

**Howard County Department of Recreation and
Parks**

**2020 Pesticide Usage
Annual Report**



**Presented By:
The Natural and Historic Resources Division**

Report 2020

HOWARD COUNTY DEPARTMENT OF RECREATION & PARKS

Overview

The Department of Recreation & Parks (DRP) is charged with the stewardship of approximately 10,000 acres of Parklands within Howard County as set forth in Title 19, subtitle 2 of the Howard County Code. The management of these County owned lands is accomplished using an Adaptive Management Approach to maintenance and conservation practices.

The Department is committed to protecting, enhancing and restoring the natural environment while providing safe, sustainable parks and recreational amenities. In 2016, the Department created two policies to limit the use of pesticides and restrict the use of noenicitinoids: Pesticide Use on Parkland & Noenicitinoid Use on Parkland.

Continuing our Department's proactive approach, we have eliminated the use of Glyphosate from our operations as of October 4, 2019. Therefore, the Department has taken a proactive approach, limiting the use of pesticides and using them in accordance with the manufacturer label and accepted Integrated Pest Management practices (IPM).

Photo on cover: Mountain Laurel, *Kalmia latifolia*, Keane, 2004

Pesticide Usage by location (Applications performed by staff)

Pesticide by Site (In Ounces)	2018	2019	2020
Alpha Ridge Landfill			
Deer Pro	1280	0	666
Alpha Ridge Park			
Round up Pro Max	0	66	0
Cheeta Pro	0	0	680
Pathfinder	0	0	4
Animal Control Facilities			
Pathway	0	2	0
B&O Railroad			
Avenger	0	21	0
Snapshot 2.5 TG	0	72	128
Round Up Power Max	0	3.5	0
Honcho Plus	40	7.06	0
2-4D Low V ester	0	0	7
Belmont			
Prosecutor	30	0	0
EZ-Ject Copperhead	0	1.4	0
Honcho Plus	0	19	0
Rodeo	0	12	0
Pathfinder II	0	89	0
EZ-Ject Diamondback	0	6	0
Calvert Ridge			
Prosecutor	0	6	0
Cedar Villa Heights			
Roundup Pro Max	4	0	0
Centennial Park			
Roundup Power Max	10	0	0
Roundup Pro Max	10	0	0
Cheetah Pro	0	0	64
Central MD Transit			
Cornerstone 5 Plus	12	0	0
Cypressmede Park			
Cheetah Pro	0	0	16
Daisy Road			
EZ-Ject Copperhead	0	2	1.70
EZ-Ject Diamondback	0	9	0
Dayton Park			
Dimension Ultra	112	0	0

Dorsey Hall OS			
4-Poster Tickicide	420.21	79.25	163.98
Elkridge Library			
Rodeo	0	266	0
Ellicott City Colored School Restored			
Cornerstone 5 Plus	4	0	0
Avenger	0	21	0
Brushmaster	0	2	0
Honcho Plus	0	10.06	0
2-4 D Low V-4 Ester	0	0.25	1.50
Pathfinder II	0	18	0
Roundup Power Max	0	5	0
Snapshot 2.5 TG	0	44	32
Ellicott City Fire Museum			
Snapshot 2.5 TG	0	4	0
Glenwood Community Center			
Rodeo	12	3	0
Hammond Hills			
Prosecutor	0	6	0
Hammond Park			
Low V-4 Ester	2	0	0
Prosecutor	20	0	0
Round up Pro Max	12	0	0
Harwood Park			
Round up Pro Max	2	0	0
High Ridge Park			
Prosecutor	4	0	0
Round up Pro Max	4	0	0
Howard Complex-Carroll/Ligon Bldg			
Brushmaster	0	16	0
Cheetah Pro	0	0	1.25
Howard House			
Rodeo	0	66.6	0
Howard High School Tower			
Prosecutor	10	0	0
Kiwanis Wallas Park			
Cheetah Pro	0	0	2
Lisbon Park			
Glypro	10	0	0
Brushmaster	0	3.5	0
Prosecutor	0	6	0
Roundup Pro Max	0	30	0

Martin Road Park			
Prosecutor	0	3	0
Meadowbrook Park			
Pathfinder II	0	0	10
Middle Patuxent Environmental Area			
Aquamaster	81.1	0	0
Brushmaster	0	10.25	14.63
EZ-Ject Copperhead	0	3	1.60
EZ-Ject Diamondback	180.6	16.5	0
Garlon 4 Ultra	434.08	0	685.04
Garlon 3A	0	0	156.66
Round Up Custom	0	148.4	0
Round Up Pro Concentrate	56.7	62.9	0
Stalker	7.68	7.68	73.48
North Laurel Community Center			
Rodeo	0	192	0
Paddocks East FCE			
EZ-Ject Diamondback	0	0.75	0
EZ-Ject Copperhead	0	0	1
Pathfinder II	0	0	29
Parking Lot B 8000 Main Street E.C.			
Rodeo	0	23	0
Patapsco Female Institute			
Round up Pro Max	32	0	0
Avenger	0	277	0
EZ- Ject Copperhead	0	1.83	0
Honcho Plus	0	37.8	0
2-4 D Low V-4 Ester	0	8	5.5
Pathfinder II	0	42	158
Snapshot 2.5 TG	0	352	288
Roundup Power Max	0	25.31	0
Pleasant Chase Park			
Round up Pro Max	5	0	0
Recreation and Parks HQ			
Honcho Plus	20	0	0
Avenger	0	64	0
Cheetah Pro	0	5	26
Cornerstone 5 Plus	0	9	0
Prosecutor	14	0	0
Roberts Rd. Forest Conservation Area			
Low V-4 Ester	2	0	0
Robinson Nature Center			
4-Poster Tickicide	90.02	2.1	0

EZ-Ject Diamondback	3.75	0	0
Rockburn Branch Park			
2-4-D LO-V Ester	60	0	0
Claire Wasp and Hornet Killer	0	28	0
Raid Wasp and Hornet Killer	0	0	16
Dimension	61.65	0	0
Honcho Plus	10	0	0
Round up Pro Max	10	0	0
Rockland Arts Center			
Spectracide Wasp & Hornet	0	0	18
Rogers Ave Forest Conservation area			
Pathfinder II	0	0	4
Scaggsville Public Safety Complex			
Prosecutor	10	0	0
Brushmaster	0	7	0
Schooley Mill Park			
Dimension Ultra	144	0	0
Momentum	576	0	0
Prosecutor	46	0	0
Round up Pro Max	32	0	0
Taylor Farm Road			
2-4-D LO-V Ester	24	0	0
Agri-Star 2-4-D LV4	6	0	0
Weedone LV 4 EC	4	0	0
Tiller Drive			
Low V-4 Ester	2	0	1
Troy Park			
Roundup Pro Max	0	33	0
Raid Wasp and Hornet	0	0	24
Spectracide Wasp and Hornet	0	0	152
Warfield Pond Park			
Glypro	6	0	0
Cheetah Pro	0	0	120
Waterloo Park			
Round up Max	13	0	0
Spectracide Wasp and Hornet	0	0	78
Waverly Cottage			
Lesco Triclopyr 4 Ester	0	0	4
West Friendship Park			
EZ-Ject Copperhead	0	0.4	0
2-4 D Low-V Ester	0	0	11
Honcho Plus	0	264	0
Rodeo	0	66.6	0

Pathfinder II	0	0	204
Western Regional Park			
4-Poster Tickicide	8.35	9.35	23.37
Amine 400	0	200	0
Cornerstone 5 Plus	20	0	0
Cheetah Pro	0	0	856
Farmworks	510	0	0
Glypro	224	0	0
Rounup Powermax	190	0	0
Round up Pro Max	0	194	0
Windflower			
Pathfinder II	0	4	0
TOTAL	5,734.62	2,994.49	4,727.71

Pesticide Usage for Noxious Weeds (Contractor)

Canada Thistle Treatments (Noxious Weeds)			
Site	Concentrate Ounces		
	2018	2019	2020
Alpha Ridge Park			
Transline	84.48	0	0
Milestone	0	3.927	0
Belmont			
Transline	144.64	0	0
Blandair North			
Transline	288	0	0
Blandair South			
Transline	276.48	0	0
Cedar Lane			
Transline	84.48	0	0
Milestone	0	1.487	1.2
Centennial			
Transline	268.8	3.96	11.25
Cypressmede Park			
Milestone	0	0	0.24
Daisy Meadow			
Milestone	0	2.087	1.2
Dayton Park			
Milestone	0	1.127	0.72
Meadowbrook Park			
Transline	84.48	0	0
Milestone	0	2.567	1.68
Rockburn Branch Park			
Transline	167.68	4.4	4.05
Schooley Mill Park			
Transline	48.64	0	0
Milestone	0	3.767	1.2
The Preserve at Clarksville			
Transline	358.4	0	0
Milestone	0	1.88	0
Troy Park			
Transline	0	0	19.125
West Friendship			
Transline	468.48	55	33.75
Western Regional Park			
Transline	153.6	37.4	45.75
Worthington			
Transline	11.52	0	0
Total	2,439.68	117.602	120.165

** Increase in Transline herbicide due to more thistle treatments particularly at West Friendship Park.

15% Increase and Decrease in Usage Over Past Two Years

Pesticide Name	2018	2019	2020	% Change	Description of 15 % Increase or Decrease
	Ounces Used			2019/2020	
2-4-D Lo-V Ester	84	0	25	n/a	Increased need for this product for invasive species during 2020
4-Poster Tickicide	518.58	90.7	187.35	106.56%	Increased need for this product for deer tick suppression
Agristar 2-4-D LV 4	6	0	0	No change	Product not used during 2020
Aquamaster	81.1	0	0	No change	Product not used during 2020
Amine 400	0	200	0	-100%	Product not used during 2020
Avenger Weed Killer	0	383	0	-100%	Product not used during 2020
BRUSH MASTER	0	38.75	14.63	-62.24 %	Reduced use of this product on conservation sites
Cheetah Pro	0	5	1,765.25	35,205%	New product to replace glyphosate-based herbicides
Claire Wasp & Hornet Killer	0	28	0	-100%	Product not used during 2020
Cornerstone 5 Plus	36	9	0	-100%	Reduced need for this product
DeerPro Repellant	2,132.48	0	666	n/a	Deer repellant applications were performed on new sites
Dimension	61.65	0	0	No change	Product not used during 2020
Dimension Ultra	256	0	0	No change	Product not used during 2020
EZ-Ject Copperhead	0	8.63	4.30	-50.17%	Reduced tree injections performed during 2020
EZ-Ject Diamondback	184.35	32.25	0	-100%	Product not used during 2020
Farmworks	510	0	0	No change	Discontinued use of this product
Garlon 4 Ultra	434.08	0	685.04	n/a	Increased need for this product for invasive species (MPEA)
Garlon 3 A	0	0	156.66	n/a	Increased need for this product for invasive species (MPEA)
Gly-4 Plus	0	0	0	No change	Discontinued use of this product
Glypro	240	0	0	No change	Discontinued use of this product
HONCHO PLUS	70	337.92	0	-100%	Discontinued use of this product
Lesco Triclopyr 4 Ester	0	0	4	n/a	Product used for invasive species
Low V-4 Ester Weed Killer	6	8.25	0	-100%	Product not used during 2020
Momentum	576	0	0	No change	No need for this product during 2020
Pathfinder II	0	153	409	167.32%	New product to control woody vegetation in conservation sites
PATHWAY	0	2	0	-100%	No need for this product during 2020
PROSECUTOR	134	21	0	-100%	No need for this product during 2020
Raid Wasp and Hornet	0	0	40	n/a	Increased stinging insect treatments to structures in parks
RODEO	12	629.2	0	-100%	Discontinued use of this product
Roundup Custom	0	148.4	0	-100%	Discontinued use of this product
Roundup Powermax	200	33.81	0	-100%	Discontinued use of this product
Roundup Pro Concentrate	56.7	62.9	0	-100%	Discontinued use of this product
ROUNDUP PRO MAX	124	323	0	-100%	Discontinued use of this product
Spectracide Wasp and Hornet	0	0	248	n/a	Increased stinging insect treatments to structures in parks
Stalker	7.68	7.68	73.48	856.77%	Increased use of product for invasive species
SNAPSHOT 2.5 TG	0	472	448	5.08%	Slight increase of use
SonarOne	0	0	0	No change	No change
Weedone LV4 EC	4	0	1	n/a	Slight increase in use of this product for invasive control
TOTAL	5,734.62	2,994.49	4,727.71	57.88%	Increases in Cheetah Pro, Stalker, Garlon and DeerPro

Exemption requests

None

Staff Trainings & Educational Initiatives 2019 & 2020

1. Maryland law requires that all registered applicators attend an annual pesticide update.
2. The Department of Recreation and Parks conducts an annual training for new applicators. During 2019 the Department trained 58 registered applicators and 24 existing certified applicators attended the required updates. During 2020, the Department conducted an in-house training for 23 employees. Existing certified applicators attended an annual required training for their respective category.
3. Many staff throughout the Department read and review the Weekly IPM Newsletter and updates from the University of Maryland Cooperative Extension. This weekly periodical provides updates on pests and diseases throughout Maryland and provides educational information with regard to Integrated Pest Management and pesticide use.
4. The Bureau of Parks conducted their annual *Parks Winter Training* in December 2019. Chuck Schuster from the University of Maryland presented on Glyphosate alternatives for managing weeds in parks and facilities. The 2020 Parks Winter Training was cancelled due to COVID.
5. The Forestry Section arranged for a demonstration of *Foamstream*, a herbicide free solution to manage weeds and unwanted vegetation on July 11, 2019. Turf Equipment and Supply Company delivered two Foamstream units to Recreation and Parks headquarters and demonstrated how to kill weeds in the parking lot and around existing trees and a vegetable garden without the use of pesticides.

Alternatives Considered

1. Foamstream
Foamstream is a herbicide free product used to control unwanted weeds. It utilizes a low-pressure biodegradable foam and hot water (steam) to kill weeds, dormant seeds algae and moss. Foamstream can also be used to clean and disinfect play equipment and other outdoor surfaces.
2. Organic Herbicides
 - a. Avenger Organic Weed Killer was used exclusively at the Patapsco Female Institute in 2019 to flower beds to suppress weeds. Avenger Weed Killer is a non-selective post emergent organic herbicide that contains citrus oil.
3. Cultural Practices
 - a. Hand weeding- staff hand weeds landscape beds where applicable. This practice reduces the use of herbicides.
 - b. Mulching- mulching can help reduce annual weeds, it incorporates organic matter into the soil as the mulch decomposes.
 - c. Incorporation of organic matter-adding organic matter can improve overall soil health and microbial activity leading to improved health of trees, shrubs, turf and the entire landscape.
 - d. Cover crops- cover crops are regularly used in natural resource and forest management projects to help reduce the establishment of invasive plants.
 - e. Black plastic to suppress weeds. This practice is currently be used at the Patapsco Female Institute. This application should only be used in areas not visible to the public.

Plans for Future Pesticide Use and Reductions

The Department of Recreation and Parks manages over 9,000 acres of both developed parks and natural areas. Pesticides are an essential part of the management of invasive species and unwanted vegetation in natural resource management, park operations and horticultural practices. Recreation and Parks in partnership with the Office of Community Sustainability will continue to research and trial new alternative herbicides, organic products and cultural practices to reduce future pesticide use. Additionally, staff will continue to practice Integrated Pest Management to maximize the effects of strategically applied pesticide applications to control pests and invasive plants.