



Natural Resources Network

Connecting Research, Teaching and Outreach

Extent of Prescribed Fire Use in New Hampshire

UPDATED TABLES, 2014 - 2019

Extent of Prescribed Fire Use in New Hampshire, Updated Tables, 2014-2019

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Acknowledgments

We appreciate the valuable assistance of:

- Steve Sherman, N.H. Division of Forests and Lands
- Tom Trask, N.H. Division of Forests and Lands
- Kathleen Errington, N.H. Department of Environmental Services
- John Neely, U.S. Forest Service
- Steve Junkin, Society for the Protection of N.H. Forests
- Zachary Boyajian, N.H. Adjutant General's Department
- Heidi Holman, N.H. Fish and Game
- Mike Crawford, The Nature Conservancy
- Stephan Najjar, U.S. Air Force.

Steven Roberge, UNH Cooperative Extension Forestry Professor and Specialist reviewed and edited this manuscript.

A project of The N.H. Prescribed Fire Council and the University of New Hampshire Cooperative Extension.

Suggested Form of Attribution

Fast, A.J., R. DiGirolomo, and K. Salvatore. 2021. Extent of Prescribed Fire Use in New Hampshire, Updated Tables, 2014- 2019. University of New Hampshire Cooperative Extension, Durham, N.H.

This publication builds on data collected by Brooke Benson, Ben Kaufhold, Andrew Fast, and Mark Ducey in 2017 and 2019. Katherine Salvatore, a University of New Hampshire student assisted with the project through data collection and synthesis in 2021. The information in this publication increases New Hampshire’s prescribed fire statistics record. Methods and project background are detailed in “Extent of Prescribed Fire Use in New Hampshire.”¹

Prescribed fires were defined as broadcast burns, e.g. “where fire is applied generally to most or all of an area within well-defined boundaries for reduction of fuel hazard, as a resource management treatment, or both.”² These are fires that require N.H. Category IV fire permits unless in the presence of a N.H. Fire Warden or N.H. Fire Warden’s agent. The tables contained herein represent all

prescribed fire activity in the state whether a N.H. Category IV fire permit was filed or a N.H. Fire Warden was present.

2014-2019 prescribed fire results reflect survey data from all 234 New Hampshire municipalities. Despite the comprehensiveness of the survey, some New Hampshire prescribed fires were not recorded due to lack of records or lack of survey response from municipal fire departments. The accuracy of the data reflect available records and institutional knowledge shared by our local, state and federal prescribed fire partners.

This project could not have been completed without the support of the New Hampshire Prescribed Fire Council and the leadership of New Hampshire’s Division of Forests and Lands Forest Protection Bureau.

Table 1: Summary of Prescribed Burns, 2014-2019

Year	2014	2015	2016	2017	2018	2019
# of burns	82	53	40	35	50	46
Acres burned	513.85	366.1	341.5	372.5	321.5	147.7
Average Ac/Burn	6.27	6.91	8.54	10.64	6.43	3.21
% of total burns	100%	100%	100%	100%	100%	100%
# of towns where burns occurred	50	36	21	23	33	27
% of towns where burns occurred	21.30%	15.30%	9.00%	9.83%	14.10%	11.54%

1 Kaufhold, B.T., A.J. Fast, and M. Ducey. 2017. Extent of Prescribed Fire Use in New Hampshire. University of New Hampshire Cooperative Extension, Durham, N.H.

2 <https://www.nwccg.gov/term/glossary/broadcast-burning> accessed 10/11/21

Table 2: Summary of Prescribed Burns by Group, 2014-2019

	Year	# of burns	Acres burned	Average Ac/burn	% of total burns	% of acreage burned	# of towns where burns occurred	% of towns where burns occurred
Municipal Fire Departments	2014	33	216.3	6.4	41.5%	42.1%	19	8.1%
	2015	24	113.8	4.7	45.3%	31.1%	24	10.3%
	2016	12	220.5	18.4	30.0%	64.6%	7	3.0%
	2017	15	185.0	12.3	42.8%	49.7%	9	3.8%
	2018	25	95.5	3.8	50.0%	29.7%	17	7.3%
	2019	25	43.3	1.7	54.3%	29.3%	16	6.8%
State Agencies	2014	25	39.0	1.6	29.3%	7.6%	17	7.3%
	2015	17	31.4	1.9	32.1%	8.6%	10	4.3%
	2016	15	18.0	1.2	37.5%	5.3%	8	3.4%
	2017	9	7.5	0.8	25.7%	2.0%	5	2.1%
	2018	10	5.5	0.6	11.0%	1.7%	7	21.2%
	2019	10	14.5	1.5	21.7%	9.8%	6	22.2%
Federal Agencies	2014	19	150.1	7.9	23.5%	29.2%	6	2.5%
	2015	7	55.0	7.9	13.5%	15.0%	4	1.7%
	2016	10	68.0	6.8	25.0%	19.9%	5	2.1%
	2017	8	110.0	13.8	22.9%	29.5%	6	2.5%
	2018	11	167.0	15.2	22.0%	51.9%	7	21.2%
	2019	6	40.4	6.7	13.0%	27.4%	2	7.4%
Other	2014	5	108.5	21.7	6.1%	21.1%	4	1.7%
	2015	5	166.0	33.2	9.4%	45.3%	5	2.1%
	2016	3	35.0	11.7	7.5%	10.2%	3	1.3%
	2017	3	70.0	23.3	8.6%	18.8%	3	1.3%
	2018	4	53.5	13.4	8.0%	16.6%	3	9.1%
	2019	5	49.5	9.9	10.9%	33.5%	3	11.1%

Table 3: Burn Objectives by Group, 2018 & 2019

Objectives	Complete Data	Municipal Fire	State Agencies	Federal Agencies	Other	% of Total Prescribed Burns
Agriculture	29	24	1	0	4	30%
Biodiversity	23	2	3	15	3	24%
Forestry	2	0	0	1	0	<1%
Public Safety	13	10	0	0	3	14%
Training	53	34	17	0	2	55%
Wildlife	16	0	0	16	0	17%

Table 4: Burn Objectives by Group, 2014 - 2019³

Objectives	Complete Data	Municipal Fire	State Agencies	Federal Agencies	Other	% of Total Prescribed Burns
Agriculture	59	44	1	1	13	19%
Biodiversity	80	23	11	37	9	26%
Forestry	6	0	0	5	1	<1%
Public Safety	31	23	0	1	7	10%
Training	148	77	69	0	2	48%
Wildlife	59	0	12	47	0	19%

³ Some respondents indicated multiple burn objectives for a single burn



Table 5: Fuels Associated with Burn Objectives, 2018 & 2019³

Objectives/Fuels	Grass	Shrub	Timber Litter	Slash
Agriculture	25	10	0	0
Biodiversity	13	14	0	8
Forestry	0	1	2	0
Public Safety	10	3	6	3
Training	37	24	18	0
Wildlife	13	9	1	0

Table 6: Fuels Associated with Burn Objectives, 2014 - 2019^{3,4}

Objectives/Fuels	Grass	Shrub	Timber Litter	Slash
Agriculture	50	30	2	0
Biodiversity	49	42	8	18
Forestry	0	3	5	3
Public Safety	50	21	18	3
Training	129	52	84	2
Wildlife	83	23	3	2

³Some respondents indicated multiple burn objectives for a single burn

⁴One survey response indicated unknown fuel type and it not reflected in the table



The Natural Resource Network Reports

The Natural Resource Network presents this material as a part of series of research reports and publications of interest to educators, resource professionals, landowners and the public. Additional copies are available from the University of New Hampshire Cooperative Extension Forestry Information Center, 131 Main Street, Nesmith Hall, Durham, NH 03824, or at our website extension.unh.edu.

The University of New Hampshire Cooperative Extension provides New Hampshire citizens with research-based education and information, enhancing their ability to make informed decisions that strengthen youth and families, sustain natural resources, and improve the economy. We work with an extensive network of partners within the natural resources community.

The mission of the Natural Resources Network is to enhance interaction among the natural resource research, teaching, and outreach communities in

New Hampshire by providing an ongoing mechanism for identifying, addressing and communicating natural resource issues.

Natural resource professionals are working toward improved ways to conserve and use the natural resources of New Hampshire. The Natural Resource Network was formed to improve the interaction among researchers and those who provide outreach education in many kinds of programs. Teachers, outreach professionals and resource managers can bring research-based education to diverse audiences. At the same time, those audiences, or consumers, identify issues and needs for educational programs which can be addressed by controlled research. Well informed and knowledgeable professionals, free-flowing exchange of information, an advantageous and gratifying professional environment, and natural resource planning are goals of the Natural Resource Network.

