

# **Dataset Documentation**

Dataset Name: Western USA Live Fuel Moisture

### Location and boundaries

#### **Overall Location Method**

X	Ground collection only
	Ground collection with boundary drawn using imagery
	Ground collection with spatial buffer added
	Boundary drawn from imagery
	Other
	Unknown

For details on ground collection protocol for live fuel moisture sampling, visit the <u>National Fuel Moisture Database</u> and click on "Utah Fuel Moisture Guide".

#### **GeoLocation Device**

	Industrial grade GPS (List model)
	Retail grade GPS
	Mobile Phone GPS
	N/A
$\times$	Unknown

Imagery used (Skip if no imagery used)

Sensor: Sentinel-1 and Landsat-8 (view Dataset Properties section for more details on image properties)

Data product used: Visit journal article for details of source of each product used

Date(s): 1-Jan-2016 - 30-Mar-2019

#### **Imagery Annotation methods**

Boundaries drawn based on a single ground point captured

Boundaries drawn/edited based on multiple ground points captured

Buffer validated from ground point captured

Boundary drawn without ground reference data (Include description of methods in Appendix C)

] Pixels annotated without ground reference data (Include description of methods in Appendix C) ] Unknown



## Data Properties

			4:	
index	column_name	description	time_stamp	units
0	percent(t)		date	percent
1	dete	Date of measurement of live fuel moisture	data	date_time
<b>1</b>	uate	content	uale	object
		Name of site where live fuel moisture content was measured. Refer to National Fuel Moisture Database https://www.wfas.net/index.php/national- fuel-moisture-database-moisture-drought-		
2	site	103 for map of site names	none	string
3	slope(t)	Terrain slope	none	degrees
4	elevation(t)	Altitude above mean sea level	none	meters
5	canopy_height(t)	Height of canopy from ground level	none	meters
6	forest_cover(t)	Land cover class of live fuel moisture content measurement site from GLOBCOVER dataset	2009	category
7	silt(t)	Silt fraction of live fuel moisture content measurement site	none	fraction
8	sand(t)	Sand fraction of live fuel moisture content measurement site	none	fraction
9	clay(t)	Clay fraction of live fuel moisture content measurement site	none	fraction
10	vv(t-3)	Backscatter in VV polarization	3 months before date	decibels
11	vh(t-3)	Backscatter in VH polarization	3 months before date	decibels
12	red(t-3)	Red band surface reflectance	3 months before date	x 10,000
13	green(t-3)	Green band surface reflectance	3 months before date	x 10,000
14	blue(t-3)	Blue band surface reflectance	3 months before date	x 10,000
15	swir(t-3)	Shortwave infrared band surface reflectance	3 months before date	x 10,000
16	nir(t-3)	Near infrared band surface reflectance	3 months before date	x 10,000
17	ndvi(t-3)	Normalized difference vegetation index	3 months before date	fraction
18	ndwi(t-3)	Normalized difference water index	3 months before date	fraction



			3 months	
19	nirv(t-3)	Near infrared vegetation	before date	x 10,000
		Backscatter in VV polarization divided by red	3 months	
20	vv_red(t-3)	band reflectance	before date	decibels
		Backscatter in VV polarization divided by	3 months	
21	vv_green(t-3)	green band reflectance	before date	decibels
		Backscatter in VV polarization divided by blue	3 months	
22	vv_blue(t-3)	band reflectance	before date	decibels
		Backscatter in VV polarization divided by	3 months	
23	vv_swir(t-3)	SWIR band reflectance	before date	decibels
		Backscatter in VV polarization divided by NIR	3 months	
24	vv_nir(t-3)	band reflectance	before date	decibels
		Backscatter in VV polarization divided by	3 months	
25	vv_ndvi(t-3)	NDVI	before date	decibels
		Backscatter in VV polarization divided by	3 months	
26	vv_ndwi(t-3)	NDWI	before date	decibels
			3 months	
27	vv_nirv(t-3)	Backscatter in VV polarization divided by NIRv	before date	decibels
		Backscatter in VH polarization divided by red	3 months	
28	vh_red(t-3)	band reflectance	before date	decibels
		Backscatter in VH polarization divided by	3 months	
29	vh_green(t-3)	green band reflectance	before date	decibels
		Backscatter in VH polarization divided by blue	3 months	
30	vn_blue(t-3)	band reflectance	before date	decidels
21		Backscatter in VH polarization divided by	3 months	de elle elle
31	vn_swir(t-3)		before date	decibels
22	$v_{\rm b}$ $n_{\rm ir}(+2)$	Backscatter in VH polarization divided by NIR	3 months	dosibola
52	<u>vii_iii(t-5)</u>	Dalla reflectance	2 months	uecibeis
22	vh $ndvi(t-2)$	Backscatter in VH polarization divided by	3 months	decibels
		Restruction divided by	2 months	decibels
34	vh. ndwi(t-3)		before date	decibels
54			3 months	
35	vh nirv(t-3)	Backscatter in VH polarization divided by NIRv	before date	decibels
		Backscatter in VH polarization divided by V//	2 months	uccibels
36	vh vv(t-3)	polarization	before date	fraction
			2 months	
37	vv(t-2)	Backscatter in VV polarization	before date	decibels
			2 months	
38	vh(t-2)	Backscatter in VH polarization	before date	decibels
		······································	2 months	
39	red(t-2)	Red band surface reflectance	before date	x 10,000
			2 months	,
40	green(t-2)	Green band surface reflectance	before date	x 10,000



			2 months	
41	blue(t-2)	Blue band surface reflectance	before date	x 10,000
12			2 months	10.000
42	swir(t-2)	Shortwave infrared band surface reflectance	before date	x 10,000
10			2 months	10.000
43	nir(t-2)	Near infrared band surface reflectance	before date	x 10,000
			2 months	Constant of
44	ndvi(t-2)	Normalized difference vegetation index	before date	Traction
45	ndwi(+2)	Normalized difference water index	2 months	fraction
45	nuwi(t-z)		Defore date	ITACION
16	pin(t 2)	Near infrared vegetation	2 months	× 10.000
40	1111 V(L-Z)		2 months	x 10,000
47	$y_{1}$ rod(t 2)	band reflectance	2 months	docibols
47	vv_reu(t-2)	Darkseatter in V/ polarization divided by	2 months	uecibeis
19	$\lambda u = groon(t-2)$	green band reflectance	2 monuns	decibels
40		Bedreatter in M( releviation divided by blue	2 months	uecibeis
10	$y_{1}$ $h_{1}$	band reflectance	2 months	decibels
45	vv_blue(t-2)	Dalkseatter in VV polarization divided by	2 months	uecibeis
50	$y_{1}$ swir(t-2)	SWIR hand reflectance	2 monuns before date	decibels
50	<u>vv_</u> 3wn(t-2)	Packscatter in VV polarization divided by NIP	2 months	uecibeis
51	$v_{1}v_{2}$ nir(t-2)	backscatter in vv polarization divided by Nik	2 monuns before date	decibels
51	vv_iii(c 2)	Backscatter in VV polarization divided by	2 months	decibels
52	vv ndvi(t-2)	NDVI	before date	decibels
		Backscatter in VV polarization divided by	2 months	
53	vv ndwi(t-2)	NDWI	before date	decibels
	_ 、 /		2 months	
54	vv_nirv(t-2)	Backscatter in VV polarization divided by NIRv	before date	decibels
		Backscatter in VH polarization divided by red	2 months	
55	vh_red(t-2)	band reflectance	before date	decibels
		Backscatter in VH polarization divided by	2 months	
56	vh_green(t-2)	green band reflectance	before date	decibels
		Backscatter in VH polarization divided by blue	2 months	
57	vh_blue(t-2)	band reflectance	before date	decibels
		Backscatter in VH polarization divided by	2 months	
58	vh_swir(t-2)	SWIR band reflectance	before date	decibels
		Backscatter in VH polarization divided by NIR	2 months	
59	vh_nir(t-2)	band reflectance	before date	decibels
		Backscatter in VH polarization divided by	2 months	
60	vh_ndvi(t-2)	NDVI	before date	decibels
		Backscatter in VH polarization divided by	2 months	
61	vh_ndwi(t-2)	NDWI	before date	decibels
			2 months	
62	vh_nirv(t-2)	Backscatter in VH polarization divided by NIRv	before date	decibels



63	vh_vv(t-2)	Backscatter in VH polarization divided by VV polarization	2 months before date	fraction
64	vv(t-1)	Backscatter in VV polarization	1 month before date	decibels
65	vh(t-1)	Backscatter in VH polarization	1 month before date	decibels
66	red(t-1)	Red band surface reflectance	1 month before date	x 10,000
67	green(t-1)	Green band surface reflectance	1 month before date	x 10,000
68	blue(t-1)	Blue band surface reflectance	1 month before date	x 10,000
69	swir(t-1)	Shortwave infrared band surface reflectance	1 month before date	x 10,000
70	nir(t-1)	Near infrared band surface reflectance	1 month before date	x 10,000
71	ndvi(t-1)	Normalized difference vegetation index	1 month before date	fraction
72	ndwi(t-1)	Normalized difference water index	1 month before date	fraction
73	nirv(t-1)	Near infrared vegetation	1 month before date	x 10,000
74	vv_red(t-1)	Backscatter in VV polarization divided by red band reflectance	1 month before date	decibels
75	vv_green(t-1)	Backscatter in VV polarization divided by green band reflectance	1 month before date	decibels
76	vv_blue(t-1)	Backscatter in VV polarization divided by blue band reflectance	1 month before date	decibels
77	vv_swir(t-1)	Backscatter in VV polarization divided by SWIR band reflectance	1 month before date	decibels
78	vv_nir(t-1)	Backscatter in VV polarization divided by NIR band reflectance	1 month before date	decibels
79	vv_ndvi(t-1)	Backscatter in VV polarization divided by NDVI	1 month before date	decibels
80	vv_ndwi(t-1)	Backscatter in VV polarization divided by NDWI	1 month before date	decibels
81	vv_nirv(t-1)	Backscatter in VV polarization divided by NIRv	1 month before date	decibels
82	vh red(t-1)	Backscatter in VH polarization divided by red band reflectance	1 month before date	decibels
83	vh green(t-1)	Backscatter in VH polarization divided by green band reflectance	1 month	decibels
84	vh_blue(t-1)	Backscatter in VH polarization divided by blue band reflectance	1 month before date	decibels



			Backscatter in VH polarization divided by	1 month	
	85	vh_swir(t-1)	SWIR band reflectance	before date	decibels
			Backscatter in VH polarization divided by NIR	1 month	
	86	vh_nir(t-1)	band reflectance	before date	decibels
			Backscatter in VH polarization divided by	1 month	
	87	vh_ndvi(t-1)	NDVI	before date	decibels
			Backscatter in VH polarization divided by	1 month	
	88	vh_ndwi(t-1)	NDWI	before date	decibels
				1 month	
	89	vh_nirv(t-1)	Backscatter in VH polarization divided by NIRv	before date	decibels
			Backscatter in VH polarization divided by VV	1 month	
	90	vh_vv(t-1)	polarization	before date	fraction
	91	vv(t)	Backscatter in VV polarization	date	decibels
	92	vh(t)	Backscatter in VH polarization	date	decibels
	93	red(t)	Red band surface reflectance	date	x 10,000
	94	green(t)	Green band surface reflectance	date	x 10,000
	95	blue(t)	Blue band surface reflectance	date	x 10,000
	96	swir(t)	Shortwave infrared band surface reflectance	date	x 10,000
	97	nir(t)	Near infrared band surface reflectance	date	x 10,000
	98	ndvi(t)	Normalized difference vegetation index	date	fraction
	99	ndwi(t)	Normalized difference water index	date	fraction
	100	nirv(t)	Near infrared vegetation	date	x 10,000
			Backscatter in VV polarization divided by red		
	101	vv_red(t)	band reflectance	date	decibels
			Backscatter in VV polarization divided by		
	102	vv_green(t)	green band reflectance	date	decibels
			Backscatter in VV polarization divided by blue		
	103	vv_blue(t)	band reflectance	date	decibels
			Backscatter in VV polarization divided by		
	104	vv_swir(t)	SWIR band reflectance	date	decibels
			Backscatter in VV polarization divided by NIR		
	105	vv_nir(t)	band reflectance	date	decibels
	100	· · · · · · · · · · · · · · · · · · ·	Backscatter in VV polarization divided by		de elle elle
	106	vv_ndvi(t)	NDVI Resksetter in VV polarization divided by	date	decideis
	107	w ndwi(t)		atch	decibels
	107	$vv_n(t)$	Backscatter in VV polarization divided by NIPv	date	decibels
	108		Backscatter in VL polarization divided by Milly	uate	decibels
	100	vh red(t)	band reflectance	date	decibels
	109		Backscatter in VH polarization divided by		
Į	110	vh green(t)	green hand reflectance	date	decibels
	110	vh_green(t)	green band reflectance	date	decibels
	110	vh_green(t)	green band reflectance Backscatter in VH polarization divided by blue band reflectance	date	decibels
	110 111	vh_green(t) vh_blue(t)	green band reflectance Backscatter in VH polarization divided by blue band reflectance	date date	decibels decibels
	110 111 112	vh_green(t) vh_blue(t)	green band reflectance Backscatter in VH polarization divided by blue band reflectance Backscatter in VH polarization divided by SWIR band reflectance	date date	decibels decibels



			Backscatter in VH polarization divided by NIR			
1	.13	vh_nir(t)	band reflectance	date		decibels
			Backscatter in VH polarization divided by			
1	.14	vh_ndvi(t)	NDVI	date		decibels
			Backscatter in VH polarization divided by			
1	.15	vh_ndwi(t)	NDWI	date		decibels
1	.16	vh_nirv(t)	Backscatter in VH polarization divided by NIRv	date		decibels
			Backscatter in VH polarization divided by VV			
1	.17	vh_vv(t)	polarization	date		fraction
			Exact duplicate of slope(t). This variable does			
			not change with time. It is included as a			
1	.18	slope(t-3)	placeholder for LSTM model compatibility	none		degrees
			Exact duplicate of elevation(t). This variable			
			does not change with time. It is included as a			
1	.19	elevation(t-3)	placeholder for LSTM model compatibility	none		meters
			Exact duplicate of canopy_height(t). This			
			variable does not change with time. It is			
	~ ~	canopy_height(t-	included as a placeholder for LSTM model			
1	.20	3)		none		meters
			Exact duplicate of forest_cover(t). This			
			variable does not change with time. It is			
1	21	forast covar(+ 2)	compatibility	2	000	catagony
1	. 2 1	Torest_cover(t-s)	compationity	۷ ک	2009	category
			Exact duplicate of silt(t). This variable does			
1	22	cil+(+ 2)	Exact duplicate of silt(t). This variable does not change with time. It is included as a	2020		fraction
1	.22	silt(t-3)	Exact duplicate of silt(t). This variable does not change with time. It is included as a placeholder for LSTM model compatibility	none		fraction
1	.22	silt(t-3)	Exact duplicate of silt(t). This variable does not change with time. It is included as a placeholder for LSTM model compatibility Exact duplicate of sand(t). This variable does	none		fraction
1	.22	silt(t-3)	Exact duplicate of silt(t). This variable does not change with time. It is included as a placeholder for LSTM model compatibility Exact duplicate of sand(t). This variable does not change with time. It is included as a	none		fraction
1	.22 .23	silt(t-3) sand(t-3)	Exact duplicate of silt(t). This variable does not change with time. It is included as a placeholder for LSTM model compatibility Exact duplicate of sand(t). This variable does not change with time. It is included as a placeholder for LSTM model compatibility	none		fraction fraction
1	.22	silt(t-3) sand(t-3)	Exact duplicate of silt(t). This variable does not change with time. It is included as a placeholder for LSTM model compatibility Exact duplicate of sand(t). This variable does not change with time. It is included as a placeholder for LSTM model compatibility Exact duplicate of clay(t). This variable does	none		fraction fraction
1	.22	silt(t-3) sand(t-3)	Exact duplicate of silt(t). This variable does not change with time. It is included as a placeholder for LSTM model compatibility Exact duplicate of sand(t). This variable does not change with time. It is included as a placeholder for LSTM model compatibility Exact duplicate of clay(t). This variable does not change with time. It is included as a placeholder for LSTM model compatibility	none		fraction fraction
1	.22 .23 .24	silt(t-3) sand(t-3) clay(t-3)	Exact duplicate of silt(t). This variable does not change with time. It is included as a placeholder for LSTM model compatibility Exact duplicate of sand(t). This variable does not change with time. It is included as a placeholder for LSTM model compatibility Exact duplicate of clay(t). This variable does not change with time. It is included as a placeholder for LSTM model compatibility	none none		fraction fraction fraction
1	.22 .23	silt(t-3) sand(t-3) clay(t-3)	Exact duplicate of silt(t). This variable does not change with time. It is included as a placeholder for LSTM model compatibility Exact duplicate of sand(t). This variable does not change with time. It is included as a placeholder for LSTM model compatibility Exact duplicate of clay(t). This variable does not change with time. It is included as a placeholder for LSTM model compatibility Exact duplicate of slope(t). This variable does	none none		fraction fraction fraction
1	22 23 24	silt(t-3) sand(t-3) clay(t-3)	Exact duplicate of silt(t). This variable does not change with time. It is included as a placeholder for LSTM model compatibility Exact duplicate of sand(t). This variable does not change with time. It is included as a placeholder for LSTM model compatibility Exact duplicate of clay(t). This variable does not change with time. It is included as a placeholder for LSTM model compatibility Exact duplicate of slope(t). This variable does not change with time. It is included as a placeholder for LSTM model compatibility	none none		fraction fraction fraction
1	22 23 24 25	silt(t-3) sand(t-3) clay(t-3) slope(t-2)	Exact duplicate of silt(t). This variable does not change with time. It is included as a placeholder for LSTM model compatibility Exact duplicate of sand(t). This variable does not change with time. It is included as a placeholder for LSTM model compatibility Exact duplicate of clay(t). This variable does not change with time. It is included as a placeholder for LSTM model compatibility Exact duplicate of slope(t). This variable does not change with time. It is included as a placeholder for LSTM model compatibility Exact duplicate of slope(t). This variable does not change with time. It is included as a placeholder for LSTM model compatibility	none none none		fraction fraction fraction degrees
1 1 1	22 23 24 25	silt(t-3) sand(t-3) clay(t-3) slope(t-2)	Exact duplicate of silt(t). This variable does not change with time. It is included as a placeholder for LSTM model compatibility Exact duplicate of sand(t). This variable does not change with time. It is included as a placeholder for LSTM model compatibility Exact duplicate of clay(t). This variable does not change with time. It is included as a placeholder for LSTM model compatibility Exact duplicate of slope(t). This variable does not change with time. It is included as a placeholder for LSTM model compatibility Exact duplicate of slope(t). This variable does not change with time. It is included as a placeholder for LSTM model compatibility Exact duplicate of elevation(t). This variable	none none none		fraction fraction fraction degrees
	22 23 24 25	silt(t-3) sand(t-3) clay(t-3) slope(t-2)	Exact duplicate of silt(t). This variable does not change with time. It is included as a placeholder for LSTM model compatibility Exact duplicate of sand(t). This variable does not change with time. It is included as a placeholder for LSTM model compatibility Exact duplicate of clay(t). This variable does not change with time. It is included as a placeholder for LSTM model compatibility Exact duplicate of slope(t). This variable does not change with time. It is included as a placeholder for LSTM model compatibility Exact duplicate of slope(t). This variable does not change with time. It is included as a placeholder for LSTM model compatibility Exact duplicate of elevation(t). This variable does not change with time. It is included as a	none none none		fraction fraction fraction degrees
	22 23 24 25 26	silt(t-3) sand(t-3) clay(t-3) slope(t-2) elevation(t-2)	Exact duplicate of silt(t). This variable does not change with time. It is included as a placeholder for LSTM model compatibility Exact duplicate of sand(t). This variable does not change with time. It is included as a placeholder for LSTM model compatibility Exact duplicate of clay(t). This variable does not change with time. It is included as a placeholder for LSTM model compatibility Exact duplicate of slope(t). This variable does not change with time. It is included as a placeholder for LSTM model compatibility Exact duplicate of slope(t). This variable does not change with time. It is included as a placeholder for LSTM model compatibility Exact duplicate of elevation(t). This variable does not change with time. It is included as a placeholder for LSTM model compatibility	none none none none		fraction fraction fraction degrees meters
	22 23 24 25 26	silt(t-3) sand(t-3) clay(t-3) slope(t-2) elevation(t-2)	Exact duplicate of silt(t). This variable does not change with time. It is included as a placeholder for LSTM model compatibility Exact duplicate of sand(t). This variable does not change with time. It is included as a placeholder for LSTM model compatibility Exact duplicate of clay(t). This variable does not change with time. It is included as a placeholder for LSTM model compatibility Exact duplicate of slope(t). This variable does not change with time. It is included as a placeholder for LSTM model compatibility Exact duplicate of slope(t). This variable does not change with time. It is included as a placeholder for LSTM model compatibility Exact duplicate of elevation(t). This variable does not change with time. It is included as a placeholder for LSTM model compatibility Exact duplicate of elevation(t). This variable does not change with time. It is included as a placeholder for LSTM model compatibility	none none none none		fraction fraction fraction degrees meters
	22 23 24 25 26	silt(t-3) sand(t-3) clay(t-3) slope(t-2) elevation(t-2)	Exact duplicate of silt(t). This variable does not change with time. It is included as a placeholder for LSTM model compatibility Exact duplicate of sand(t). This variable does not change with time. It is included as a placeholder for LSTM model compatibility Exact duplicate of clay(t). This variable does not change with time. It is included as a placeholder for LSTM model compatibility Exact duplicate of slope(t). This variable does not change with time. It is included as a placeholder for LSTM model compatibility Exact duplicate of slope(t). This variable does not change with time. It is included as a placeholder for LSTM model compatibility Exact duplicate of elevation(t). This variable does not change with time. It is included as a placeholder for LSTM model compatibility Exact duplicate of canopy_height(t). This variable does not change with time. It is included as a placeholder for LSTM model	none none none none		fraction fraction fraction degrees meters
	22 23 24 25 26 27	silt(t-3) sand(t-3) clay(t-3) slope(t-2) elevation(t-2) canopy_height(t- 2)	Exact duplicate of silt(t). This variable does not change with time. It is included as a placeholder for LSTM model compatibility Exact duplicate of sand(t). This variable does not change with time. It is included as a placeholder for LSTM model compatibility Exact duplicate of clay(t). This variable does not change with time. It is included as a placeholder for LSTM model compatibility Exact duplicate of slope(t). This variable does not change with time. It is included as a placeholder for LSTM model compatibility Exact duplicate of slope(t). This variable does not change with time. It is included as a placeholder for LSTM model compatibility Exact duplicate of elevation(t). This variable does not change with time. It is included as a placeholder for LSTM model compatibility Exact duplicate of canopy_height(t). This variable does not change with time. It is included as a placeholder for LSTM model compatibility	none none none none		fraction fraction fraction degrees meters meters
	22 23 24 25 26 27	silt(t-3) sand(t-3) clay(t-3) slope(t-2) elevation(t-2) canopy_height(t- 2)	Exact duplicate of silt(t). This variable does not change with time. It is included as a placeholder for LSTM model compatibility Exact duplicate of sand(t). This variable does not change with time. It is included as a placeholder for LSTM model compatibility Exact duplicate of clay(t). This variable does not change with time. It is included as a placeholder for LSTM model compatibility Exact duplicate of slope(t). This variable does not change with time. It is included as a placeholder for LSTM model compatibility Exact duplicate of slope(t). This variable does not change with time. It is included as a placeholder for LSTM model compatibility Exact duplicate of elevation(t). This variable does not change with time. It is included as a placeholder for LSTM model compatibility Exact duplicate of canopy_height(t). This variable does not change with time. It is included as a placeholder for LSTM model compatibility Exact duplicate of forest cover(t). This	none none none none none		fraction fraction fraction degrees meters meters
	22 23 24 25 26 27	silt(t-3) sand(t-3) clay(t-3) slope(t-2) elevation(t-2) canopy_height(t- 2)	Exact duplicate of silt(t). This variable does not change with time. It is included as a placeholder for LSTM model compatibility Exact duplicate of sand(t). This variable does not change with time. It is included as a placeholder for LSTM model compatibility Exact duplicate of clay(t). This variable does not change with time. It is included as a placeholder for LSTM model compatibility Exact duplicate of slope(t). This variable does not change with time. It is included as a placeholder for LSTM model compatibility Exact duplicate of slope(t). This variable does not change with time. It is included as a placeholder for LSTM model compatibility Exact duplicate of elevation(t). This variable does not change with time. It is included as a placeholder for LSTM model compatibility Exact duplicate of canopy_height(t). This variable does not change with time. It is included as a placeholder for LSTM model compatibility Exact duplicate of forest_cover(t). This variable does not change with time. It is included as a placeholder for LSTM model compatibility	none none none none none		fraction fraction fraction degrees meters meters
	22 23 24 25 26 27	silt(t-3) sand(t-3) clay(t-3) slope(t-2) elevation(t-2) canopy_height(t- 2)	Exact duplicate of silt(t). This variable does not change with time. It is included as a placeholder for LSTM model compatibility Exact duplicate of sand(t). This variable does not change with time. It is included as a placeholder for LSTM model compatibility Exact duplicate of clay(t). This variable does not change with time. It is included as a placeholder for LSTM model compatibility Exact duplicate of slope(t). This variable does not change with time. It is included as a placeholder for LSTM model compatibility Exact duplicate of slope(t). This variable does not change with time. It is included as a placeholder for LSTM model compatibility Exact duplicate of elevation(t). This variable does not change with time. It is included as a placeholder for LSTM model compatibility Exact duplicate of canopy_height(t). This variable does not change with time. It is included as a placeholder for LSTM model compatibility Exact duplicate of forest_cover(t). This variable does not change with time. It is included as a placeholder for LSTM model	none none none none none		fraction fraction fraction degrees meters meters



129	silt(t-2)	Exact duplicate of silt(t). This variable does not change with time. It is included as a placeholder for LSTM model compatibility	none		fraction
130	sand(t-2)	Exact duplicate of sand(t). This variable does not change with time. It is included as a placeholder for LSTM model compatibility	none		fraction
131	clay(t-2)	Exact duplicate of clay(t). This variable does not change with time. It is included as a placeholder for LSTM model compatibility	none		fraction
132	slope(t-1)	Exact duplicate of slope(t). This variable does not change with time. It is included as a placeholder for LSTM model compatibility	none		degrees
133	elevation(t-1)	Exact duplicate of elevation(t). This variable does not change with time. It is included as a placeholder for LSTM model compatibility	none		meters
	canopy_height(t-	Exact duplicate of canopy_height(t). This variable does not change with time. It is included as a placeholder for LSTM model			
134	1)	compatibility	none		meters
105		Exact duplicate of forest_cover(t). This variable does not change with time. It is included as a placeholder for LSTM model			
135	forest cover(t-1)	compatibility		2009	category
135	forest_cover(t-1) silt(t-1)	compatibility Exact duplicate of silt(t). This variable does not change with time. It is included as a placeholder for LSTM model compatibility	none	2009	category fraction
135	forest_cover(t-1) silt(t-1) sand(t-1)	compatibility Exact duplicate of silt(t). This variable does not change with time. It is included as a placeholder for LSTM model compatibility Exact duplicate of sand(t). This variable does not change with time. It is included as a placeholder for LSTM model compatibility	none	2009	category fraction fraction
135 136 137 138	forest_cover(t-1) silt(t-1) sand(t-1) clay(t-1)	compatibility Exact duplicate of silt(t). This variable does not change with time. It is included as a placeholder for LSTM model compatibility Exact duplicate of sand(t). This variable does not change with time. It is included as a placeholder for LSTM model compatibility Exact duplicate of clay(t). This variable does not change with time. It is included as a placeholder for LSTM model compatibility	none	2009	category fraction fraction fraction
135 136 137 138	forest_cover(t-1) silt(t-1) sand(t-1) clay(t-1)	compatibility Exact duplicate of silt(t). This variable does not change with time. It is included as a placeholder for LSTM model compatibility Exact duplicate of sand(t). This variable does not change with time. It is included as a placeholder for LSTM model compatibility Exact duplicate of clay(t). This variable does not change with time. It is included as a placeholder for LSTM model compatibility Latitude of live fuel moisture content	none none none	2009	category fraction fraction fraction decimal
135 136 137 138 138	forest_cover(t-1) silt(t-1) sand(t-1) clay(t-1) latitude	compatibility Exact duplicate of silt(t). This variable does not change with time. It is included as a placeholder for LSTM model compatibility Exact duplicate of sand(t). This variable does not change with time. It is included as a placeholder for LSTM model compatibility Exact duplicate of clay(t). This variable does not change with time. It is included as a placeholder for LSTM model compatibility Latitude of live fuel moisture content measurement site	none none none	2009	category fraction fraction fraction decimal degrees