

# **Appendix 1: Eastern Fuel Consumption Data Study Summary--JFSP 08-1-6-01**

Eastern fuel consumption study data summarized for the 29 units monitored. It includes study site descriptions and location, pre-fire environmental variables, and pre-fire loading and fuel consumption by fuelbed category. Unshaded rows are pine units and shaded rows are mixed hardwood units.

## Unit Label and Description

Unit code	Location	Latitude	Longitude	Burn date	Fuelbed type	Ignition type	Ignition length (min)	Site description
AP018	Appalachicola NF, FL	30.2089	-84.8599	2/11/2010	Pine	Helicopter	3.75	Long leaf pine plantation with understory of palmetto, gallberry, other shrub and grass.
AP034	Appalachicola NF, FL	30.2026	-84.8345	2/18/2010	Pine	Hand	4	Same as AP018
AP050	Appalachicola NF, FL	30.1375	-84.7746	2/7/2009	Pine	Helicopter	360	Same as AP018
AP213	Appalachicola NF, FL	30.3423	-84.5412	2/11/2010	Pine	Hand	2.75	Same as AP018
AP312	Appalachicola NF, FL	30.1957	-84.6313	1/24/2009	Pine	Helicopter	120	Same as AP018
AP319	Appalachicola NF, FL	30.2184	-84.4205	1/14/2010	Pine	Hand	3.25	Same as AP018
AP320	Appalachicola NF, FL	30.2432	-84.4685	2/17/2009	Pine	Helicopter	240	Same as AP018
AP328	Appalachicola NF, FL	30.1309	-84.6327	1/31/2009	Pine	Helicopter	240	Same as AP018
E100BE	Eglin AFB, SC	30.6566	-86.7145	1/12/2010	Pine	Hand	4	Same as AP018
E501B	Eglin AFB, SC	30.4569	-86.7618	12/23/2009	Pine	Hand	5.75	Same as AP018
E505	Eglin AFB, SC	30.4614	-86.6688	1/23/2010	Pine	Hand	1.75	Same as AP018
E807B	Eglin AFB, SC	30.4847	-86.2767	1/4/2010	Pine	Hand	2.5	Same as AP018
E807D	Eglin AFB, SC	30.5034	-86.2570	2/21/2010	Pine	Hand	5	Same as AP018
PH1V	Pumpkin Hill State Park Reserve, FL	30.4729	-81.4926	2/10/2009	Pine	Hand	240	Pond pine forest with understory of sand live oak, palmetto, and wiregrass
PH1V2	Pumpkin Hill State Park Reserve, FL	30.4729	-81.4926	2/27/2009	Pine	Hand	270	Same as PH1V
PH2K	Pumpkin Hill State Park Reserve, FL	30.4719	-81.4897	2/27/2009	Pine	Hand	135	Pond pine savannah with patchy understory of palmetto and oak interspersed with bare mineral soil
S121	Saint Marks Wildlife Refuge, FL	30.1433	-84.1317	3/19/2009	Pine	Hand	60	Long leaf pine forest with understory dominated by palmetto component with some oak species.
S330	Saint Marks Wildlife Reserve, FL	30.0783	-84.3743	2/17/2010	Pine	Hand	4	Long leaf pine forest with understory of palmetto, gallberry, and wiregrass
DBBCLF	Daniel Boone NF, KY	38.0526	-83.5543	4/18/2009	Hardwood	Helicopter	270	Mixed hardwood forest with open greenbriar understory
DBCCLF	Daniel Boone NF, KY	38.0435	-83.5500	4/18/2009	Hardwood	Helicopter	390	Mixed hardwood forest with understory of red maple and greenbrier.
DBWPLF	Daniel Boone NF, KY	38.0608	-83.5802	4/17/2009	Hardwood	Helicopter	210	Same as DBBCLF
DBWSLF	Daniel Boone NF, KY	38.0882	-83.5783	3/23/2009	Hardwood	Hand	300	Mixed forest, with hardwood species, shortleaf pine, and pitch pine. Understory dominated by red maple and greenbrier.
GWJCM	George Washington & Jefferson NF, VI/KY	37.7554	-79.2114	4/9/2009	Hardwood	Hand.	300	Mixed hardwood forest with red maple understory.
GWJJR	George Washington & Jefferson NF, VI/KY	38.1350	-79.7911	4/17/2009	Hardwood	Helicopter	285	Same as GWJCM
MBHG	Mammoth Caves NP, KY	37.1811	-86.0999	3/31/2009	Hardwood	Hand	360	Mixed hardwood forest with little to no understory.
MFM2	Mammoth Caves NP, KY	37.2093	-86.0816	4/1/2009	Hardwood	Hand	360	Mixed hardwood forest with a midstory of maple, dogwood, and cedar. Little to no understory.
MJC	Mammoth Caves NP, KY	37.1763	-86.1134	4/2/2009	Hardwood	Hand	480	Same as MFM2
THA	Tar Hollow State Park, OH	39.3660	-82.7770	4/13/2009	Hardwood	Helicopter	270	Mixed hardwood forest with a midstory of maple and American beech. Little to no understory.
THB PLOH	Tar Hollow State Park, OH	39.3490	-82.7580	4/13/2009	Hardwood	Helicopter	90	Mixed hardwood forest with heavy greenbriar understory.

Unshaded rows are pine units and shaded rows are mixed hardwood units.

## Environmental Variables

Unit	Fuel Moisture								Wind speed	Days since rain
	Shrub	Grass	1 hr	10 hr	100 hr	1000 hr	Litter	Duff		
	-----Percentage-----								Miles per hour	Days
AP018	--	33.6	14.1	61.4	--	--	23.0	--	2.0	33.6
AP034	103.9	35.7	12.3	74	71.3	--	24.6	--	2.0	35.7
AP050	120.1	38.6	8.5	22.6	93.4	93.0	15.9	--	--	38.6
AP213	93.7	28.0	10.2	54.9	78.8	N/A	19.1	--	2.0	28.0
AP312	108.3	60.4	23.4	56	63.7	101.0	35.4	--	--	60.4
AP319	114.3	43.1	15.4	48.9	58.1	--	23.4	--	--	43.1
AP320	101.0	31.0	16.9	60.3	77.1	84.2	31.8	--	--	31.0
AP328	92.8	34.1	18.5	56.4	67.3	65.6	15.8	--	--	34.1
E100BE	100.3	48.5	27.1	40	69.8	123.09	18.8	--	4.0	48.5
E501B	--	--	--	--	--	--	--	--	5.0	--
E505	97.0	45.5	20.5	66.5	129.5	113.8	21.2	--	2.0	45.5
E807B	--	--	--	--	--	--	--	--	3.0	--
E807D	101.6	40.3	17.7	81.2	210.1	140	34.5	--	6.0	40.3
PH1V	94.1	36.5	9.8	13.7	60.5	--	6.1	--	--	36.5
PH1V2	94.1	36.5	9.8	9.89	60.5	--	6.1	--	--	36.5
PH2K	54.5	21.7	8.4	9.89	27.3	--	25.1	--	--	21.7
S121	80.3	67.7	13.8	32	106.4	--	21.5	--	--	67.7
S330	92.6	26.9	21.9	57.5	346.7	--	18.9	--	1.0	26.9
DBBCLF	--	--	8.6	13.7	51.6	69.5	6.4	75.2	--	--
DBCCLF	--	--	13.9	42.6	7.9	58.2	47.8	172.9	--	--
DBWPLF	--	--	13.6	23.2	58.5	82.45	5.7	191.1	--	--
DBWSLF	--	--	11	20.3	66.7	67.5	7.9	77.9	--	--
GWJCM	--	--	25.9	50.3	59.3	73.5	43.3	349.5	--	--
GWJJR	--	--	11	39.6	69.3	73.34	9.1	272.9	--	--
MBHG	--	--	17.6	34.7	45	57.9	11.9	--	--	--
MFM2	--	--	38.6	25.7	--	71.9	6.76	--	--	--
MJC	--	--	11.2	27.3	51.4	76.3	5.7	67.49	--	--
THA	--	--	8.1	9.64	18.6	59.1	9.7	59.67	--	--
THB PLOH	--	--	7.3	13.1	30.5	52.1	7.9	47.2	--	--

Unshaded rows are pine units and shaded rows are mixed hardwood units.

### Fuel Loading

Unit	Shrub	Herb	Litter	Duff	1 hr	10 hr	100 hr	1000+ hr	Total Woody	Total
-----Tons per acre -----										
AP018	1.34	0.39	0.91	NP	0.03	0.24	0.17	0.34	0.78	3.42
AP034	0.76	0.21	0.71	NP	0.02	0.17	0.14	0.11	0.44	2.12
AP050	2.29	0.39	0.84	NP	0.22	0.63	0.35	0.34	1.74	5.26
AP213	1.57	0.01	1.66	NP	0.01	0.14	0.32	1.27	1.07	4.31
AP312	3.44	0.12	1.61	NP	0.16	0.67	0.97	2.16	1.54	6.71
AP319	1.89	0.09	1.74	NP	0.10	0.18	0.26	0.53	3.96	7.68
AP320	2.79	0.21	1.04	NP	0.11	0.18	0.49	0.86	1.64	5.68
AP328	1.46	0.41	1.19	NP	0.08	0.33	0.24	0.98	1.63	4.69
E100BE	2.07	0.08	1.53	NP	0.1	0.43	0.64	4.46	5.63	9.31
E501B	1.4	0.12	1.05	NP	0.06	0.23	0.34	2.46	3.09	5.66
E505	1.04	0.06	1.29	NP	0.06	0.32	0.48	2.13	2.99	5.38
E807B	2	0.15	1.61	NP	0.13	0.48	0.93	1.11	2.65	6.41
E807D	1.65	0.02	2.05	NP	0.09	0.25	0.46	0.1	0.9	4.62
PH1V	4.77	0.03	1.61	NP	0.2	0.3	0.22	0.09	0.81	7.22
PH1V2	4.77	0.03	1.39	NP	0.2	0.35	0.22	0.09	0.86	7.05
PH2K	4.62	0.02	0.81	NP	0.16	0.13	0.05	0.19	0.53	5.98
S121	3.76	0.1	1.66	NP	0.1	0.47	0.33	0.72	1.62	7.14
S330	1.27	0.24	1.8	NP	0.03	0.33	0.25	0.27	0.88	4.19
DBBCLF	0.06	NP	2.01	1.65	0.32	1.59	3	8.92	13.83	17.55
DBCCLF	0.01	NP	1.52	1.65	0.26	1.21	2.08	6.8	10.35	13.53
DBWPLF	0.04	NP	1.96	2.44	0.29	1.57	2.53	14.68	19.07	23.51
DBWSLF	9.87	0.19	1.68	2.38	0.36	1.59	2.69	15.6	20.24	34.36
GWJCM	NP	NP	2.07	4.36	0.25	1.43	2.03	4.87	8.58	15.01
GWJJR	0.02	NP	2.68	4.14	0.2	1.2	1.2	2.81	5.41	12.25
MBHG	NP	NP	1.13	0.42	0.32	1.27	0.64	7.51	9.74	11.29
MFM2	NP	NP	1.16	3.47	0.37	1.47	1.83	9.85	13.52	18.15
MJC	NP	NP	1.89	1.07	0.22	1.17	1.72	5.66	8.77	11.73
THA	NP	NP	1.71	2.52	0.26	1.24	1.63	5.6	8.73	12.96
THB_PLOH	0.32	NP	1.76	1.61	0.3	1.33	1.53	3.36	6.52	10.21

NP=Not Present

Unshaded rows are pine units and shaded rows are mixed hardwood units.

## Fuel Consumption

Unit	Shrub	Herb	Litter	Duff	1 hr	10 hr	100 hr	1000+ hr	Total Woody	Total
-----Tons per acre-----										
AP018	1.17	0.34	0	NP	0.02	0.03	0	0	0.05	1.56
AP034	0.44	0.21	0	NP	0	0	0.01	0	0.01	0.66
AP050	1.99	0.34	0.08	NP	0.18	0.27	0.06	0	0.02	2.43
AP213	1.13	0.01	0.1	NP	0.01	0	0.01	0	0.11	1.35
AP312	2.58	0.13	0.28	NP	0.04	0.40	0.13	0	0.51	3.5
AP319	1.61	0.09	0.44	NP	0.08	0	0.03	0	0.57	2.71
AP320	2.31	0.21	0	NP	0.1	0	0.03	0.06	0.19	2.71
AP328	0.92	0.41	0	NP	0.05	0.13	0.05	0	0.23	1.56
E100BE	1.14	0.08	0	NP	0.08	0	0.04	0	0.12	1.34
E501B	1.17	0.11	0.56	NP	0.04	0	0.02	0	0.06	1.9
E505	0.15	0.03	0.91	NP	0.01	0	0	0	0.01	1.1
E807B	0.86	0.08	1.22	NP	0.05	0	0.03	0	0.08	2.24
E807D	1.37	0.02	1.44	NP	0.04	0	0.02	0	0.06	2.89
PH1V	4.11	0.02	0.55	NP	0.2	0.24	0	0	0.44	5.12
PH1V2	4.4	0.02	0.36	NP	0.2	0.3	0	0	0.5	5.28
PH2K	2.51	0.02	0.3	NP	0.08	0.02	0.06	0	0.16	2.99
S121	1.15	0.1	1.36	NP	0.04	0.13	0.01	0	0.18	2.79
S330	0.69	0.24	0	NP	0	0	0.07	0.15	0.22	1.15
DBBCLF	0	NP	1.66	0.44	0.2	0.81	0.77	1.34	3.12	5.22
DBCCLF	0	NP	0.67	0.05	0.05	0.15	0.36	0.93	1.49	2.21
DBWPLF	0	NP	1.51	0.4	0.15	0.56	0.68	1.22	2.61	4.52
DBWSLF	0.02	0	1.43	0.51	0.21	0.84	0.7	2.97	4.72	6.68
GWJCM	NP	NP	1.23	0.14	0.06	0.17	0.13	0.45	0.81	2.18
GWJJR	0.02	NP	2.21	0.23	0.07	0.38	0.23	0.13	0.81	3.27
MBHG	NP	NP	0.88	0.07	0.13	0.44	0.1	2.27	2.94	3.89
MFM2	NP	NP	0.94	0.73	0.41	1.28	0.67	1.66	4.02	5.69
MJC	NP	NP	1.48	0.52	0.13	0.46	0.35	0.54	1.48	3.48
THA	NP	NP	1.12	0.34	0.21	0.78	0.58	1.34	2.91	4.37
THB_PLOH	0.25	NP	1.38	0.18	0.18	0.64	0.5	0.87	2.19	4

NP=Not Present

Unshaded rows are pine units and shaded rows are mixed hardwood units.