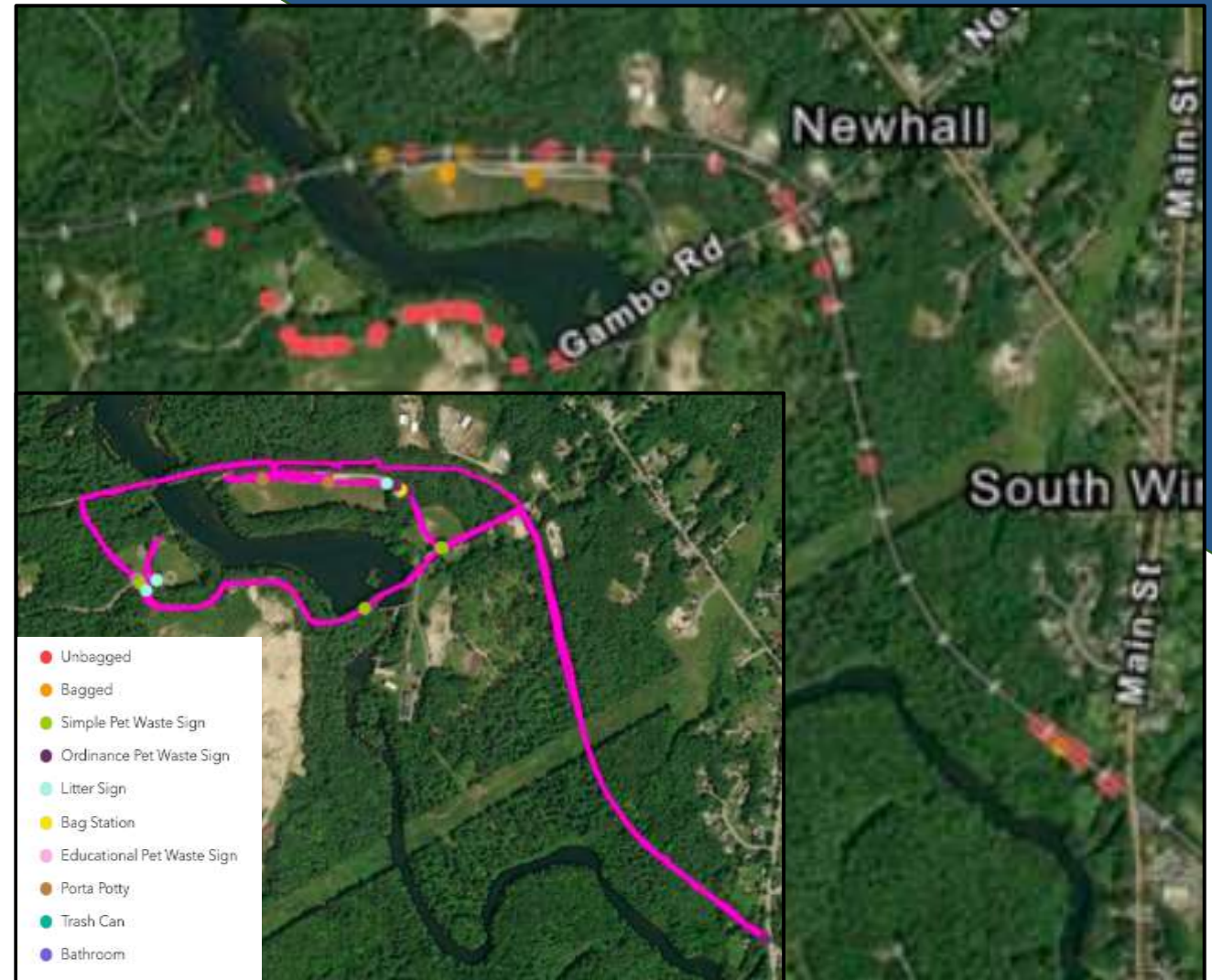
# Saco

	Survey 2	Annually	Town Dogs (2,770)
Number of Deposits	29	756	3 Million
Pounds of Pet Waste	8.7	226	758,980
Fecal Bacteria	90 Billion	2 Trillion	7.9 Quadrillion



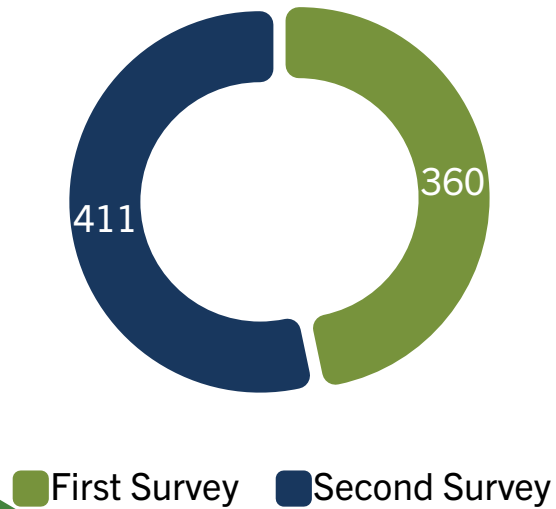
# Windham/Gorham

	Survey 2	Annually
Number of Deposits	82	2,132
Pounds of Pet Waste	25	640
Fecal Bacteria	<b>256 Billion</b>	<b>6 Trillion</b>

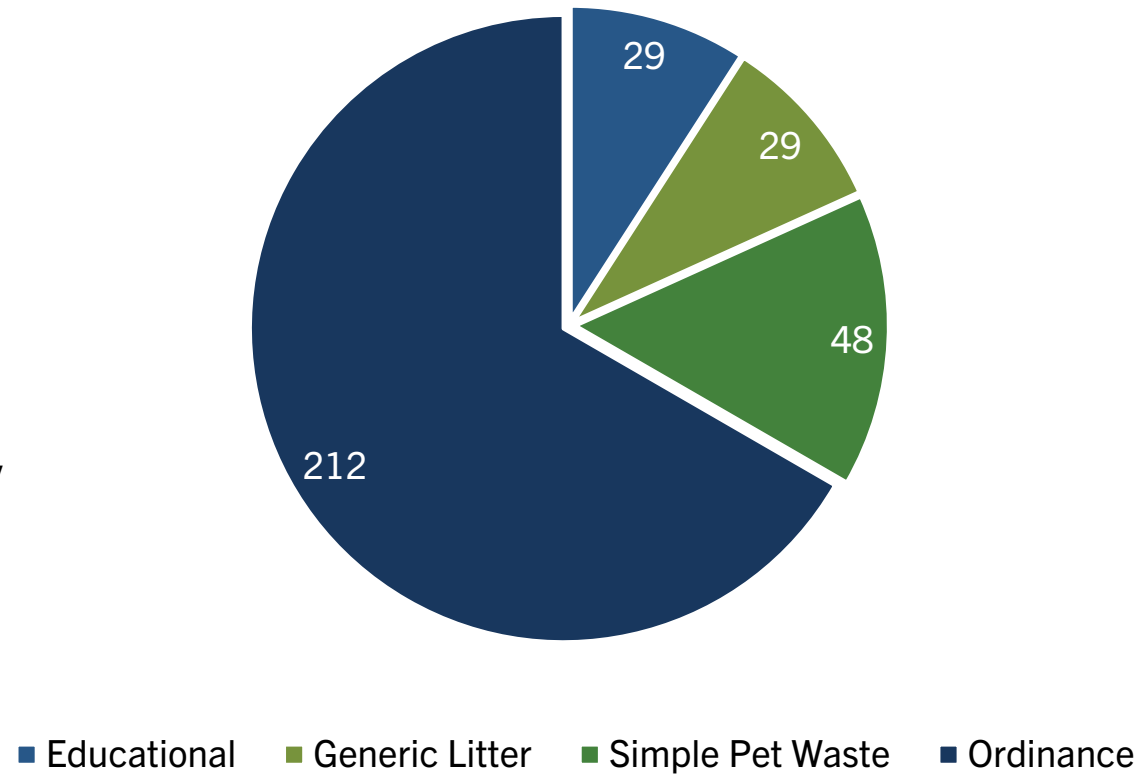


# Regional Totals

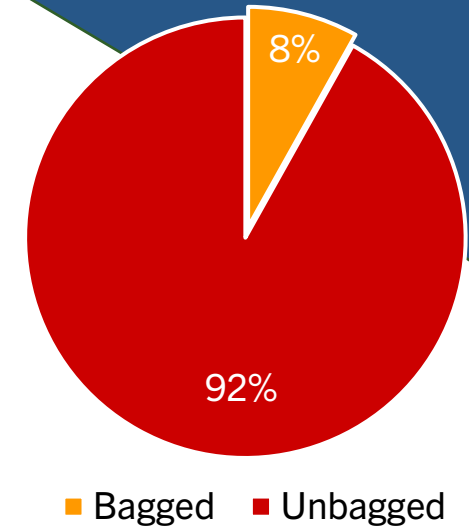
Total Deposits



Signs



Second Survey





# Observations

1:14 LTE

**Pet Waste Site Observations**



This is a required question  
**Site Name \***

**Weather \***

**Today's Date \***

**Start Time \***

**Observation Site Location \***  
Please take picture of where you made your stationary observations from during 3 hour window! We have to return to this EXACT site for second round of observations in PY1 and in 5 years.

**Age 25-34 Observations**  
Enter "Y" for each who picked up waste and carried out.  
Enter "N" for each who didn't pick up or carry out.


**Age 25-34 Owners with Pet Waste Bags**  
Keep tally of all owners observed with pet waste bags.

**Age 35-55 Observations**  
Enter "Y" for each who picked up waste and carried out.  
Enter "N" for each who didn't pick up or carry out.

**Age 35-55 Total # of Dogs**  
Keep tally of all dogs observed with owners in this age group.

**Age 35-55 Owners With Pet Waste Bags**  
Keep tally of all owners observed with pet waste bags.

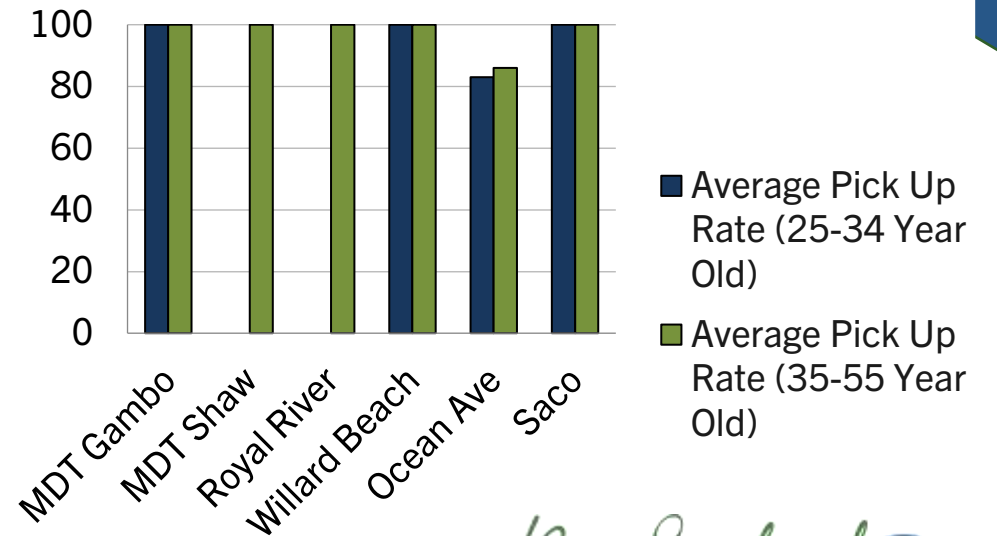
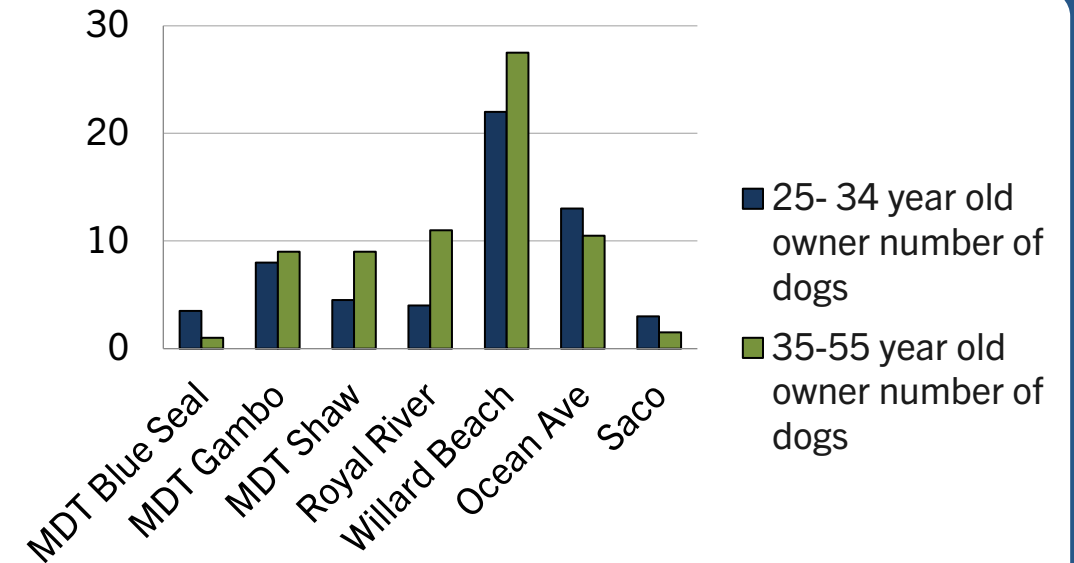
**End Time \***





# Observations

Site Name	25-34 Year Olds With Visible Pet Waste Bags	35-55 Year Olds With Visible Pet Waste Bags
MDT Blue Seal	28.6 %	0
MDT Gambo	56.3 %	33.3 %
MDT Shaw	55.6 %	33.3 %
Royal River	40.9 %	25 %
Willard Beach	61.4 %	50.91 %
Ocean Ave	65.4 %	52.4 %
Saco Dog Park	100 %	66.6 %



# It Can Work



2021 Survey



2022 Survey (Addition of trash cans)



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# General Recommendations

## Infrastructure



Confirm staff capacity



Install bag stations with trash cans



Location matters!



Increase educational signs



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# General Recommendations

## Education



Dog waste is not natural



More dogs, more problems



Expectations



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# Next Steps



Annual site surveys

Site-specific  
recommendations



Regional education  
campaign



Analyze nutrients



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# Remember

SCOOP it.



BAG it.



TAKE it home



TRASH it.



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# Thanks!

**Ridge Kelly** (2021 Bates College Purposeful Work Intern)

**Katie Caperton** (2021 Bates College Purposeful Work Intern)

**John Clark** (2021 Maine Conservation Corps Environmental Steward)

**Lucas Kirsch** (2022 Maine Conservation Corps Environmental Steward)



# Questions?

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