**EMERGING METHODS FOR EARLY DETECTION OF FOREST FIRES**

**PROJECT DEVELOPMENT PHASE**

**SPRINT 4**

|  |  |
| --- | --- |
| Date | 14.11.2022 |
| Team ID | PNT2022TMID53546  PNT2022TMID13265 |
| Project Name | Emerging Methods For Early Detection Of Forest Fires |
| Team Leader | Karthikeyan .K |
| Team Members | E.Bhavan ramana  S. Aravind raj  P. Hemanth kumar reddy  M . Gunaseelan |

|  |  |  |
| --- | --- | --- |
| **import** matplotlib.pyplot **as** plt **import** numpy **as** np **import** pandas **as** pd **import** seaborn **as** sns  **from** sklearn **import** metrics **from** classification\_report,confusion\_matrix | sklearn.metrics | **import** |

In [4]:

|  |
| --- |
| **import** warnings warnings**.**filterwarnings(action**=**"ignore")  **%matplotlib** inline sns**.**set\_style('darkgrid') pd**.**set\_option("display.max\_rows",1000) pd**.**set\_option("display.max\_columns",1000) |

In [5]:

|  |
| --- |
| fires **=** pd**.**read\_csv(r"C:\Users\dhine\Downloads\forestfires.csv\forestfires.csv") *#show the first 15 instance of dataset* fires**.**head(15) |

In [6]:

Out[6]: **X Y month day FFMC DMC DC ISI temp RH wind rain area**

|  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **0** 7 5 | | mar | fri | 86.2 | 26.2 | 94.3 | 5.1 | 8.2 | 51 | 6.7 | 0.0 | 0.0 |
| **1** 7 4 | | oct | tue | 90.6 | 35.4 | 669.1 | 6.7 | 18.0 | 33 | 0.9 | 0.0 | 0.0 |
| **2** 7 4 | | oct | sat | 90.6 | 43.7 | 686.9 | 6.7 | 14.6 | 33 | 1.3 | 0.0 | 0.0 |
| **3** 8 6 | | mar | fri | 91.7 | 33.3 | 77.5 | 9.0 | 8.3 | 97 | 4.0 | 0.2 | 0.0 |
| **4** 8 6 | | mar | sun | 89.3 | 51.3 | 102.2 | 9.6 | 11.4 | 99 | 1.8 | 0.0 | 0.0 |
| **5** 8 6 | | aug | sun | 92.3 | 85.3 | 488.0 | 14.7 | 22.2 | 29 | 5.4 | 0.0 | 0.0 |
| **6** 8 6 | | aug | mon | 92.3 | 88.9 | 495.6 | 8.5 | 24.1 | 27 | 3.1 | 0.0 | 0.0 |
| **7** 8 | 6 | aug | mon | 91.5 | 145.4 | 608.2 | 10.7 | 8.0 | 86 | 2.2 | 0.0 | 0.0 |
| **8** 8 | 6 | sep | tue | 91.0 | 129.5 | 692.6 | 7.0 | 13.1 | 63 | 5.4 | 0.0 | 0.0 |
| **9** 7 | 5 | sep | sat | 92.5 | 88.0 | 698.6 | 7.1 | 22.8 | 40 | 4.0 | 0.0 | 0.0 |
| **10** 7 | 5 | sep | sat | 92.5 | 88.0 | 698.6 | 7.1 | 17.8 | 51 | 7.2 | 0.0 | 0.0 |
| **11** 7 | 5 | sep | sat | 92.8 | 73.2 | 713.0 | 22.6 | 19.3 | 38 | 4.0 | 0.0 | 0.0 |
| **12** 6 | 5 | aug | fri | 63.5 | 70.8 | 665.3 | 0.8 | 17.0 | 72 | 6.7 | 0.0 | 0.0 |
| **13** 6 | 5 | sep | mon | 90.9 | 126.5 | 686.5 | 7.0 | 21.3 | 42 | 2.2 | 0.0 | 0.0 |

**14** 6 5 sep wed 92.9 133.3 699.6 9.2 26.4 21 4.5

0.0 0.0

|  |
| --- |
| fires**.**shape |

In [7]:

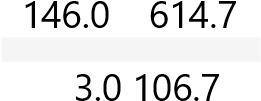
(517, 13) Out[7]:

|  |
| --- |
| *#sho w the last 10 inst ances of dat aset* f ires**.** tail(15) |

In [8]:

Out[8]: **X Y month day FFMC DMC DC ISI temp RH wind rain area**

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **502** 4 | | 4 | aug | tue | 96.1 | 181.1 | 671.2 | 14.3 | 20.7 | 69 | 4.9 | 0.4 | 0.00 |
| **503** | 2 | 4 | aug | wed | 94.5 | 139.4 | 689.1 | 20.0 | 29.2 | 30 | 4.9 | 0.0 | 1.95 |
| **504** 4 | | 3 | aug | wed | 94.5 | 139.4 | 689.1 | 20.0 | 28.9 | 29 | 4.9 | 0.0 | 49.59 |
| **505** | 1 | 2 | aug | thu | 91.0 | 163.2 | 744.4 | 10.1 | 26.7 | 35 | 1.8 | 0.0 | 5.80 |
| **506** 1 | | 2 | aug | fri | 91.0 | 166.9 | 752.6 | 7.1 | 18.5 | 73 | 8.5 | 0.0 | 0.00 |
| **507** | 2 | 4 | aug | fri | 91.0 |  |  | 7.1 | 25.9 | 41 | 3.6 | 0.0 | 0.00 |
|  |  |  |  |  |  |  |  |  |  |  |  |
| **508** 1 | | 2 | aug | fri | 91.0 | 166.9 | 752.6 | 7.1 | 25.9 | 41 | 3.6 | 0.0 | 0.00 |
| **509** | 5 | 4 | aug | fri | 91.0 | 166.9 | 752.6 | 7.1 | 21.1 | 71 | 7.6 | 1.4 | 2.17 |
| **510** 6 | | 5 | aug | fri | 91.0 | 166.9 | 752.6 | 7.1 | 18.2 | 62 | 5.4 | 0.0 | 0.43 |
| **511** | 8 | 6 | aug | sun | 81.6 | 56.7 | 665.6 | 1.9 | 27.8 | 35 | 2.7 | 0.0 | 0.00 |
| **512** 4 | | 3 | aug | sun | 81.6 | 56.7 | 665.6 | 1.9 | 27.8 | 32 | 2.7 | 0.0 | 6.44 |
| **513** | 2 | 4 | aug | sun | 81.6 | 56.7 | 665.6 | 1.9 | 21.9 | 71 | 5.8 | 0.0 | 54.29 |
| **514** 7 | | 4 | aug | sun | 81.6 | 56.7 | 665.6 | 1.9 | 21.2 | 70 | 6.7 | 0.0 | 11.16 |
| **515** 1 | | 4 | aug | sat | 94.4 |  |  | 11.3 | 25.6 | 42 | 4.0 | 0.0 | 0.00 |

**516** 6 3 nov tue 79.5  1.1 11.8 31 4.5 0.0 0.00

|  |
| --- |
| fires**.**info() |

In [9]:

<class 'pandas.core.frame.DataFrame'> RangeIndex: 517 entries, 0 to 516 Data columns (total 13 columns):

# Column Non-Null Count Dtype



1. X 517 non-null int64
2. Y 517 non-null int64
3. month 517 non-null object
4. day 517 non-null object
5. FFMC 517 non-null float64 5 DMC 517 non-null float64
6. DC 517 non-null float64
7. ISI 517 non-null float64
8. temp 517 non-null float64
9. RH 517 non-null int64
10. wind 517 non-null float64
11. rain 517 non-null float64
12. area 517 non-null float64 dtypes: float64(8), int64(3), object(2) memory usage: 52.6+

KB

In [10]:

Out[10]:

|  |
| --- |
| *#generate descriptive statistics of each attribute* fires**.**describe()**.**T |

**count mean std min 25% 50% 75% max**

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| **Y** | 517.0 | 4.299807 | 1.229900 | 2.0 | 4.0 | 4.00 | 5.00 |

 **X** 517.0 4.669246 2.313778 1.0 3.0 4.00 7.00 9.00

**FFMC** 517.0 90.644681 5.520111 18.7 90.2 91.60 92.90 96.20

**DMC** 517.0 110.872340 64.046482 1.1 68.6 108.30 142.40 291.30 **DC** 517.0

547.940039 248.066192 7.9 437.7 664.20 713.90 860.60

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| fires['area']**.**values[fires['area']**.**values **>**0] **=** 1  *#renaming the area attribute to output for clear understanding* fires **=** fires**.**rename(columns**=**{'area': 'output'}) fires**.**head(10) | | | | | | | | | | | | | |
| **ISI** 517.0 |  | 9.021663 |  | 4.559477 0.0 |  | 6.5 |  | 8.40 |  | 10.80 |  | 56.10 |  |

**temp** 517.0 18.889168 5.806625 2.2 15.5 19.30 22.80 33.30

|  |
| --- |
| 44.288201 |

|  |
| --- |
| 100.00 |

|  |  |  |
| --- | --- | --- |
| **RH** |  | 517.0 |

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| 33.0 |  | 42.00 |  | 53.00 |

16.317469 15.0

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  | **wind** | 517.0 | 4.017602 | 1.791653 | 0.4 | 2.7 | 4.00 | 4.90 9.40 |
|  | **rain** | 517.0 | 0.021663 | 0.295959 | 0.0 | 0.0 | 0.00 | 0.00 6.40 |
| In [11]: | **area** | 517.0 | 12.847292 | 63.655818 | 0.0 | 0.0 | 0.52 | 6.57 1090.84 |
| Out[11]: | **X Y month day FFMC DMC** | | | | **DC** | **ISI temp RH wind rain output** | | |

0 7 5 mar fri oct 86.2 26.2 94.3 5.1 8.2 51 6.7 0.0 0.0

4 tue oct sat 90.6 35.4 669.1 6.7 18.0 33 0.9 0.0 0.0 1 7

4 mar fri mar 90.6 43.7 686.9 6.7 14.6 33 1.3 0.0 0.0

1. 7
   1. sun aug 91.7 33.3 77.5 9.0 8.3 97 4.0 0.2 0.0
2. 8 6 sun 89.3 51.3 102.2 9.6 11.4 99 1.8 0.0 0.0
   1. aug mon 92.3 85.3 488.0 14.7 22.2 29 5.4 0.0 0.0
3. 8 aug mon
   1. sep tue 92.3 88.9 495.6 8.5 24.1 27 3.1 0.0 0.0
4. 8 sep sat 8.0 86 2.2 0.0 0.0
5. 91.5 145.4 608.2 10.7
6. 8 6 91.0 129.5 692.6 7.0 13.1 63 5.4 0.0 0.0

5 22.8 40 4.0 0.0 0.0

1. 8 92.5 88.0 698.6 7.1

1. 8

1. 7

|  |
| --- |
| fires**.**corr() |

In [12]: Out[12]:

**X Y FFMC DMC DC ISI temp RH wind**

**X** 1.000000 0.539548 -0.021039 -0.048384 -0.085916 0.006210 -0.051258 0.085223 0.018798 0.065

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **Y** 0.539548 1.000000 | -0.046308 | 0.007782 | -0.10117 | -0.024488 | -0.024103 | 0.062221 |
| **FFMC** -0.021039 -0.046308 | 1.000000 | 0.382619 | 0.330512 | 0.531805 | 0.431532 | -0.300995 |
| **DMC** -0.048384 0.007782 | 0.382619 | 1.000000 | 0.682192 | 0.305128 | 0.469594 | 0.073795 |
| **DC** -0.085916 -0.101178 | 0.330512 | 0.682192 | 1.000000 | 0.229154 | 0.496208 | -0.039192 |
| **ISI** 0.006210-0.024488 | 0.531805 | 0.305128 | 0.229154 | 1.000000 | 0.394287 | -0.132517 |
| **temp** -0.051258 -0.024103 | 0.431532 | 0.469594 | 0.496208 | 0.394287 | 1.000000 | -0.527390 |
| **RH** 0.085223 0.062221 | -0.300995 | 0.073795 | -0.03919 | -0.132517 | -0.527390 | 1.000000 |

-0.02034 0.033

-0.028485 0.056

-0.10534 0.074

-0.203466 0.035

0.10682 0.067

-0.227116 0.069

0.06941 0.099

**wind** 0.018798-0.020341 -0.028485 -0.105342 -0.203466 0.106826 -0.227116 0.069410 1.000000 0.061

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **rain** | 0.065387 0.033234 | 0.056702 | 0.074790 | 0.035861 | 0.067668 | 0.069491 | 0.099751 | 0.06111 1.000 |

**output** 0.062491 0.056892 0.073823 0.062672 0.096724 0.035663 0.076047 -0.035587 0.055702 0.025

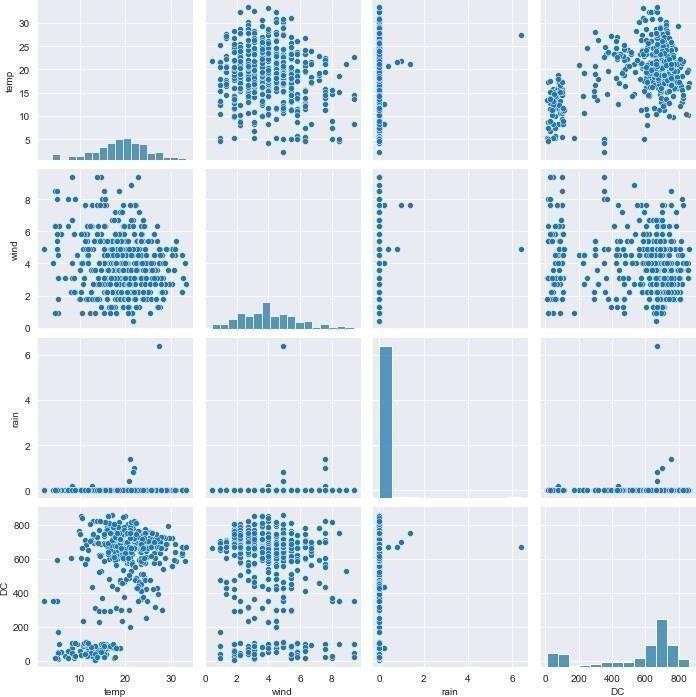
|  |
| --- |
| numerical\_feature **=** fires**.**describe(include**=**["int", "float"])**.**columns    *# Print it in list type ..*  print(list(numerical\_feature)) |

In [15]:

['X', 'Y', 'FFMC', 'DMC', 'DC', 'ISI', 'temp', 'RH', 'wind', 'rain', 'output']

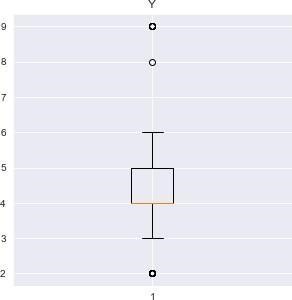
|  |
| --- |
| sns**.**set\_style('darkgrid') *# Find the relation # plt.subplot(fires)*  sns**.**pairplot(fires[["temp", "wind",  "rain","DC"]]) plt**.**show() |

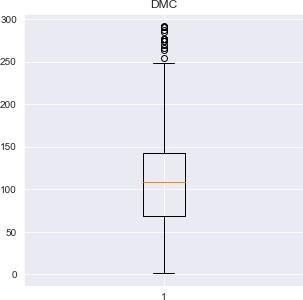
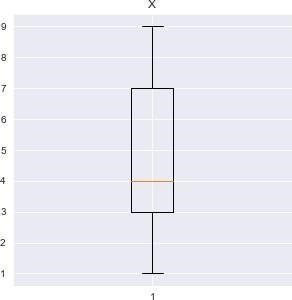
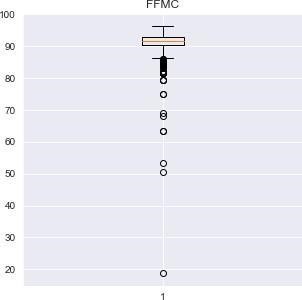
In [16]:

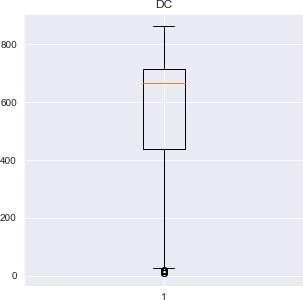


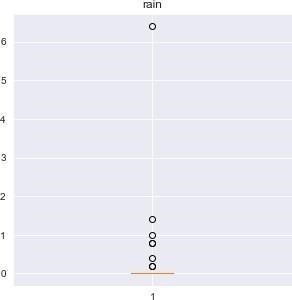
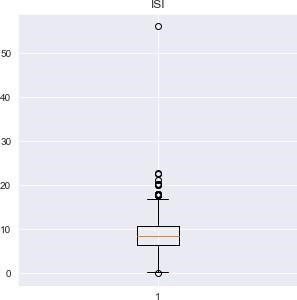
|  |
| --- |
| **for** idx, col **in** enumerate(numerical\_feature, 1):  plt**.**figure(figsize**=**(5,5))    *# plt.subplot(len(numerical\_feature) // 2, 3, idx)* plt**.**boxplot(fires[col]) plt**.**title(col)  *# plt.hist(fires[col])* plt**.**tight\_layout() plt**.**show(plt) |

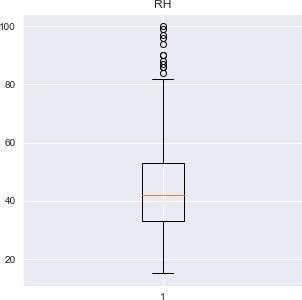
In [17]:

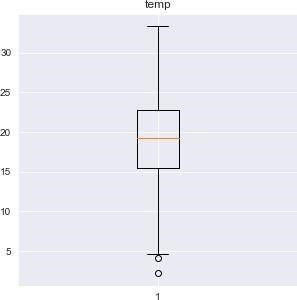
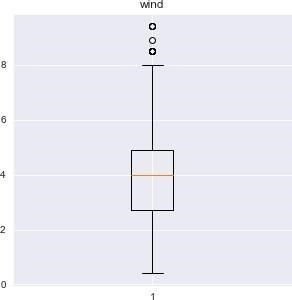


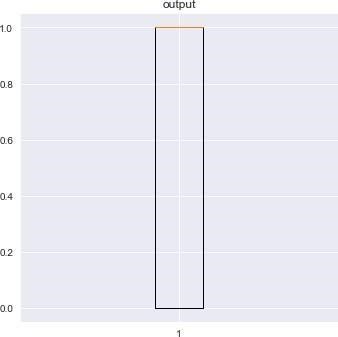






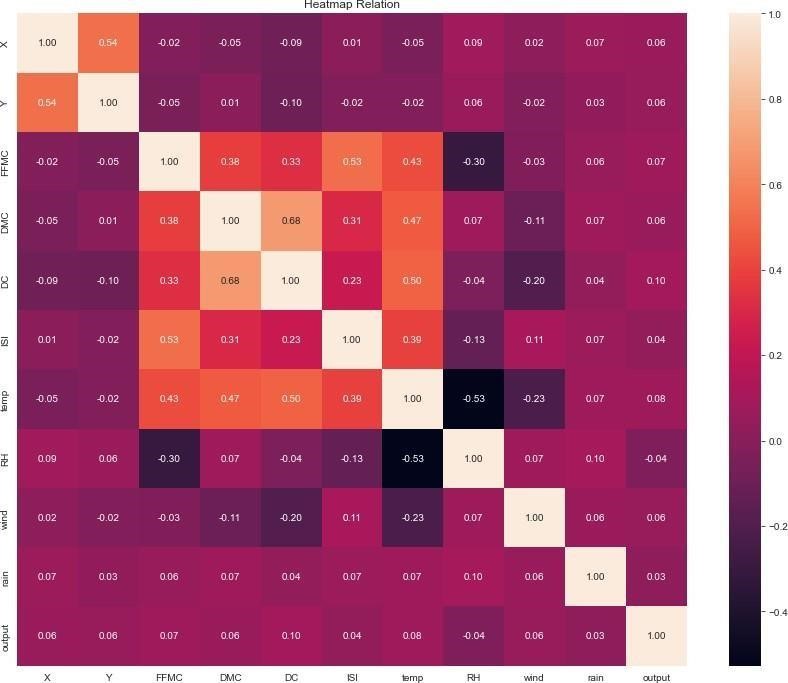
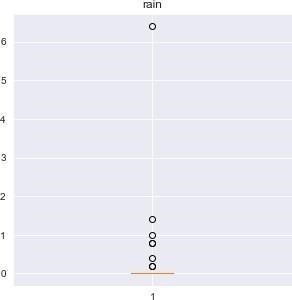






|  |
| --- |
| plt**.**figure(figsize**=**(15, 12)) plt**.**title("Heatmap Relation") sns**.**heatmap(fires[numerical\_feature]**.**corr(), annot**=True**, fmt**=**'.2f'); |

In [18]:



|  |
| --- |
| highest\_rain **=** fires**.**sort\_values(by**=**'rain', ascending**=False**)[['month', 'day', 'rain']]**.**head() highest\_rain |

In [19]:

Out[19]: **month day rain**

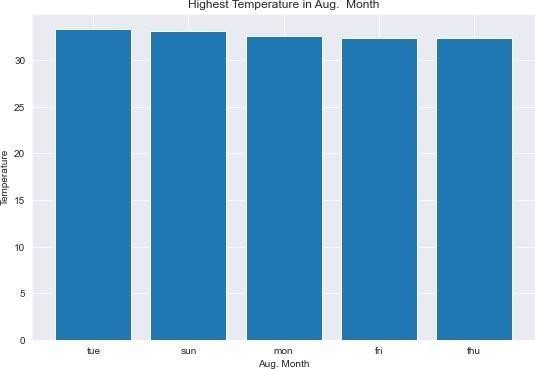
**499** aug tue 6.4

|  |  |  |  |
| --- | --- | --- | --- |
| **509** | aug | fri | 1.4 |
| **243** | aug | sun | 1.0 |
| **500** | aug | tue | 0.8 |

**501** aug tue 0.8

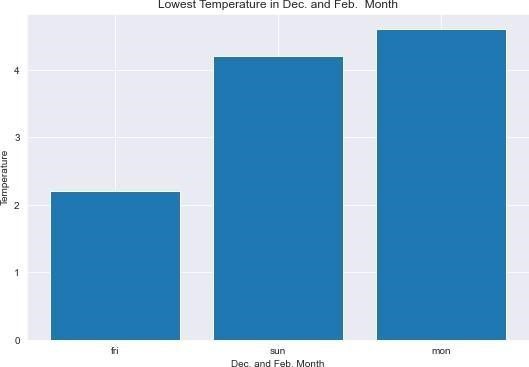
|  |
| --- |
| highest\_temp **=** fires**.**sort\_values(by**=**'temp', ascending**=False**)[['month', 'day', 'temp']]**.**head() plt**.**figure(figsize**=**(9, 6))  plt**.**title("Highest Temperature in Aug. Month") plt**.**bar(highest\_temp['day'], highest\_temp['temp'])  plt**.**xlabel("Day") plt**.**xlabel("Aug. Month")    plt**.**ylabel("Temperature") plt**.**show() |

In [20]:



|  |
| --- |
| lowest\_temp **=** fires**.**sort\_values(by**=**'temp', ascending**=True**)[['month', 'day', 'temp']]**.**head() plt**.**figure(figsize**=**(9, 6))  plt**.**title("Lowest Temperature in Dec. and Feb. Month")  plt**.**bar(lowest\_temp['day'], lowest\_temp['temp'])  plt**.**xlabel("Day")  plt**.**xlabel("Dec. and Feb. Month") plt**.**ylabel("Temperature") plt**.**show() |

In [21]:



|  |
| --- |
| fires |

In [22]:

Out[22]: **X Y month day FFMC DMC DC ISI temp RH wind rain output**

|  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **0** 7 | 5 | mar | fri | 86.2 | 26.2 | 94.3 | 5.1 | 8.2 | 51 | 6.7 | 0.0 | 0.0 |
| **1** 7 | 4 | oct | tue | 90.6 | 35.4 | 669.1 | 6.7 | 18.0 | 33 | 0.9 | 0.0 | 0.0 |
| **2** 7 | 4 | oct | sat | 90.6 | 43.7 | 686.9 | 6.7 | 14.6 | 33 | 1.3 | 0.0 | 0.0 |
| **3** 8 | 6 | mar | fri | 91.7 | 33.3 | 77.5 | 9.0 | 8.3 | 97 | 4.0 | 0.2 | 0.0 |
| **4** 8 | 6 | mar | sun | 89.3 | 51.3 | 102.2 | 9.6 | 11.4 | 99 | 1.8 | 0.0 | 0.0 |
| **5** 8 | 6 | aug | sun | 92.3 | 85.3 | 488.0 | 14.7 | 22.2 | 29 | 5.4 | 0.0 | 0.0 |
| **6** 8 | 6 | aug | mon | 92.3 | 88.9 | 495.6 | 8.5 | 24.1 | 27 | 3.1 | 0.0 | 0.0 |
| **7** 8 | 6 | aug | mon | 91.5 | 145.4 | 608.2 | 10.7 | 8.0 | 86 | 2.2 | 0.0 | 0.0 |
| **8** 8 | 6 | sep | tue | 91.0 | 129.5 | 692.6 | 7.0 | 13.1 | 63 | 5.4 | 0.0 | 0.0 |
| **9** 7 | 5 | sep | sat | 92.5 | 88.0 | 698.6 | 7.1 | 22.8 | 40 | 4.0 | 0.0 | 0.0 |
| **10** 7 | 5 | sep | sat | 92.5 | 88.0 | 698.6 | 7.1 | 17.8 | 51 | 7.2 | 0.0 | 0.0 |
| **11** 7 | 5 | sep | sat | 92.8 | 73.2 | 713.0 | 22.6 | 19.3 | 38 | 4.0 | 0.0 | 0.0 |
| **12** 6 | 5 | aug | fri | 63.5 | 70.8 | 665.3 | 0.8 | 17.0 | 72 | 6.7 | 0.0 | 0.0 |
| **13** 6 | 5 | sep | mon | 90.9 | 126.5 | 686.5 | 7.0 | 21.3 | 42 | 2.2 | 0.0 | 0.0 |
| **14** 6 | 5 | sep | wed | 92.9 | 133.3 | 699.6 | 9.2 | 26.4 | 21 | 4.5 | 0.0 | 0.0 |
| **15** 6 | 5 | sep | fri | 93.3 | 141.2 | 713.9 | 13.9 | 22.9 | 44 | 5.4 | 0.0 | 0.0 |
| **16** 5 | 5 | mar | sat | 91.7 | 35.8 | 80.8 | 7.8 | 15.1 | 27 | 5.4 | 0.0 | 0.0 |
| **17** 8 | 5 | oct | mon | 84.9 | 32.8 | 664.2 | 3.0 | 16.7 | 47 | 4.9 | 0.0 | 0.0 |
| **18** 6 | 4 | mar | wed | 89.2 | 27.9 | 70.8 | 6.3 | 15.9 | 35 | 4.0 | 0.0 | 0.0 |
| **19** 6 | 4 | apr | sat | 86.3 | 27.4 | 97.1 | 5.1 | 9.3 | 44 | 4.5 | 0.0 | 0.0 |
| **20** 6 | 4 | sep | tue | 91.0 | 129.5 | 692.6 | 7.0 | 18.3 | 40 | 2.7 | 0.0 | 0.0 |
| **21** 5 | 4 | sep | mon | 91.8 | 78.5 | 724.3 | 9.2 | 19.1 | 38 | 2.7 | 0.0 | 0.0 |
| **22** 7 | 4 | jun | sun | 94.3 | 96.3 | 200.0 | 56.1 | 21.0 | 44 | 4.5 | 0.0 | 0.0 |
| **23** 7 | 4 | aug | sat | 90.2 | 110.9 | 537.4 | 6.2 | 19.5 | 43 | 5.8 | 0.0 | 0.0 |
| **24** 7 | 4 | aug | sat | 93.5 | 139.4 | 594.2 | 20.3 | 23.7 | 32 | 5.8 | 0.0 | 0.0 |
| **25** 7 | 4 | aug | sun | 91.4 | 142.4 | 601.4 | 10.6 | 16.3 | 60 | 5.4 | 0.0 | 0.0 |
| **26** 7 | 4 | sep | fri | 92.4 | 117.9 | 668.0 | 12.2 | 19.0 | 34 | 5.8 | 0.0 | 0.0 |
| **27** 7 | 4 | sep | mon | 90.9 | 126.5 | 686.5 | 7.0 | 19.4 | 48 | 1.3 | 0.0 | 0.0 |

**28** 6 3 sep sat 93.4 145.4 721.4 8.1 30.2 24 2.7 0.0 0.0

|  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **29** 6 | 3 | sep | sun | 93.5 | 149.3 | 728.6 | 8.1 | 22.8 | 39 | 3.6 | 0.0 | 0.0 |
| **30** 6 | 3 | sep | fri | 94.3 | 85.1 | 692.3 | 15.9 | 25.4 | 24 | 3.6 | 0.0 | 0.0 |
| **31** 6 | 3 | sep | mon | 88.6 | 91.8 | 709.9 | 7.1 | 11.2 | 78 | 7.6 | 0.0 | 0.0 |
| **32** 6 | 3 | sep | fri | 88.6 | 69.7 | 706.8 | 5.8 | 20.6 | 37 | 1.8 | 0.0 | 0.0 |
| **33** 6 | 3 | sep | sun | 91.7 | 75.6 | 718.3 | 7.8 | 17.7 | 39 | 3.6 | 0.0 | 0.0 |
| **34** 6 | 3 | sep | mon | 91.8 | 78.5 | 724.3 | 9.2 | 21.2 | 32 | 2.7 | 0.0 | 0.0 |
| **35** 6 | 3 | sep | tue | 90.3 | 80.7 | 730.2 | 6.3 | 18.2 | 62 | 4.5 | 0.0 | 0.0 |

**36** 6 3 oct tue 90.6 35.4 669.1 6.7 21.7 24 4.5 0.0

**X Y month day FFMC DMC DC ISI temp RH wind rain output**

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **37** 7 | | 4 | oct | fri | 90.0 | 41.5 | 682.6 | 8.7 | 11.3 | 60 | 5.4 | 0.0 | 0.0 |
| **38** 7 | | 3 | oct | sat | 90.6 | 43.7 | 686.9 | 6.7 | 17.8 | 27 | 4.0 | 0.0 | 0.0 |
| **39** 4 | | 4 | mar | tue | 88.1 | 25.7 | 67.6 | 3.8 | 14.1 | 43 | 2.7 | 0.0 | 0.0 |
| **40** 4 | | 4 | jul | tue | 79.5 | 60.6 | 366.7 | 1.5 | 23.3 | 37 | 3.1 | 0.0 | 0.0 |
| **41** 4 | | 4 | aug | sat | 90.2 | 96.9 | 624.2 | 8.9 | 18.4 | 42 | 6.7 | 0.0 | 0.0 |
| **42** 4 | | 4 | aug | tue | 94.8 | 108.3 | 647.1 | 17.0 | 16.6 | 54 | 5.4 | 0.0 | 0.0 |
| **43** 4 | | 4 | sep | sat | 92.5 | 88.0 | 698.6 | 7.1 | 19.6 | 48 | 2.7 | 0.0 | 0.0 |
| **44** 4 | | 4 | sep | wed | 90.1 | 82.9 | 735.7 | 6.2 | 12.9 | 74 | 4.9 | 0.0 | 0.0 |
| **45** 5 | | 6 | sep | wed | 94.3 | 85.1 | 692.3 | 15.9 | 25.9 | 24 | 4.0 | 0.0 | 0.0 |
| **46** 5 | | 6 | sep | mon | 90.9 | 126.5 | 686.5 | 7.0 | 14.7 | 70 | 3.6 | 0.0 | 0.0 |
| **47** 6 | | 6 | jul | mon | 94.2 | 62.3 | 442.9 | 11.0 | 23.0 | 36 | 3.1 | 0.0 | 0.0 |
| **48** 4 | | 4 | mar | mon | 87.2 | 23.9 | 64.7 | 4.1 | 11.8 | 35 | 1.8 | 0.0 | 0.0 |
| **49** 4 | | 4 | mar | mon | 87.6 | 52.2 | 103.8 | 5.0 | 11.0 | 46 | 5.8 | 0.0 | 0.0 |
| **50** 4 | | 4 | sep | thu | 92.9 | 137.0 | 706.4 | 9.2 | 20.8 | 17 | 1.3 | 0.0 | 0.0 |
| **51** 4 | | 3 | aug | sun | 90.2 | 99.6 | 631.2 | 6.3 | 21.5 | 34 | 2.2 | 0.0 | 0.0 |
| **52** 4 | | 3 | aug | wed | 92.1 | 111.2 | 654.1 | 9.6 | 20.4 | 42 | 4.9 | 0.0 | 0.0 |
| **53** 4 | | 3 | aug | wed | 92.1 | 111.2 | 654.1 | 9.6 | 20.4 | 42 | 4.9 | 0.0 | 0.0 |
| **54** 4 | | 3 | aug | thu | 91.7 | 114.3 | 661.3 | 6.3 | 17.6 | 45 | 3.6 | 0.0 | 0.0 |
| **55** 4 | | 3 | sep | thu | 92.9 | 137.0 | 706.4 | 9.2 | 27.7 | 24 | 2.2 | 0.0 | 0.0 |
| **56** 4 | | 3 | sep | tue | 90.3 | 80.7 | 730.2 | 6.3 | 17.8 | 63 | 4.9 | 0.0 | 0.0 |
| **57** 4 | | 3 | oct | sun | 92.6 | 46.5 | 691.8 | 8.8 | 13.8 | 50 | 2.7 | 0.0 | 0.0 |
| **58** 2 | 2 | | feb | mon | 84.0 | 9.3 | 34.0 | 2.1 | 13.9 | 40 | 5.4 | 0.0 | 0.0 |
| **59** 2 | 2 | | feb | fri | 86.6 | 13.2 | 43.0 | 5.3 | 12.3 | 51 | 0.9 | 0.0 | 0.0 |
| **60** 2 | 2 | | mar | sun | 89.3 | 51.3 | 102.2 | 9.6 | 11.5 | 39 | 5.8 | 0.0 | 0.0 |
| **61** 2 | 2 | | mar | sun | 89.3 | 51.3 | 102.2 | 9.6 | 5.5 | 59 | 6.3 | 0.0 | 0.0 |
| **62** 2 | 2 | | aug | thu | 93.0 | 75.3 | 466.6 | 7.7 | 18.8 | 35 | 4.9 | 0.0 | 0.0 |
| **63** 2 | 2 | | aug | sun | 90.2 | 99.6 | 631.2 | 6.3 | 20.8 | 33 | 2.7 | 0.0 | 0.0 |
| **64** 2 | 2 | | aug | mon | 91.1 | 103.2 | 638.8 | 5.8 | 23.1 | 31 | 3.1 | 0.0 | 0.0 |
| **65** 2 | 2 | | aug | thu | 91.7 | 114.3 | 661.3 | 6.3 | 18.6 | 44 | 4.5 | 0.0 | 0.0 |
| **66** 2 | 2 | | sep | fri | 92.4 | 117.9 | 668.0 | 12.2 | 23.0 | 37 | 4.5 | 0.0 | 0.0 |
| **67** 2 | 2 | | sep | fri | 92.4 | 117.9 | 668.0 | 12.2 | 19.6 | 33 | 5.4 | 0.0 | 0.0 |
| **68** 2 | 2 | | sep | fri | 92.4 | 117.9 | 668.0 | 12.2 | 19.6 | 33 | 6.3 | 0.0 | 0.0 |
| **69** 4 | 5 | | mar | fri | 91.7 | 33.3 | 77.5 | 9.0 | 17.2 | 26 | 4.5 | 0.0 | 0.0 |
| **70** 4 | 5 | | mar | fri | 91.2 | 48.3 | 97.8 | 12.5 | 15.8 | 27 | 7.6 | 0.0 | 0.0 |
| **71** 4 | 5 | | sep | fri | 94.3 | 85.1 | 692.3 | 15.9 | 17.7 | 37 | 3.6 | 0.0 | 0.0 |
| **72** 5 | 4 | | mar | fri | 91.7 | 33.3 | 77.5 | 9.0 | 15.6 | 25 | 6.3 | 0.0 | 0.0 |
| **73** 5 | 4 | | aug | tue | 88.8 | 147.3 | 614.5 | 9.0 |  | 43 | 4.5 | 0.0 | 0.0 |
| **74** | 5 4 | | sep | fri | 93.3 | 141.2 | 713.9 | 13.9 |  | 30 | 1.3 | 0.0 | 0.0 |
| **75** | 9 9 | | feb | thu | 84.2 | 6.8 | 26.6 | 7.7 | 6.7 | 79 | 3.1 | 0.0 | 0.0 |
| **76** | 9 9 | | feb | fri | 86.6 | 13.2 | 43.0 | 5.3 | 15.7 | 43 | 3.1 | 0.0 | 0.0 |
| **77** | 1 3 | | mar | mon | 87.6 | 52.2 | 103.8 | 5.0 | 8.3 | 72 | 3.1 | 0.0 | 0.0 |
| **78** | 1 2 | | aug | fri | 90.1 | 108.0 | 529.8 | 12.5 | 14.7 | 66 | 2.7 | 0.0 | 0.0 |
| **79** | 1 2 | | aug | tue | 91.0 | 121.2 | 561.6 | 7.0 | 21.6 | 19 | 6.7 | 0.0 | 0.0 |
| **80** | 1 2 | | aug | sun | 91.4 | 142.4 | 601.4 | 10.6 | 19.5 | 39 | 6.3 | 0.0 | 0.0 |
| **81** | 1 2 | | aug | sun | 90.2 | 99.6 | 631.2 | 6.3 | 17.9 | 44 | 2.2 | 0.0 | 0.0 |
| **82** | 1 2 | | aug | tue | 94.8 | 108.3 | 647.1 | 17.0 | 18.6 | 51 | 4.5 | 0.0 | 0.0 |
| **83** | 1 2 | | aug | wed | 92.1 | 111.2 | 654.1 | 9.6 | 16.6 | 47 | 0.9 | 0.0 | 0.0 |
| **84** | 1 2 | | aug | thu | 91.7 | 114.3 | 661.3 | 6.3 | 20.2 | 45 | 3.6 | 0.0 | 0.0 |
| **85** | 1 2 | | sep | thu | 92.9 | 137.0 | 706.4 | 9.2 | 21.5 | 15 | 0.9 | 0.0 | 0.0 |
| **86** | 1 2 | | sep | thu | 92.9 | 137.0 | 706.4 | 9.2 | 25.4 | 27 | 2.2 | 0.0 | 0.0 |
| **87** | 1 2 | | sep | thu | 92.9 | 137.0 | 706.4 | 9.2 | 22.4 | 34 | 2.2 | 0.0 | 0.0 |
| **88** | 1 2 | | sep | sun | 93.5 | 149.3 | 728.6 | 8.1 | 25.3 | 36 | 3.6 | 0.0 | 0.0 |
| **89** | 6 5 | | mar | sat | 91.7 | 35.8 | 80.8 | 7.8 | 17.4 | 25 | 4.9 | 0.0 | 0.0 |
| **90** | 6 5 | | aug | sat | 90.2 | 96.9 | 624.2 | 8.9 | 14.7 | 59 | 5.8 | 0.0 | 0.0 |
| **91** | 8 6 | | mar | fri | 91.7 | 35.8 | 80.8 | 7.8 | 17.4 | 24 | 5.4 | 0.0 | 0.0 |

**92** 8 6 aug sun 92.3 85.3 488.0 14.7 20.8 32 6.3 0.0 0.0

|  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **93** | 8 6 | aug | sun | 91.4 | 142.4 | 601.4 | 10.6 | 18.2 | 43 | 4.9 | 0.0 | 0.0 |
| **94** | 8 6 | aug | mon | 91.1 | 103.2 | 638.8 | 5.8 | 23.4 | 22 | 2.7 | 0.0 | 0.0 |
| **95** | 4 4 | sep | sun | 89.7 | 90.0 | 704.4 | 4.8 | 17.8 | 64 | 1.3 | 0.0 | 0.0 |
| **96** | 3 4 | feb | sat | 83.9 | 8.0 | 30.2 | 2.6 | 12.7 | 48 | 1.8 | 0.0 | 0.0 |
| **97** | 3 4 | mar | sat | 69.0 | 2.4 | 15.5 | 0.7 | 17.4 | 24 | 5.4 | 0.0 | 0.0 |
| **98** | 3 4 | aug | sun | 91.4 | 142.4 | 601.4 | 10.6 | 11.6 | 87 | 4.5 | 0.0 | 0.0 |
| **99** | 3 4 | aug | sun | 91.4 | 142.4 | 601.4 | 10.6 | 19.8 | 39 | 5.4 | 0.0 | 0.0 |
| **100** 3 | 4 | aug | sun | 91.4 | 142.4 | 601.4 | 10.6 | 19.8 | 39 | 5.4 | 0.0 | 0.0 |
| **101** 3 | 4 | aug | tue | 88.8 | 147.3 | 614.5 | 9.0 | 14.4 | 66 | 5.4 | 0.0 | 0.0 |
| **102** 2 | 4 | aug | tue | 94.8 | 108.3 | 647.1 | 17.0 | 20.1 | 40 | 4.0 | 0.0 | 0.0 |
| **103** 2 | 4 | sep | sat | 92.5 | 121.1 | 674.4 | 8.6 | 24.1 | 29 | 4.5 | 0.0 | 0.0 |
| **104** 2 | 4 | jan | sat | 82.1 | 3.7 | 9.3 | 2.9 | 5.3 | 78 | 3.1 | 0.0 | 0.0 |
| **105** 4 | 5 | mar | fri | 85.9 | 19.5 | 57.3 | 2.8 | 12.7 | 52 | 6.3 | 0.0 | 0.0 |
| **106** 4 | 5 | mar | thu | 91.4 | 30.7 | 74.3 | 7.5 | 18.2 | 29 | 3.1 | 0.0 | 0.0 |
| **107** 4 | 5 | aug | sun | 90.2 | 99.6 | 631.2 | 6.3 | 21.4 | 33 | 3.1 | 0.0 | 0.0 |
| **108** 4 | 5 | sep | sat | 92.5 | 88.0 | 698.6 | 7.1 | 20.3 | 45 | 3.1 | 0.0 | 0.0 |
| **109** 4 | 5 | sep | mon | 88.6 | 91.8 | 709.9 | 7.1 | 17.4 | 56 | 5.4 | 0.0 | 0.0 |

**110** 4 4 mar fri 85.9 19.5 57.3 2.8 13.7 43 5.8 0.0 **RH wind rain output**

|  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **111** 3 | 4 | mar | fri | 91.7 | 33.3 | 77.5 | 9.0 | 18.8 | 18 | 4.5 | 0.0 | 0.0 |
| **112** 3 | 4 | sep | sun | 89.7 | 90.0 | 704.4 | 4.8 | 22.8 | 39 | 3.6 | 0.0 | 0.0 |
| **113** 3 | 4 | sep | mon | 91.8 | 78.5 | 724.3 | 9.2 | 18.9 | 35 | 2.7 | 0.0 | 0.0 |
| **114** 3 | 4 | mar | tue | 88.1 | 25.7 | 67.6 | 3.8 | 15.8 | 27 | 7.6 | 0.0 | 0.0 |
| **115** 3 | 5 | mar | tue | 88.1 | 25.7 | 67.6 | 3.8 | 15.5 | 27 | 6.3 | 0.0 | 0.0 |
| **116** 3 | 4 | mar | sat | 91.7 | 35.8 | 80.8 | 7.8 | 11.6 | 30 | 6.3 | 0.0 | 0.0 |
| **117** 3 | 4 | mar | sat | 91.7 | 35.8 | 80.8 | 7.8 | 15.2 | 27 | 4.9 | 0.0 | 0.0 |
| **118** 3 | 4 | mar | mon | 90.1 | 39.7 | 86.6 | 6.2 | 10.6 | 30 | 4.0 | 0.0 | 0.0 |
| **119** 3 | 4 | aug | thu | 93.0 | 75.3 | 466.6 | 7.7 | 19.6 | 36 | 3.1 | 0.0 | 0.0 |
| **120** 3 | 4 | aug | mon | 91.5 | 145.4 | 608.2 | 10.7 | 10.3 | 74 | 2.2 | 0.0 | 0.0 |
| **121** 3 | 4 | aug | mon | 91.5 | 145.4 | 608.2 | 10.7 | 17.1 | 43 | 5.4 | 0.0 | 0.0 |
| **122** 3 | 4 | sep | sun | 92.4 | 124.1 | 680.7 | 8.5 | 22.5 | 42 | 5.4 | 0.0 | 0.0 |
| **123** 3 | 4 | sep | tue | 84.4 | 73.4 | 671.9 | 3.2 | 17.9 | 45 | 3.1 | 0.0 | 0.0 |
| **124** 3 | 4 | sep | fri | 94.3 | 85.1 | 692.3 | 15.9 | 19.8 | 50 | 5.4 | 0.0 | 0.0 |
| **125** 3 | 4 | oct | sun | 92.6 | 46.5 | 691.8 | 8.8 | 20.6 | 24 | 5.4 | 0.0 | 0.0 |
| **126** 3 | 5 | mar | mon | 87.6 | 52.2 | 103.8 | 5.0 | 9.0 | 49 | 2.2 | 0.0 | 0.0 |
| **127** 3 | 5 | sep | fri | 93.5 | 149.3 | 728.6 | 8.1 | 17.2 | 43 | 3.1 | 0.0 | 0.0 |
| **128** 3 | 5 | oct | wed | 91.4 | 37.9 | 673.8 | 5.2 | 15.9 | 46 | 3.6 | 0.0 | 0.0 |
| **129** 2 | 5 | oct | sun | 92.6 | 46.5 | 691.8 | 8.8 | 15.4 | 35 | 0.9 | 0.0 | 0.0 |
| **130** 4 | 6 | feb | sat | 68.2 | 21.5 | 87.2 | 0.8 | 15.4 | 40 | 2.7 | 0.0 | 0.0 |
| **131** 4 | 6 | mar | mon | 87.2 | 23.9 | 64.7 | 4.1 | 14.0 | 39 | 3.1 | 0.0 | 0.0 |
| **132** 4 | 6 | mar | sun | 89.3 | 51.3 | 102.2 | 9.6 | 10.6 | 46 | 4.9 | 0.0 | 0.0 |
| **133** 4 | 6 | sep | thu | 93.7 | 80.9 | 685.2 | 17.9 | 17.6 | 42 | 3.1 | 0.0 | 0.0 |
| **134** 3 | 5 | mar | tue | 88.1 | 25.7 | 67.6 | 3.8 | 14.9 | 38 | 2.7 | 0.0 | 0.0 |
| **135** 3 | 5 | aug | sat | 93.5 | 139.4 | 594.2 | 20.3 | 17.6 | 52 | 5.8 | 0.0 | 0.0 |
| **136** 3 | 6 | sep | sun | 92.4 | 124.1 | 680.7 | 8.5 | 17.2 | 58 | 1.3 | 0.0 | 0.0 |
| **137** 3 | 6 | sep | mon | 90.9 | 126.5 | 686.5 | 7.0 | 15.6 | 66 | 3.1 | 0.0 | 0.0 |
| **138** 9 | 9 | jul | tue | 85.8 | 48.3 | 313.4 | 3.9 | 18.0 | 42 | 2.7 | 0.0 | 1.0 |
| **139** 1 | 4 | sep | tue | 91.0 | 129.5 | 692.6 | 7.0 | 21.7 | 38 | 2.2 | 0.0 | 1.0 |

**X Y month day FFMC DMC DC ISI temp**

**140** 2 5 sep mon 90.9 126.5 686.5 7.0 21.9 39 1.8 0.0 1.0

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **141** 1 2 aug wed 95.5 99.9 513.3 13.2 23.3 31 4.5 0.0 1.0 | | | | | | | | | | | | | | | |
| **142** 8 | | 6 | aug | fri | 90.1 | 108.0 | 529.8 | 12.5 | 21.2 | 51 | 8.9 | | 0.0 | | 1.0 |
| **143** 1 | | 2 | jul | sat | 90.0 | 51.3 | 296.3 | 8.7 | 16.6 | 53 | 5.4 | | 0.0 | | 1.0 |
| **144** 2 | | 5 | aug | wed | 95.5 | 99.9 | 513.3 | 13.2 | 23.8 | 32 | 5.4 | | 0.0 | | 1.0 |
| **145** 6 | | 5 | aug | thu | 95.2 | 131.7 | 578.8 | 10.4 | 27.4 | 22 | 4.0 | | 0.0 | | 1.0 |
| **146** 5 | | 4 | mar | mon | 90.1 | 39.7 | 86.6 | 6.2 | 13.2 | 40 | 5.4 | | 0.0 | | 1.0 |
| **147** 8 | | 3 | sep | tue | 84.4 | 73.4 | 671.9 |  | 24.2 |  | 3.6 | | 0.0 | | 1.0 |
| **148** 2 | | 2 | aug | tue | 94.8 | 108.3 | 647.1 |  | 17.4 |  | 6.7 | | 0.0 | | 1.0 |
| **149** 8 | | 6 | sep | thu | 93.7 | 80.9 | 685.2 | 17.9 | 23.7 | 25 | 4.5 | | 0.0 | | 1.0 |
| **150** 6 | | 5 | jun | fri | 92.5 | 56.4 | 433.3 | 7.1 | 23.2 | 39 | 5.4 | | 0.0 | | 1.0 |
| **151** 9 | | 9 | jul | sun | 90.1 | 68.6 | 355.2 | 7.2 | 24.8 | 29 | 2.2 | | 0.0 | | 1.0 |
| **152** 3 | | 4 | jul | sat | 90.1 | 51.2 | 424.1 | 6.2 | 24.6 | 43 | 1.8 | | 0.0 | | 1.0 |
| **153** 5 | | 4 | sep | fri | 94.3 | 85.1 | 692.3 | 15.9 | 20.1 | 47 | 4.9 | | 0.0 | | 1.0 |
| **154** 1 | | 5 | sep | sat | 93.4 | 145.4 | 721.4 | 8.1 | 29.6 | 27 | 2.7 | | 0.0 | | 1.0 |
| **155** 7 | | 4 | aug | sun | 94.8 | 108.3 | 647.1 | 17.0 | 16.4 | 47 | 1.3 | | 0.0 | | 1.0 |
| **156** 2 | | 4 | sep | sat | 93.4 | 145.4 | 721.4 | 8.1 | 28.6 | 27 | 2.2 | | 0.0 | | 1.0 |
| **157** 2 | | 2 | aug | wed | 92.1 | 111.2 | 654.1 | 9.6 | 18.4 | 45 | 3.6 | | 0.0 | | 1.0 |
| **158** 2 | | 4 | aug | wed | 92.1 | 111.2 | 654.1 | 9.6 | 20.5 | 35 | 4.0 | | 0.0 | | 1.0 |
| **159** 7 | | 4 | sep | fri | 92.4 | 117.9 | 668.0 | 12.2 | 19.0 | 34 | 5.8 | | 0.0 | | 1.0 |
| **160** 7 | | 4 | mar | mon | 90.1 | 39.7 | 86.6 | 6.2 | 16.1 | 29 | 3.1 | | 0.0 | | 1.0 |
| **161** 6 | | 4 | aug | thu | 95.2 | 131.7 | 578.8 | 10.4 | 20.3 | 41 | 4.0 | | 0.0 | | 1.0 |
| **162** 6 | | 3 | mar | sat | 90.6 | 50.1 | 100.4 | 7.8 | 15.2 | 31 | 8.5 | | 0.0 | | 1.0 |
| **163** 8 | | 6 | sep | sat | 92.5 | 121.1 | 674.4 | 8.6 | 17.8 | 56 | 1.8 | | 0.0 | | 1.0 |
| **164** 8 | | 5 | sep | sun | 89.7 | 90.0 | 704.4 | 4.8 | 17.8 | 67 | 2.2 | | 0.0 | | 1.0 |
| **165** 6 | | 5 | mar | thu | 84.9 | 18.2 | 55.0 | 3.0 | 5.3 | 70 | 4.5 | | 0.0 | | 1.0 |
| **166** 6 | | 5 | aug | wed | 92.1 | 111.2 | 654.1 | 9.6 | 16.6 | 47 | 0.9 | | 0.0 | | 1.0 |
| **167** 6 | | 5 | aug | wed | 96.0 | 127.1 | 570.5 | 16.5 | 23.4 | 33 | 4.5 | | 0.0 | | 1.0 |
| **168** 6 | | 5 | mar | fri | 91.2 | 48.3 | 97.8 | 12.5 | 14.6 | 26 | 9.4 | | 0.0 | | 1.0 |
| **169** 8 | | 6 | aug | thu | 95.2 | 131.7 | 578.8 | 10.4 | 20.7 | 45 | 2.2 | | 0.0 | | 1.0 |
| **170** 5 | | 4 | sep | wed | 92.9 | 133.3 | 699.6 | 9.2 | 21.9 | 35 | 1.8 | | 0.0 | | 1.0 |
| **171** 8 | | 6 | aug | wed | 85.6 | 90.4 | 609.6 | 6.6 | 17.4 | 50 | 4.0 | | 0.0 | | 1.0 |
| **172** 7 | | 4 | aug | sun | 91.4 | 142.4 | 601.4 | 10.6 | 20.1 | 39 | 5.4 | | 0.0 | | 1.0 |
| **173** 4 | | 4 | sep | mon | 90.9 | 126.5 | 686.5 | 7.0 | 17.7 | 39 | 2.2 | | 0.0 | | 1.0 |
| **174** 1 | 4 | | aug | sat | 90.2 | 96.9 | 624.2 | 8.9 | 14.2 | 53 | 1.8 | 0.0 | | 1.0 | |
| **175** 1 | 4 | | aug | sat | 90.2 | 96.9 | 624.2 | 8.9 | 20.3 | 39 | 4.9 | 0.0 | | 1.0 | |
| **176** 6 | 5 | | apr | thu | 81.5 | 9.1 | 55.2 | 2.7 | 5.8 | 54 | 5.8 | 0.0 | | 1.0 | |
| **177** 2 | 5 | | aug | sun | 90.2 | 99.6 | 631.2 | 6.3 | 19.2 | 44 | 2.7 | 0.0 | | 1.0 | |
| **178** 2 | 5 | | sep | wed | 90.1 | 82.9 | 735.7 | 6.2 | 18.3 | 45 | 2.2 | 0.0 | | 1.0 | |
| **179** 8 | 6 | | aug | tue |  |  |  | 9.0 | 14.4 | 66 | 5.4 | 0.0 | | 1.0 | |
| **180** 1 | 3 | | sep | sun | 92.4 | 124.1 | 680.7 | 8.5 | 23.9 | 32 | 6.7 | 0.0 | | 1.0 | |
| **181** 8 | 6 | | oct | mon | 84.9 | 32.8 | 664.2 | 3.0 | 19.1 | 32 | 4.0 | 0.0 | | 1.0 | |
| **182** 5 | 4 | | feb | sun | 86.8 | 15.6 | 48.3 | 3.9 | 12.4 | 53 | 2.2 | 0.0 | | 1.0 | |
|  | 4 | | oct | mon | 91.7 | 48.5 |  |  |  | 45 | 4.5 | 0.0 | | 1.0 | |
|  | 8 | | 6 | aug | fri | |  |  |  | 15.1 | | 20.8 | | 34 | |
|  | 4.9 | | 1.0 **RH wind rain output** | | | |  |  |  |  |  |  | |  | |
| **185** 2 | 5 | | sep | tue | 91.0 | 129.5 | 692.6 | 7.0 | 17.6 | 46 | 3.1 | 0.0 | | 1.0 | |
| **186** 8 | 6 | | mar | sun | 89.3 | 51.3 | 102.2 | 9.6 | 11.5 | 39 | 5.8 | 0.0 | | 1.0 | |
| **187** 1 | 5 | | sep | mon | 90.9 | 126.5 | 686.5 | 7.0 | 21.0 | 42 | 2.2 | 0.0 | | 1.0 | |
| **188** 6 | 4 | | mar | sat | 90.8 | 41.9 | 89.4 | 7.9 | 13.3 | 42 | 0.9 | 0.0 | | 1.0 | |
| **189** 7 | 4 | | mar | sun | 90.7 | 44.0 | 92.4 | 5.5 | 11.5 | 60 | 4.0 | 0.0 | | 1.0 | |
| **190** 6 | 5 | | mar | fri | 91.2 | 48.3 | 97.8 | 12.5 | 11.7 | 33 | 4.0 | 0.0 | | 1.0 | |
| **191** 2 | 5 | | aug | thu | 95.2 | 131.7 | 578.8 | 10.4 | 24.2 | 28 | 2.7 | 0.0 | | 1.0 | |
| **192** 2 | 2 | | aug | tue | 94.8 | 108.3 | 647.1 | 17.0 | 24.6 | 22 | 4.5 | 0.0 | | 1.0 | |
| **193** 4 | 5 | | sep | wed | 92.9 | 133.3 | 699.6 | 9.2 | 24.3 | 25 | 4.0 | 0.0 | | 1.0 | |
| **194** 2 | 2 | | aug | tue | 94.8 | 108.3 | 647.1 | 17.0 | 24.6 | 22 | 4.5 | 0.0 | | 1.0 | |
| **195** 2 | 5 | | aug | fri | 93.9 | 135.7 | 586.7 | 15.1 | 23.5 | 36 | 5.4 | 0.0 | | 1.0 | |
| **196** 6 | 5 | | apr | thu | 81.5 | 9.1 | 55.2 | 2.7 | 5.8 | 54 | 5.8 | 0.0 | | 1.0 | |
| **197** 4 | 5 | | sep | thu | 92.9 | 137.0 | 706.4 | 9.2 | 21.5 | 15 | 0.9 | 0.0 | | 1.0 | |
| **198** 3 | 4 | | sep | tue | 91.0 | 129.5 | 692.6 | 7.0 | 13.9 | 59 | 6.3 | 0.0 | | 1.0 | |
| **199** 2 | 4 | | sep mon | | 63.5 | 70.8 | 665.3 | 0.8 | 22.6 | 38 | 3.6 | 0.0 | | 1.0 | |
| **200** 1 | 5 | | sep tue | | 91.0 | 129.5 | 692.6 | 7.0 | 21.6 | 33 | 2.2 | 0.0 | | 1.0 | |
| **201** 6 | 5 | | mar sun | | 90.1 | 37.6 | 83.7 | 7.2 | 12.4 | 54 | 3.6 | 0.0 | | 1.0 | |
| **202** 7 | 4 | | feb sun | | 83.9 | 8.7 | 32.1 | 2.1 | 8.8 | 68 | 2.2 | 0.0 | | 1.0 | |
| **203** 8 | 6 | | oct wed | | 91.4 | 37.9 | 673.8 | 5.2 | 20.2 | 37 | 2.7 | 0.0 | | 1.0 | |

**204** 5 6 mar sat 90.6 50.1 100.4 7.8 15.1 64 4.0 0.0 1.0

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **X** | **Y** | **month** | **day** | **FFMC DMC** | | | **DC** | **ISI temp** | |  |  |  |  |
| **205** 4 | 5 | sep | thu |  | 92.9 | 137.0 | 706.4 | 9.2 | 22.1 | 34 | 1.8 | 0.0 | 1.0 |
| **206** 2 | 2 | aug | sat |  | 93.5 | 139.4 | 594.2 | 20.3 | 22.9 | 31 | 7.2 | 0.0 | 1.0 |
| **207** 7 | 5 | sep | tue |  | 91.0 | 129.5 | 692.6 | 7.0 | 20.7 | 37 | 2.2 | 0.0 | 1.0 |
| **208** 6 | 5 | sep | fri |  | 92.4 | 117.9 | 668.0 | 12.2 | 19.6 | 33 | 6.3 | 0.0 | 1.0 |
| **209** 8 | 3 | sep | thu |  | 93.7 | 80.9 | 685.2 | 17.9 | 23.2 | 26 | 4.9 | 0.0 | 1.0 |
| **210** 4 | 4 | oct | sat |  | 90.6 | 43.7 | 686.9 | 6.7 | 18.4 | 25 | 3.1 | 0.0 | 1.0 |
| **211** 7 | 4 | aug | sat |  | 93.5 | 139.4 | 594.2 | 20.3 | 5.1 | 96 | 5.8 | 0.0 | 1.0 |
| **212** 7 | 4 | sep | fri |  | 94.3 | 85.1 | 692.3 | 15.9 | 20.1 | 47 | 4.9 | 0.0 | 1.0 |
| **213** 7 | 3 | mar mon | | | 87.6 | 52.2 | 103.8 | 5.0 | 11.0 | 46 | 5.8 | 0.0 | 1.0 |
| **214** 4 | 4 | mar sat | | | 91.7 | 35.8 | 80.8 | 7.8 | 17.0 | 27 | 4.9 | 0.0 | 1.0 |
| **215** 4 | 4 | mar sat | | | 91.7 | 35.8 | 80.8 | 7.8 | 17.0 | 27 | 4.9 | 0.0 | 1.0 |
| **216** 4 | 4 | sep sun | | | 92.4 | 124.1 | 680.7 | 8.5 | 16.9 | 60 | 1.3 | 0.0 | 1.0 |
| **217** 1 | 3 | sep mon | | | 88.6 | 91.8 | 709.9 | 7.1 | 12.4 | 73 | 6.3 | 0.0 | 1.0 |
| **218** 4 | 5 | sep wed | | | 92.9 | 133.3 | 699.6 | 9.2 | 19.4 | 19 | 1.3 | 0.0 | 1.0 |
| **219** 6 | 5 | mar mon | | | 90.1 | 39.7 | 86.6 | 6.2 | 15.2 | 27 | 3.1 | 0.0 | 1.0 |
| **220** 8 | 6 | aug sun | | | 90.2 | 99.6 | 631.2 | 6.3 | 16.2 | 59 | 3.1 | 0.0 | 1.0 |
| **221** 3 | 4 | sep fri | | | 93.3 | 141.2 | 713.9 | 13.9 | 18.6 | 49 | 3.6 | 0.0 | 1.0 |

**222** 4 3 mar mon 87.6 52.2 103.8 5.0 11.0 46 5.8 0.0 1.0

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| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **223** 2 | 2 | jul | fri | 88.3 | 150.3 | 309.9 | 6.8 | 13.4 | 79 | 3.6 | 0.0 | 1.0 |
| **224** 7 | 4 | sep | wed | 90.1 | 82.9 | 735.7 | 6.2 | 15.4 | 57 | 4.5 | 0.0 | 1.0 |
| **225** 4 | 4 | sep | sun | 93.5 | 149.3 | 728.6 | 8.1 | 22.9 | 39 | 4.9 | 0.0 | 1.0 |
| **226** 7 | 5 | oct | mon | 91.7 | 48.5 | 696.1 | 11.1 | 16.1 | 44 | 4.0 | 0.0 | 1.0 |
| **227** 8 | 6 | aug | sat | 92.2 | 81.8 | 480.8 | 11.9 | 20.1 | 34 | 4.5 | 0.0 | 1.0 |
| **228** 4 | 6 | sep | sun | 93.5 | 149.3 | 728.6 | 8.1 | 28.3 | 26 | 3.1 | 0.0 | 1.0 |
| **229** 8 | 6 | aug | sat | 92.2 | 81.8 | 480.8 | 11.9 | 16.4 | 43 | 4.0 | 0.0 | 1.0 |
| **230** 4 | 4 | sep | wed | 92.9 | 133.3 | 699.6 | 9.2 | 26.4 | 21 | 4.5 | 0.0 | 1.0 |
| **231** 1 | 5 | sep | sun | 93.5 | 149.3 | 728.6 | 8.1 | 27.8 | 27 | 3.1 | 0.0 | 1.0 |
| **232** 6 | 4 | sep | tue | 91.0 | 129.5 | 692.6 | 7.0 | 18.7 | 43 | 2.7 | 0.0 | 1.0 |
| **233** 9 | 4 | sep | tue | 84.4 | 73.4 | 671.9 | 3.2 | 24.3 | 36 | 3.1 | 0.0 | 1.0 |
| **234** 4 | 5 | sep | sat | 92.5 | 121.1 | 674.4 | 8.6 | 17.7 | 25 | 3.1 | 0.0 | 1.0 |
| **235** 8 | 6 | aug | sun | 91.4 | 142.4 | 601.4 | 10.6 | 19.6 | 41 | 5.8 | 0.0 | 1.0 |
| **236** 2 | 2 | sep | sat | 92.5 | 121.1 | 674.4 | 8.6 | 18.2 | 46 | 1.8 | 0.0 | 1.0 |
| **237** 1 | 2 | sep | tue | 91.0 | 129.5 | 692.6 | 7.0 | 18.8 | 40 | 2.2 | 0.0 | 1.0 |
| **238** 6 | 5 | sep | sat | 92.5 | 121.1 | 674.4 | 8.6 | 25.1 | 27 | 4.0 | 0.0 | 1.0 |
| **239** 7 | 5 | apr | sun | 81.9 | 3.0 | 7.9 | 3.5 | 13.4 | 75 | 1.8 | 0.0 | 0.0 |
| **240** 6 | 3 | apr | wed | 88.0 | 17.2 | 43.5 | 3.8 | 15.2 | 51 | 2.7 | 0.0 | 0.0 |
| **241** 4 | 4 | apr | fri | 83.0 | 23.3 | 85.3 | 2.3 | 16.7 | 20 | 3.1 | 0.0 | 0.0 |
| **242** 2 | 4 | aug | sun | 94.2 | 122.3 | 589.9 | 12.9 | 15.4 | 66 | 4.0 | 0.0 | 1.0 |
| **243** 7 | 4 | aug | sun | 91.8 | 175.1 | 700.7 | 13.8 | 21.9 | 73 | 7.6 | 1.0 | 0.0 |
| **244** 2 | 4 | aug | sun | 91.8 | 175.1 | 700.7 | 13.8 | 22.4 | 54 | 7.6 | 0.0 | 1.0 |
| **245** 3 | 4 | aug | sun | 91.8 | 175.1 | 700.7 | 13.8 | 26.8 | 38 | 6.3 | 0.0 | 1.0 |
| **246** 5 | 4 | aug | sun | 91.8 | 175.1 | 700.7 | 13.8 | 25.7 | 39 | 5.4 | 0.0 | 1.0 |
| **247** 2 | 4 | aug | wed | 92.2 | 91.6 | 503.6 | 9.6 | 20.7 | 70 | 2.2 | 0.0 | 1.0 |

**248** 8 6 aug wed 93.1 157.3 666.7 13.5 28.7 28 2.7 0.0 0.0

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| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **X** | **Y** | **month** | **day** | **FFMC DMC** | | **DC** | **ISI temp** | | | **RH wind rain** | | | **output** |
| **249** 3 | 4 | aug | wed | 93.1 | 157.3 | 666.7 | 13.5 | 21.7 | 40 | | 0.4 | 0.0 | 1.0 |
| **250** 8 | 5 | aug | wed | 93.1 | 157.3 | 666.7 | 13.5 | 26.8 | 25 | | 3.1 | 0.0 | 1.0 |
| **251** 8 | 5 | aug | wed | 93.1 | 157.3 | 666.7 | 13.5 | 24.0 | 36 | | 3.1 | 0.0 | 1.0 |
| **252** 6 | 5 | aug | wed | 93.1 | 157.3 | 666.7 | 13.5 | 22.1 | 37 | | 3.6 | 0.0 | 1.0 |
| **253** 7 | 4 | aug | thu | 91.9 | 109.2 | 565.5 | 8.0 | 21.4 | 38 | | 2.7 | 0.0 | 1.0 |
| **254** 6 | 3 | aug | thu | 91.6 | 138.1 | 621.7 | 6.3 | 18.9 | 41 | | 3.1 | 0.0 | 1.0 |
| **255** 2 | 5 | aug | thu | 87.5 | 77.0 | 694.8 | 5.0 | 22.3 | 46 | | 4.0 | 0.0 | 0.0 |
| **256** 8 | 6 | aug | sat | 94.2 | 117.2 | 581.1 | 11.0 | 23.9 | 41 | | 2.2 | 0.0 | 1.0 |
| **257** 4 | 3 | aug | sat | 94.2 | 117.2 | 581.1 | 11.0 | 21.4 | 44 | | 2.7 | 0.0 | 1.0 |
| **258** 3 | 4 | aug |  | 91.8 | 170.9 | 692.3 | 13.7 | 20.6 | 59 | | 0.9 |  | 0.0 |
| **259** 7 | 4 | aug | sat | 91.8 | 170.9 | 692.3 | 13.7 | 23.7 | 40 | | 1.8 | 0.0 | 1.0 |
| **260** 2 | 4 | aug | mon | 93.6 | 97.9 | 542.0 | 14.4 | 28.3 | 32 | | 4.0 | 0.0 | 1.0 |
| **261** 3 | 4 | aug | fri | 91.6 | 112.4 | 573.0 | 8.9 | 11.2 | 84 | | 7.6 | 0.0 | 1.0 |
| **262** 2 | 4 | aug | fri | 91.6 | 112.4 | 573.0 | 8.9 | 21.4 | 42 | | 3.1 | 0.0 | 1.0 |
| **263** 6 | 3 | aug | fri | 91.1 | 141.1 | 629.1 | 7.1 | 19.3 | 39 | | 3.6 | 0.0 | 1.0 |
| **264** 4 | 4 | aug | fri | 94.3 | 167.6 | 684.4 | 13.0 | 21.8 | 53 | | 3.1 | 0.0 | 1.0 |
| **265** 4 | 4 | aug | tue | 93.7 | 102.2 | 550.3 | 14.6 | 22.1 | 54 | | 7.6 | 0.0 | 1.0 |
| **266** 6 | 5 | aug | tue | 94.3 | 131.7 | 607.1 | 22.7 | 19.4 | 55 | | 4.0 | 0.0 | 1.0 |
| **267** 2 | 2 | aug | tue | 92.1 | 152.6 | 658.2 | 14.3 | 23.7 | 24 | | 3.1 | 0.0 | 0.0 |
| **268** 3 | 4 | aug | tue | 92.1 | 152.6 | 658.2 | 14.3 | 21.0 | 32 | | 3.1 | 0.0 | 0.0 |
| **269** 4 | 4 | aug | tue | 92.1 | 152.6 | 658.2 | 14.3 | 19.1 | 53 | | 2.7 | 0.0 | 1.0 |
| **270** 2 | 2 | aug | tue | 92.1 | 152.6 | 658.2 | 14.3 | 21.8 | 56 | | 3.1 | 0.0 | 1.0 |
| **271** 8 | 6 | aug | tue | 92.1 | 152.6 | 658.2 | 14.3 | 20.1 | 58 | | 4.5 | 0.0 | 1.0 |
| **272** 2 | 5 | aug | tue | 92.1 | 152.6 | 658.2 | 14.3 | 20.2 | 47 | | 4.0 | 0.0 | 1.0 |
| **273** 4 | 6 | dec | sun | 84.4 | 27.2 | 353.5 | 6.8 | 4.8 | 57 | | 8.5 | 0.0 | 1.0 |
| **274** 8 | 6 | dec | wed | 84.0 | 27.8 | 354.6 | 5.3 | 5.1 | 61 | | 8.0 | 0.0 | 1.0 |
| **275** 4 | 6 | dec | thu | 84.6 | 26.4 | 352.0 | 2.0 | 5.1 | 61 | | 4.9 | 0.0 | 1.0 |

**276** 4 4 dec mon 85.4 25.4 349.7 2.6 4.6 21 8.5 0.0 1.0

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| **277** 3 | 4 | dec | mon | 85.4 | 25.4 | 349.7 | 2.6 | 4.6 | 21 | 8.5 | 0.0 | 1.0 |
| **278** 4 | 4 | dec | mon | 85.4 | 25.4 | 349.7 | 2.6 | 4.6 | 21 | 8.5 | 0.0 | 1.0 |
| **279** 4 | 4 | dec | mon | 85.4 | 25.4 | 349.7 | 2.6 | 4.6 | 21 | 8.5 | 0.0 | 1.0 |
| **280** 4 | 6 | dec | fri | 84.7 | 26.7 | 352.6 | 4.1 | 2.2 | 59 | 4.9 | 0.0 | 1.0 |
| **281** 6 | 5 | dec | tue | 85.4 | 25.4 | 349.7 | 2.6 | 5.1 | 24 | 8.5 | 0.0 | 1.0 |
| **282** 6 | 3 | feb | sun | 84.9 | 27.5 | 353.5 | 3.4 | 4.2 | 51 | 4.0 | 0.0 | 0.0 |
| **283** 3 | 4 | feb | wed | 86.9 | 6.6 | 18.7 | 3.2 | 8.8 | 35 | 3.1 | 0.0 | 1.0 |
| **284** 5 | 4 | feb | fri | 85.2 | 4.9 | 15.8 | 6.3 | 7.5 | 46 | 8.0 | 0.0 | 1.0 |
| **285** 2 | 5 | jul | sun | 93.9 | 169.7 | 411.8 | 12.3 | 23.4 | 40 | 6.3 | 0.0 | 0.0 |
| **286** 7 | 6 | jul | wed | 91.2 | 183.1 | 437.7 | 12.5 | 12.6 | 90 | 7.6 | 0.2 | 0.0 |
| **287** 7 | 4 | jul | sat | 91.6 | 104.2 | 474.9 | 9.0 | 22.1 | 49 | 2.7 | 0.0 | 0.0 |
| **288** 7 | 4 | jul | sat | 91.6 | 104.2 | 474.9 | 9.0 | 24.2 | 32 | 1.8 | 0.0 | 0.0 |
| **289** 7 | 4 | jul | sat | 91.6 | 104.2 | 474.9 | 9.0 | 24.3 | 30 | 1.8 | 0.0 | 0.0 |
| **290** 2 | 5 | jul | sat | 91.6 | 104.2 | 474.9 | 9.0 | 18.7 | 53 | 1.8 | 0.0 | 0.0 |
| **291** 9 | 4 | jul | sat | 91.6 | 104.2 | 474.9 | 9.0 | 25.3 | 39 | 0.9 | 0.0 | 1.0 |
| **292** 4 | 5 | jul | fri | 91.6 | 100.2 | 466.3 | 6.3 | 22.9 | 40 | 1.3 | 0.0 | 1.0 |
| **293** 7 | 6 | jul | tue | 93.1 | 180.4 | 430.8 | 11.0 | 26.9 | 28 | 5.4 | 0.0 | 1.0 |
| **294** 8 | 6 | jul | tue | 92.3 | 88.8 | 440.9 | 8.5 | 17.1 | 67 | 3.6 | 0.0 | 1.0 |
| **295** 7 | 5 | jun | sun | 93.1 | 180.4 | 430.8 | 11.0 | 22.2 | 48 | 1.3 | 0.0 | 0.0 |
| **296** 6 | 4 | jun | sun | 90.4 | 89.5 290.8 | | 6.4 | 14.3 | 46 | 1.8 | 0.0 | 1.0 |
| **297** 8 | 6 | jun | sun | 90.4 | 89.5 | 290.8 | 6.4 | 15.4 | 45 | 2.2 | 0.0 | 0.0 |
| **298** 8 | 6 | jun | wed | 91.2 | 147.8 | 377.2 | 12.7 | 19.6 | 43 | 4.9 | 0.0 | 0.0 |
| **299** 6 | 5 | jun | sat | 53.4 | 71.0 | 233.8 | 0.4 | 10.6 | 90 | 2.7 | 0.0 | 0.0 |
| **300** 6 | 5 | jun | mon | 90.4 | 93.3 | 298.1 | 7.5 | 20.7 | 25 | 4.9 | 0.0 | 0.0 |
| **301** 6 | 5 | jun | mon | 90.4 | 93.3 | 298.1 | 7.5 | 19.1 | 39 | 5.4 | 0.0 | 1.0 |

**302** 3 6 jun fri 91.1 94.1 232.1 7.1 19.2 38 4.5 0.0 0.0

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| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **X** | **Y** | **month** | **day** | **FFMC DMC** | | **DC** | **ISI temp** | | | **RH wind rain output** | | | |
| **303** 3 | 6 | jun | fri | 91.1 | 94.1 | 232.1 | 7.1 | 19.2 | 38 | | 4.5 | 0.0 | 0.0 |
| **304** 6 | 5 | may | sat | 85.1 | 28.0 | 113.8 | 3.5 | 11.3 | 94 | | 4.9 | 0.0 | 0.0 |
| **305** 1 | 4 | sep | sun | 89.6 | 84.1 | 714.3 | 5.7 | 19.0 | 52 | | 2.2 | 0.0 | 0.0 |
| **306** 7 | 4 | sep | sun | 89.6 | 84.1 | 714.3 | 5.7 | 17.1 | 53 | | 5.4 | 0.0 | 1.0 |
| **307** 3 | 4 | sep | sun | 89.6 | 84.1 | 714.3 | 5.7 | 23.8 | 35 | | 3.6 | 0.0 | 1.0 |
| **308** 2 | 4 | sep | sun | 92.4 | 105.8 | 758.1 | 9.9 | 16.0 | 45 | | 1.8 | 0.0 | 0.0 |
| **309** 2 | 4 | sep | sun | 92.4 | 105.8 | 758.1 | 9.9 | 24.9 | 27 | | 2.2 | 0.0 | 0.0 |
| **310** 7 | 4 | sep | sun | 92.4 | 105.8 | 758.1 | 9.9 | 25.3 | 27 | | 2.7 | 0.0 | 0.0 |
| **311** 6 | 3 | sep | sun | 92.4 | 105.8 | 758.1 | 9.9 | 24.8 | 28 | | 1.8 | 0.0 | 1.0 |
| **312** 2 | 4 | sep | sun | 50.4 | 46.2 | 706.6 | 0.4 | 12.2 | 78 | | 6.3 | 0.0 | 0.0 |
| **313** 6 | 5 | sep | wed | 92.6 | 115.4 | 777.1 | 8.8 | 24.3 | 27 | | 4.9 | 0.0 | 0.0 |
| **314** 4 | 4 | sep | wed | 92.6 | 115.4 | 777.1 | 8.8 | 19.7 | 41 | | 1.8 | 0.0 | 1.0 |
| **315** 3 | 4 | sep | wed | 91.2 | 134.7 | 817.5 | 7.2 | 18.5 | 30 | | 2.7 | 0.0 | 0.0 |
| **316** 4 | 5 | sep | thu | 92.4 | 96.2 | 739.4 | 8.6 | 18.6 | 24 | | 5.8 | 0.0 | 0.0 |
| **317** 4 | 4 | sep | thu | 92.4 | 96.2 | 739.4 | 8.6 | 19.2 | 24 | | 4.9 | 0.0 | 1.0 |
| **318** 6 | 5 | sep | thu | 92.8 | 119.0 | 783.5 | 7.5 | 21.6 | 27 | | 2.2 | 0.0 | 0.0 |
| **319** 5 | 4 | sep | thu | 92.8 | 119.0 | 783.5 | 7.5 | 21.6 | 28 | | 6.3 | 0.0 | 1.0 |
| **320** 6 | 3 | sep | thu | 92.8 | 119.0 | 783.5 | 7.5 | 18.9 | 34 | | 7.2 | 0.0 | 1.0 |
| **321** 1 | 4 | sep | thu | 92.8 | 119.0 | 783.5 | 7.5 | 16.8 | 28 | | 4.0 | 0.0 | 1.0 |
| **322** 6 | 5 | sep | thu | 92.8 | 119.0 | 783.5 | 7.5 | 16.8 | 28 | | 4.0 | 0.0 | 1.0 |
| **323** 3 | 5 | sep | thu | 90.7 | 136.9 | 822.8 | 6.8 | 12.9 | 39 | | 2.7 | 0.0 | 1.0 |
| **324** 6 | 5 | sep | thu | 88.1 | 53.3 | 726.9 | 5.4 | 13.7 | 56 | | 1.8 | 0.0 | 1.0 |
| **325** 1 | 4 | sep | sat | 92.2 | 102.3 | 751.5 | 8.4 | 24.2 | 27 | | 3.1 | 0.0 | 0.0 |
| **326** 5 | 4 | sep | sat | 92.2 | 102.3 | 751.5 | 8.4 | 24.1 | 27 | | 3.1 | 0.0 | 0.0 |
| **327** 6 | 5 | sep | sat | 92.2 | 102.3 | 751.5 | 8.4 | 21.2 | 32 | | 2.2 | 0.0 | 0.0 |
| **328** 6 | 5 | sep | sat | 92.2 | 102.3 | 751.5 | 8.4 | 19.7 | 35 | | 1.8 | 0.0 | 0.0 |
| **329** 4 | 3 | sep | sat | 92.2 | 102.3 | 751.5 | 8.4 | 23.5 | 27 | | 4.0 | 0.0 | 1.0 |

**330** 3 3 sep sat 92.2 102.3 751.5 8.4 24.2 27 3.1 0.0 1.0

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| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **331** 7 | 4 | sep | sat | 91.2 | 124.4 | 795.3 | 8.5 | 21.5 | 28 | 4.5 | 0.0 | 1.0 |
| **332** 4 | 4 | sep |  | 91.2 | 124.4 | 795.3 | 8.5 | 17.1 | 41 | 2.2 |  |  |
| **333** 1 | 4 | sep | mon | 92.1 | 87.7 | 721.1 | 9.5 | 18.1 | 54 | 3.1 | 0.0 | 1.0 |
| **334** 2 | 3 | sep | mon | 91.6 | 108.4 | 764.0 | 6.2 | 18.0 | 51 | 5.4 | 0.0 | 0.0 |
| **335** 4 | 3 | sep | mon | 91.6 | 108.4 | 764.0 | 6.2 | 9.8 | 86 | 1.8 | 0.0 | 0.0 |
| **336** 7 | 4 | sep | mon | 91.6 | 108.4 | 764.0 | 6.2 | 19.3 | 44 | 2.2 | 0.0 | 0.0 |
| **337** 6 | 3 | sep | mon | 91.6 | 108.4 | 764.0 | 6.2 | 23.0 | 34 | 2.2 | 0.0 | 1.0 |
| **338** 8 | 6 | sep | mon | 91.6 | 108.4 | 764.0 | 6.2 | 22.7 | 35 | 2.2 | 0.0 | 1.0 |
| **339** 2 | 4 | sep | mon | 91.6 | 108.4 | 764.0 | 6.2 | 20.4 | 41 | 1.8 | 0.0 | 1.0 |
| **340** 2 | 5 | sep | mon | 91.6 | 108.4 | 764.0 | 6.2 | 19.3 | 44 | 2.2 | 0.0 | 1.0 |
| **341** 8 | 6 | sep | mon | 91.9 | 111.7 | 770.3 | 6.5 | 15.7 | 51 | 2.2 | 0.0 | 0.0 |
| **342** 6 | 3 | sep | mon | 91.5 | 130.1 | 807.1 | 7.5 | 20.6 | 37 | 1.8 | 0.0 | 0.0 |
| **343** 8 | 6 | sep | mon | 91.5 | 130.1 | 807.1 | 7.5 | 15.9 | 51 | 4.5 | 0.0 | 1.0 |
| **344** 6 | 3 | sep | mon | 91.5 | 130.1 | 807.1 | 7.5 | 12.2 | 66 | 4.9 | 0.0 | 1.0 |
| **345** 2 | 2 | sep | mon | 91.5 | 130.1 | 807.1 | 7.5 | 16.8 | 43 | 3.1 | 0.0 | 1.0 |
| **346** 1 | 4 | sep | mon | 91.5 | 130.1 | 807.1 | 7.5 | 21.3 | 35 | 2.2 | 0.0 | 1.0 |
| **347** 5 | 4 | sep | fri | 92.1 | 99.0 | 745.3 | 9.6 | 10.1 | 75 | 3.6 | 0.0 | 0.0 |
| **348** 3 | 4 | sep | fri | 92.1 | 99.0 | 745.3 | 9.6 | 17.4 | 57 | 4.5 | 0.0 | 0.0 |
| **349** 5 | 4 | sep | fri | 92.1 | 99.0 | 745.3 | 9.6 | 12.8 | 64 | 3.6 | 0.0 | 1.0 |
| **350** 5 | 4 | sep | fri | 92.1 | 99.0 | 745.3 | 9.6 | 10.1 | 75 | 3.6 | 0.0 | 1.0 |
| **351** 4 | 4 | sep | fri | 92.1 | 99.0 | 745.3 | 9.6 | 15.4 | 53 | 6.3 | 0.0 | 1.0 |
| **352** 7 | 4 | sep | fri | 92.1 | 99.0 | 745.3 | 9.6 | 20.6 | 43 | 3.6 | 0.0 | 1.0 |
| **353** 7 | 4 | sep | fri | 92.1 | 99.0 | 745.3 | 9.6 | 19.8 | 47 | 2.7 | 0.0 | 1.0 |
| **354** 7 | 4 | sep | fri | 92.1 | 99.0 | 745.3 | 9.6 | 18.7 | 50 | 2.2 | 0.0 | 1.0 |
| **355** 4 | 4 | sep | fri | 92.1 | 99.0 | 745.3 | 9.6 | 20.8 | 35 | 4.9 | 0.0 | 1.0 |

**356** 4 4 sep fri 92.1 99.0 745.3 9.6 20.8 35 4.9 0.0 1.0

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| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **X** | **Y** | **month** | **day** | **FFMC DMC** | | **DC** | **ISI temp** | | | **RH wind rain output** | | | |
| **357** 6 | 3 | sep | fri | 92.5 | 122.0 | 789.7 | 10.2 | 15.9 | 55 | | 3.6 | 0.0 | 0.0 |
| **358** 6 | 3 | sep | fri | 92.5 | 122.0 | 789.7 | 10.2 | 19.7 | 39 | | 2.7 | 0.0 | 0.0 |
| **359** 1 | 4 | sep | fri | 92.5 | 122.0 | 789.7 | 10.2 | 21.1 | 39 | | 2.2 | 0.0 | 1.0 |
| **360** 6 | 5 | sep | fri | 92.5 | 122.0 | 789.7 | 10.2 | 18.4 | 42 | | 2.2 | 0.0 | 1.0 |
| **361** 4 | 3 | sep | fri | 92.5 | 122.0 | 789.7 | 10.2 | 17.3 | 45 | | 4.0 | 0.0 | 1.0 |
| **362** 7 | 4 | sep | fri | 88.2 | 55.2 | 732.3 | 11.6 | 15.2 | 64 | | 3.1 | 0.0 | 1.0 |
| **363** 4 | 3 | sep | tue | 91.9 | 111.7 | 770.3 | 6.5 | 15.9 | 53 | | 2.2 | 0.0 | 1.0 |
| **364** 6 | 5 | sep | tue | 91.9 | 111.7 | 770.3 | 6.5 | 21.1 | 35 | | 2.7 | 0.0 | 1.0 |
| **365** 6 | 5 | sep | tue | 91.9 | 111.7 | 770.3 | 6.5 | 19.6 | 45 | | 3.1 | 0.0 | 1.0 |
| **366** 4 | 5 | sep | tue | 91.1 | 132.3 | 812.1 | 12.5 | 15.9 | 38 | | 5.4 | 0.0 | 1.0 |
| **367** 4 | 5 | sep | tue | 91.1 | 132.3 | 812.1 | 12.5 | 16.4 | 27 | | 3.6 | 0.0 | 0.0 |
| **368** 6 | 5 | sep | sat | 91.2 | 94.3 | 744.4 | 8.4 | 16.8 | 47 | | 4.9 | 0.0 | 1.0 |
| **369** 4 | 5 | sep | sun | 91.0 | 276.3 | 825.1 | 7.1 | 13.8 | 77 | | 7.6 | 0.0 | 0.0 |

**month DMC DC**

**X Y day FFMC ISI temp RH**

**wwinidndrairnaionutpoutput**

|  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **370** 7 4 | sep | sun | 91.0 | 276.3 | 825.1 | 7.1 | 13.8 | 77 | 7.6 | 0.0 | 1.0 |
| **371** 3 4 | jul | wed | 91.9 | 133.6 | 520.5 | 8.0 | 14.2 | 58 | 4.0 | 0.0 | 0.0 |
| **372** 4 5 | aug | sun | 92.0 | 203.2 | 664.5 | 8.1 | 10.4 | 75 | 0.9 | 0.0 | 0.0 |
| **373** 5 4 | aug | thu | 94.8 | 222.4 | 698.6 | 13.9 | 20.3 | 42 | 2.7 | 0.0 | 0.0 |
| **374** 6 5 | sep | fri | 90.3 | 290.0 | 855.3 | 7.4 | 10.3 | 78 | 4.0 | 0.0 | 1.0 |
| **375** 6 5 | sep | sat | 91.2 | 94.3 | 744.4 | 8.4 | 15.4 | 57 | 4.9 | 0.0 | 1.0 |
| **376** 8 6 | aug | mon | 92.1 | 207.0 | 672.6 | 8.2 | 21.1 | 54 | 2.2 | 0.0 | 0.0 |
| **377** 2 2 | aug | sat | 93.7 | 231.1 | 715.1 | 8.4 | 21.9 | 42 | 2.2 | 0.0 | 1.0 |
| **378** 6 5 | mar | thu | 90.9 | 18.9 | 30.6 | 8.0 | 8.7 | 51 | 5.8 | 0.0 | 0.0 |
| **379** 4 5 | jan | sun | 18.7 | 1.1 | 171.4 | 0.0 | 5.2 | 100 | 0.9 | 0.0 | 0.0 |
| **380** 5 4 | jul | wed | 93.7 | 101.3 | 458.8 | 11.9 | 19.3 | 39 | 7.2 | 0.0 | 1.0 |
| **381** 8 6 | aug | thu | 90.7 | 194.1 | 643.0 | 6.8 | 16.2 | 63 | 2.7 | 0.0 | 1.0 |
| **382** 8 6 | aug | wed | 95.2 | 217.7 | 690.0 | 18.0 | 28.2 | 29 | 1.8 | 0.0 | 1.0 |
| **383** 9 6 | aug | thu | 91.6 | 248.4 | 753.8 | 6.3 | 20.5 | 58 | 2.7 | 0.0 | 1.0 |
| **384** 8 4 | aug | sat | 91.6 | 273.8 | 819.1 | 7.7 | 21.3 | 44 | 4.5 | 0.0 | 1.0 |
| **385** 2 4 | aug | sun | 91.6 | 181.3 | 613.0 | 7.6 | 20.9 | 50 | 2.2 | 0.0 | 1.0 |
| **386** 3 4 | sep | sun | 90.5 | 96.7 | 750.5 | 11.4 | 20.6 | 55 | 5.4 | 0.0 | 1.0 |
| **387** 5 5 | mar | thu | 90.9 | 18.9 | 30.6 | 8.0 | 11.6 | 48 | 5.4 | 0.0 | 0.0 |
| **388** 6 4 | aug | fri | 94.8 | 227.0 | 706.7 | 12.0 | 23.3 | 34 | 3.1 | 0.0 | 1.0 |
| **389** 7 4 | aug | fri | 94.8 | 227.0 | 706.7 | 12.0 | 23.3 | 34 | 3.1 | 0.0 | 0.0 |
| **390** 7 4 | feb | mon | 84.7 | 9.5 | 58.3 | 4.1 | 7.5 | 71 | 6.3 | 0.0 | 1.0 |
| **391** 8 6 | sep | fri | 91.1 | 91.3 | 738.1 | 7.2 | 20.7 | 46 | 2.7 | 0.0 | 1.0 |
| **392** 1 3 | sep | sun | 91.0 | 276.3 | 825.1 | 7.1 | 21.9 | 43 | 4.0 | 0.0 | 1.0 |
| **393** 2 4 | mar | tue | 93.4 | 15.0 | 25.6 | 11.4 | 15.2 | 19 | 7.6 | 0.0 | 0.0 |
| **394** 6 5 | feb | mon | 84.1 | 4.6 | 46.7 | 2.2 | 5.3 | 68 | 1.8 | 0.0 | 0.0 |
| **395** 4 5 | feb | sun | 85.0 | 9.0 | 56.9 | 3.5 | 10.1 | 62 | 1.8 | 0.0 | 1.0 |

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| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **396** | 4 3 | sep | sun | 90.5 | 96.7 | 750.5 | 11.4 | 20.4 | 55 | 4.9 | 0.0 | 1.0 |
| **397** | 5 6 | aug | sun | 91.6 | 181.3 | 613.0 | 7.6 | 24.3 | 33 | 3.6 | 0.0 | 1.0 |
| **398** | 1 2 | aug | sat | 93.7 | 231.1 | 715.1 | 8.4 | 25.9 | 32 | 3.1 | 0.0 | 0.0 |
| **399** | 9 5 | jun | wed | 93.3 | 49.5 | 297.7 | 14.0 | 28.0 | 34 | 4.5 | 0.0 | 0.0 |
| **400** | 9 5 | jun | wed | 93.3 | 49.5 | 297.7 | 14.0 | 28.0 | 34 | 4.5 | 0.0 | 1.0 |
| **401** | 3 4 | sep | thu | 91.1 | 88.2 | 731.7 | 8.3 | 22.8 | 46 | 4.0 | 0.0 | 1.0 |
| **402** | 9 9 | aug | fri | 94.8 | 227.0 | 706.7 | 12.0 | 25.0 | 36 | 4.0 | 0.0 | 0.0 |
| **403** | 8 6 | aug | thu | 90.7 | 194.1 | 643.0 | 6.8 | 21.3 | 41 | 3.6 | 0.0 | 0.0 |
| **404** | 2 4 | sep | wed | 87.9 | 84.8 | 725.1 | 3.7 | 21.8 | 34 | 2.2 | 0.0 | 1.0 |
| **405** | 2 2 | aug | tue | 94.6 | 212.1 | 680.9 | 9.5 | 27.9 | 27 | 2.2 | 0.0 | 0.0 |
| **406** | 6 5 | sep |  | 87.1 291.3 860.6 | | | 4.0 | 17.0 | 67 | 4.9 | 0.0 |  |
| **407** 4 | 5 | feb | sat | 84.7 | 8.2 | 55.0 | 2.9 | 14.2 | 46 | 4.0 | 0.0 | 0.0 |
| **408** 4 | 3 | sep | fri | 90.3 | 290.0 | 855.3 | 7.4 | 19.9 | 44 | 3.1 | 0.0 | 1.0 |
| **409** 1 | 4 | jul | tue | 92.3 | 96.2 | 450.2 | 12.1 | 23.4 | 31 | 5.4 | 0.0 | 0.0 |
| **410** 6 | 3 | feb | fri | 84.1 | 7.3 | 52.8 | 2.7 | 14.7 | 42 | 2.7 | 0.0 | 0.0 |
| **411** 7 | 4 | feb | fri | 84.6 | 3.2 | 43.6 | 3.3 | 8.2 | 53 | 9.4 | 0.0 | 1.0 |
| **412** 9 | 4 | jul | mon | 92.3 | 92.1 | 442.1 | 9.8 | 22.8 | 27 | 4.5 | 0.0 | 1.0 |
| **413** 7 | 5 | aug | sat | 93.7 | 231.1 | 715.1 | 8.4 | 26.4 | 33 | 3.6 | 0.0 | 0.0 |
| **414** 5 | 4 | aug | sun | 93.6 | 235.1 | 723.1 | 10.1 | 24.1 | 50 | 4.0 | 0.0 | 0.0 |
| **415** 8 | 6 | aug | thu | 94.8 | 222.4 | 698.6 | 13.9 | 27.5 | 27 | 4.9 | 0.0 | 1.0 |
| **416** 6 | 3 | jul | tue | 92.7 | 164.1 | 575.8 | 8.9 | 26.3 | 39 | 3.1 | 0.0 | 1.0 |
| **417** 6 | 5 | mar | wed | 93.4 | 17.3 | 28.3 | 9.9 | 13.8 | 24 | 5.8 | 0.0 | 0.0 |
| **418** 2 | 4 | aug | sun | 92.0 | 203.2 | 664.5 | 8.1 | 24.9 | 42 | 5.4 | 0.0 | 1.0 |
| **419** 2 | 5 | aug | sun | 91.6 | 181.3 | 613.0 | 7.6 | 24.8 | 36 | 4.0 | 0.0 | 1.0 |
| **420** 8 | 8 | aug | wed | 91.7 | 191.4 | 635.9 | 7.8 | 26.2 | 36 | 4.5 | 0.0 | 1.0 |
| **421** 2 | 4 | aug | wed | 95.2 | 217.7 | 690.0 | 18.0 | 30.8 | 19 | 4.5 | 0.0 | 0.0 |

**422** 8 6 jul sun 88.9 263.1 795.9 5.2 29.3 27 3.6 0.0 1.0

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| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **423** 1 | 3 | sep | sat | 91.2 | 94.3 | 744.4 | 8.4 | 22.3 | 48 | 4.0 | 0.0 | 1.0 |
| **424** 8 | 6 | aug | sat | 93.7 | 231.1 | 715.1 | 8.4 | 26.9 | 31 | 3.6 | 0.0 | 1.0 |
| **425** 2 | 2 | aug | thu | 91.6 | 248.4 | 753.8 | 6.3 | 20.4 | 56 | 2.2 | 0.0 | 0.0 |
| **426** 8 | 6 | aug | thu | 91.6 | 248.4 | 753.8 | 6.3 | 20.4 | 56 | 2.2 | 0.0 | 0.0 |
| **427** 2 | 4 | aug | mon | 92.1 | 207.0 | 672.6 | 8.2 | 27.9 | 33 | 2.2 | 0.0 | 1.0 |
| **428** 1 | 3 | aug | thu | 94.8 | 222.4 | 698.6 | 13.9 | 26.2 | 34 | 5.8 | 0.0 | 0.0 |
| **429** 3 | 4 | aug | sun | 91.6 | 181.3 | 613.0 | 7.6 | 24.6 | 44 | 4.0 | 0.0 | 1.0 |
| **430** 7 | 4 | sep | thu | 89.7 | 287.2 | 849.3 | 6.8 | 19.4 | 45 | 3.6 | 0.0 | 0.0 |
| **431** 1 | 3 | aug | sat | 92.1 | 178.0 | 605.3 | 9.6 | 23.3 | 40 | 4.0 | 0.0 | 1.0 |
| **432** 8 | 6 | aug | thu | 94.8 | 222.4 | 698.6 | 13.9 | 23.9 | 38 | 6.7 | 0.0 | 0.0 |
| **433** 2 | 4 | aug | sun | 93.6 | 235.1 | 723.1 | 10.1 | 20.9 | 66 | 4.9 | 0.0 | 1.0 |
| **434** 1 | 4 | aug | fri | 90.6 | 269.8 | 811.2 | 5.5 | 22.2 | 45 | 3.6 | 0.0 | 0.0 |
| **435** 2 | 5 | jul | sat | 90.8 | 84.7 | 376.6 | 5.6 | 23.8 | 51 | 1.8 | 0.0 | 0.0 |
| **436** 8 | 6 | aug | mon | 92.1 | 207.0 | 672.6 | 8.2 | 26.8 | 35 | 1.3 | 0.0 | 1.0 |
| **437** 8 | 6 | aug | sat | 89.4 | 253.6 | 768.4 | 9.7 | 14.2 | 73 | 2.7 | 0.0 | 0.0 |
| **438** 2 | 5 | aug | sat | 93.7 | 231.1 | 715.1 | 8.4 | 23.6 | 53 | 4.0 | 0.0 | 1.0 |
| **439** 1 | 3 | sep | fri | 91.1 | 91.3 | 738.1 | 7.2 | 19.1 | 46 | 2.2 | 0.0 | 1.0 |
| **440** 5 | 4 | sep | fri | 90.3 | 290.0 | 855.3 | 7.4 | 16.2 | 58 | 3.6 | 0.0 | 0.0 |
| **441** 8 | 6 | aug | mon | 92.1 | 207.0 | 672.6 | 8.2 | 25.5 | 29 | 1.8 | 0.0 | 1.0 |
| **442** 6 | 5 | apr | mon | 87.9 | 24.9 | 41.6 | 3.7 | 10.9 | 64 | 3.1 | 0.0 | 1.0 |
| **443** 1 | 2 | jul | fri | 90.7 | 80.9 | 368.3 | 16.8 | 14.8 | 78 | 8.0 | 0.0 | 0.0 |

**X Y month day FFMC DMC DC ISI temp RH**

**wwinidndrairnaionutpoutput**

|  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **444** 2 5 | sep | fri | 90.3 | 290.0 | 855.3 | 7.4 | 16.2 | 58 | 3.6 | 0.0 | 1.0 |
| **445** 5 5 | aug | sun | 94.0 | 47.9 | 100.7 | 10.7 | 17.3 | 80 | 4.5 | 0.0 | 0.0 |
| **446** 6 5 | aug | sun | 92.0 | 203.2 | 664.5 | 8.1 | 19.1 | 70 | 2.2 | 0.0 | 0.0 |
| **447** 3 4 | mar | wed | 93.4 | 17.3 | 28.3 | 9.9 | 8.9 | 35 | 8.0 | 0.0 | 0.0 |

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| **448** 7 4 | sep | wed | 89.7 | 284.9 | 844.0 | 10.1 | 10.5 | 77 | 4.0 | 0.0 | 0.0 |
| **449** 7 4 | aug | sun | 91.6 | 181.3 | 613.0 | 7.6 | 19.3 | 61 | 4.9 | 0.0 | 0.0 |
| **450** 4 5 | aug | wed | 95.2 | 217.7 | 690.0 | 18.0 | 23.4 | 49 | 5.4 | 0.0 | 1.0 |
| **451** 1 4 | aug | fri | 90.5 | 196.8 | 649.9 | 16.3 | 11.8 | 88 | 4.9 | 0.0 | 1.0 |
| **452** 7 4 | aug | mon | 91.5 | 238.2 | 730.6 | 7.5 | 17.7 | 65 | 4.0 | 0.0 | 0.0 |
| **453** 4 5 | aug | thu | 89.4 | 266.2 | 803.3 | 5.6 | 17.4 | 54 | 3.1 | 0.0 | 0.0 |
| **454** 3 4 | aug | thu | 91.6 | 248.4 | 753.8 | 6.3 | 16.8 | 56 | 3.1 | 0.0 | 0.0 |
| **455** 3 4 | jul | mon | 94.6 | 160.0 | 567.2 | 16.7 | 17.9 | 48 | 2.7 | 0.0 | 0.0 |
| **456** 2 4 | aug | thu | 91.6 | 248.4 | 753.8 | 6.3 | 16.6 | 59 | 2.7 | 0.0 | 0.0 |
| **457** 1 4 | aug | wed | 91.7 | 191.4 | 635.9 | 7.8 | 19.9 | 50 | 4.0 | 0.0 | 1.0 |
| **458** 8 6 | aug | sat | 93.7 | 231.1 | 715.1 | 8.4 | 18.9 | 64 | 4.9 | 0.0 | 1.0 |
| **459** 7 4 | aug | sat | 91.6 | 273.8 | 819.1 | 7.7 | 15.5 | 72 | 8.0 | 0.0 | 1.0 |
| **460** 2 5 | aug | sat | 93.7 | 231.1 | 715.1 | 8.4 | 18.9 | 64 | 4.9 | 0.0 | 0.0 |
| **461** 8 6 | aug | sat | 93.7 | 231.1 | 715.1 | 8.4 | 18.9 | 64 | 4.9 | 0.0 | 0.0 |
| **462** 1 4 | sep | sun | 91.0 | 276.3 | 825.1 | 7.1 | 14.5 | 76 | 7.6 | 0.0 | 1.0 |
| **463** 6 5 | feb | tue | 75.1 | 4.4 | 16.2 | 1.9 | 4.6 | 82 | 6.3 | 0.0 | 1.0 |
| **464** 6 4 | feb | tue | 75.1 | 4.4 | 16.2 | 1.9 | 5.1 | 77 | 5.4 | 0.0 | 1.0 |
| **465** 2 2 | feb | sat | 79.5 | 3.6 | 15.3 | 1.8 | 4.6 | 59 | 0.9 | 0.0 | 1.0 |
| **466** 6 5 | mar | mon | 87.2 | 15.1 | 36.9 | 7.1 | 10.2 | 45 | 5.8 | 0.0 | 1.0 |
| **467** 3 4 | mar | wed | 90.2 | 18.5 | 41.1 | 7.3 | 11.2 | 41 | 5.4 | 0.0 | 1.0 |
| **468** 6 5 | mar | thu | 91.3 | 20.6 | 43.5 | 8.5 | 13.3 | 27 | 3.6 | 0.0 | 1.0 |
| **469** 6 3 | apr | sun | 91.0 | 14.6 | 25.6 | 12.3 | 13.7 | 33 | 9.4 | 0.0 | 1.0 |
| **470** 5 4 | apr | sun | 91.0 | 14.6 | 25.6 | 12.3 | 17.6 | 27 | 5.8 | 0.0 | 0.0 |
| **471** 4 3 | may | fri | 89.6 | 25.4 | 73.7 | 5.7 | 18.0 | 40 | 4.0 | 0.0 | 1.0 |
| **472** 8 3 | jun | mon | 88.2 | 96.2 | 229.0 | 4.7 | 14.3 | 79 | 4.0 | 0.0 | 1.0 |
| **473** 9 4 | jun | sat | 90.5 | 61.1 | 252.6 | 9.4 | 24.5 | 50 | 3.1 | 0.0 | 1.0 |

**474** 4 3 jun thu 93.0 103.8 316.7 10.8 26.4 35 2.7 0.0 1.0

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| **475** 2 5 | jun | thu | 93.7 | 121.7 | 350.2 | 18.0 | 22.7 | 40 | 9.4 | 0.0 | 1.0 |
| **476** 4 3 | jul | thu | 93.5 | 85.3 | 395.0 | 9.9 | 27.2 | 28 | 1.3 | 0.0 | 1.0 |
| **477** 4 3 | jul | sun | 93.7 | 101.3 | 423.4 | 14.7 | 26.1 | 45 | 4.0 | 0.0 | 1.0 |
| **478** 7 4 | jul | sun | 93.7 | 101.3 | 423.4 | 14.7 | 18.2 | 82 | 4.5 | 0.0 | 1.0 |
| **479** 7 4 | jul | mon | 89.2 | 103.9 | 431.6 | 6.4 | 22.6 | 57 | 4.9 | 0.0 | 1.0 |

**480** 9 9 jul thu 93.2 114.4 560.0 9.5 30.2 25 4.5 0.0

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| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **X Y** | | **month** | **day FFMC** | | **DMC** | **DC** | **ISI temp** | |  | **RH wind rain output** | | |
| **481** 4 | 3 | jul | thu | 93.2 | 114.4 | 560.0 | 9.5 | 30.2 | 22 | 4.9 | 0.0 | 0.0 |
| **482** 3 | 4 | aug | sun | 94.9 | 130.3 | 587.1 | 14.1 | 23.4 | 40 | 5.8 | 0.0 | 1.0 |
| **483** 8 | 6 | aug | sun | 94.9 | 130.3 | 587.1 | 14.1 | 31.0 | 27 | 5.4 | 0.0 | 0.0 |
| **484** 2 | 5 | aug | sun | 94.9 | 130.3 | 587.1 | 14.1 | 33.1 | 25 | 4.0 | 0.0 | 1.0 |
| **485** 2 | 4 | aug | mon | 95.0 | 135.5 | 596.3 | 21.3 | 30.6 | 28 | 3.6 | 0.0 | 1.0 |
| **486** 5 | 4 | aug | tue | 95.1 | 141.3 | 605.8 | 17.7 | 24.1 | 43 | 6.3 | 0.0 | 1.0 |
| **487** 5 | 4 | aug | tue | 95.1 | 141.3 | 605.8 | 17.7 | 26.4 | 34 | 3.6 | 0.0 | 1.0 |
| **488** 4 | 4 | aug | tue | 95.1 | 141.3 | 605.8 | 17.7 | 19.4 | 71 | 7.6 | 0.0 | 1.0 |
| **489** 4 | 4 | aug | wed | 95.1 | 141.3 | 605.8 | 17.7 | 20.6 | 58 | 1.3 | 0.0 | 0.0 |
| **490** 4 | 4 | aug | wed | 95.1 | 141.3 | 605.8 | 17.7 | 28.7 | 33 | 4.0 | 0.0 | 0.0 |
| **491** 4 | 4 | aug | thu | 95.8 | 152.0 | 624.1 | 13.8 | 32.4 | 21 | 4.5 | 0.0 | 0.0 |
| **492** 1 | 3 | aug | fri | 95.9 | 158.0 | 633.6 | 11.3 | 32.4 | 27 | 2.2 | 0.0 | 0.0 |
| **493** 1 | 3 | aug | fri | 95.9 | 158.0 | 633.6 | 11.3 | 27.5 | 29 | 4.5 | 0.0 | 1.0 |
| **494** 6 | 6 | aug | sat | 96.0 | 164.0 | 643.0 | 14.0 | 30.8 | 30 | 4.9 | 0.0 | 1.0 |
| **495** 6 | 6 | aug | mon | 96.2 | 175.5 | 661.8 | 16.8 | 23.9 | 42 | 2.2 | 0.0 | 0.0 |
| **496** 4 | 5 | aug | mon | 96.2 | 175.5 | 661.8 | 16.8 | 32.6 | 26 | 3.1 | 0.0 | 1.0 |
| **497** 3 | 4 | aug | tue | 96.1 | 181.1 | 671.2 | 14.3 | 32.3 | 27 | 2.2 | 0.0 | 1.0 |
| **498** 6 | 5 | aug | tue | 96.1 | 181.1 | 671.2 | 14.3 | 33.3 | 26 | 2.7 | 0.0 | 1.0 |
| **499** 7 | 5 | aug | tue | 96.1 | 181.1 | 671.2 | 14.3 | 27.3 | 63 | 4.9 | 6.4 | 1.0 |
| **500** 8 | 6 | aug | tue | 96.1 | 181.1 | 671.2 | 14.3 | 21.6 | 65 | 4.9 | 0.8 | 0.0 |
| **501** 7 | 5 | aug | tue | 96.1 | 181.1 | 671.2 | 14.3 | 21.6 | 65 | 4.9 | 0.8 | 0.0 |

**502** 4 4 aug tue 96.1 181.1 671.2 14.3 20.7 69 4.9 0.4 0.0

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| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **503** 2 | 4 | aug | wed | 94.5 | 139.4 | 689.1 | 20.0 | 29.2 | 30 | 4.9 | 0.0 | 1.0 |
| **504** 4 | 3 | aug | wed | 94.5 | 139.4 | 689.1 | 20.0 | 28.9 | 29 | 4.9 | 0.0 | 1.0 |
| **505** 1 | 2 | aug | thu | 91.0 | 163.2 | 744.4 | 10.1 | 26.7 | 35 | 1.8 | 0.0 | 1.0 |
| **506** 1 | 2 | aug | fri | 91.0 | 166.9 | 752.6 | 7.1 | 18.5 | 73 | 8.5 | 0.0 | 0.0 |
| **507** 2 | 4 | aug | fri | 91.0 | 166.9 | 752.6 | 7.1 | 25.9 | 41 | 3.6 | 0.0 | 0.0 |
| **508** 1 | 2 | aug | fri | 91.0 | 166.9 | 752.6 | 7.1 | 25.9 | 41 | 3.6 | 0.0 | 0.0 |
| **509** 5 | 4 | aug | fri | 91.0 | 166.9 | 752.6 | 7.1 | 21.1 | 71 | 7.6 | 1.4 | 1.0 |
| **510** 6 | 5 | aug | fri | 91.0 | 166.9 | 752.6 | 7.1 | 18.2 | 62 | 5.4 | 0.0 | 1.0 |
| **511** 8 | 6 | aug | sun | 81.6 | 56.7 | 665.6 | 1.9 | 27.8 | 35 | 2.7 | 0.0 | 0.0 |
| **512** 4 | 3 | aug | sun | 81.6 | 56.7 | 665.6 | 1.9 | 27.8 | 32 | 2.7 | 0.0 | 1.0 |
| **513** 2 | 4 | aug | sun | 81.6 | 56.7 | 665.6 | 1.9 | 21.9 | 71 | 5.8 | 0.0 | 1.0 |
| **514** 7 | 4 | aug | sun | 81.6 | 56.7 | 665.6 | 1.9 | 21.2 | 70 | 6.7 | 0.0 | 1.0 |
| **515** 1 | 4 | aug | sat | 94.4 | 146.0 | 614.7 | 11.3 | 25.6 | 42 | 4.0 | 0.0 | 0.0 |

**516** 6 3 nov tue 79.5 3.0 106.7 1.1 11.8 31 4.5 0.0 0.0

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| --- | --- |
|  |  |

In [ ]:

In [1]: **import** keras **from** keras.preprocessing.image **import** ImageDataGenerator

In [2]: *#Define the parameters/arguments for ImageDataGenerator class* train\_datagen**=**ImageDataGenerator(rescale**=**1.**/**255,shear\_range**=**0.2,rotation\_range**=**180,zoom\_range

test\_datagen**=**ImageDataGenerator(rescale**=**1.**/**255)

|  |
| --- |
| *#Applying ImageDataGenerator functionality to trainset*  x\_train**=**train\_datagen**.**flow\_from\_directory(r'C:\Users\dhine\Downloads\archive\Dataset\Dataset\  target\_size**=**(128,128),batch\_size**=**32,  class\_mode**=**'binary') |

In [3]:

Found 436 images belonging to 2 classes.

|  |
| --- |
| *#Applying ImageDataGenerator functionality to testset*  x\_test**=**test\_datagen**.**flow\_from\_directory(r'C:\Users\dhine\Downloads\archive\Dataset\Dataset\te  target\_size**=**(128,128),batch\_size**=**32,  class\_mode**=**'binary') |

In [4]:

|  |
| --- |
| *#importmodelbuilding libraries*    *#Todefine Linearinitialisation import Sequential* **from** keras.models **import** Sequential *#To add layers import Dense* **from** keras.layers **import** Dense  *#Tocreate Convolutionkernelimport Convolution2D* **from** keras.layers **import** Convolution2D *#import Maxpooling layer* **from** keras.layers **import** MaxPooling2D *#import flatten layer* **from** keras.layers  **import** Flatten **import** warnings  warnings**.**filterwarnings('ignore') |

Found 121 images belonging to 2 classes.

In [5]:

|  |
| --- |
| *#initializing the model* model**=**Sequential() |

In [7]:

|  |
| --- |
| *#add convolutional layer*  model**.**add(Convolution2D(32,(3,3),input\_shape**=**(128,128,3),activation**=**'relu')) *#add maxpooling layer* model**.**add(MaxPooling2D(pool\_size**=**(2,2)))  *#add flatten layer* model**.**add(Flatten()) |

In [8]:

|  |
| --- |
| *#add hidden layer* model**.**add(Dense(150,activation**=**'relu')) *#add output layer* model**.**add(Dense(1,activation**=**'sigmoid')) |
| *#configure the learning process* model**.**compile(loss**=**'binary\_crossentropy',optimizer**=**"adam",metrics**=**["accuracy"]) |
| *#Training the model* model**.**fit\_generator(x\_train,steps\_per\_epoch**=**14,epochs**=**10,validation\_data**=**x\_test,validation\_st |

In [9]:

In [10]:

In [11]:

Epoch 1/10

14/14 [==============================] - 84s 6s/step - loss: 4.2334 - accuracy: 0.5619 - val\_ loss: 1.3686 - val\_accuracy: 0.5950Epoch 2/10

14/14 [==============================] - 74s 5s/step - loss: 0.5689 - accuracy: 0.7362 - val\_ loss:

0.2423 - val\_accuracy: 0.8926Epoch 3/10

14/14 [==============================] - 123s 9s/step - loss: 0.2231 - accuracy: 0.9197 - val \_loss:

0.1323 - val\_accuracy: 0.9669Epoch 4/10

14/14 [==============================] - 75s 5s/step - loss: 0.2170 - accuracy: 0.9128 - val\_ loss:

0.1082 - val\_accuracy: 0.9669Epoch 5/10

14/14 [==============================] - 129s 10s/step - loss: 0.1918 - accuracy: 0.9151 - va l\_loss: 0.1145 - val\_accuracy: 0.9669Epoch 6/10

14/14 [==============================] - 111s 8s/step - loss: 0.1938 - accuracy: 0.9037 - val \_loss:

0.1030 - val\_accuracy: 0.9669

Epoch14/14 [==========================7/10 ====]

- 88s 6s/step - loss: 0.1756 - accuracy: 0.9312 - val\_ loss: 0.0831 - val\_accuracy: 0.97528/10

Epoch

14/14 [========================== - 86s 6s/step - loss: 0.1564 - accuracy: 0.9404 - val\_ loss: ====]

Epoch 0.1073 - val\_accuracy: 0.96699/10

14/14 [==========================

====] - 77s 6s/step - loss: 0.1480 - accuracy: 0.9427 - val\_ loss: 0.0754 - val\_accuracy: 0.983510/10 Epoch [==========================

====]

14/14 - 81s 6s/step - loss: 0.1641 - accuracy: 0.9289 - val\_ loss: 0.0601 - val\_accuracy: 0.9835

<keras.callbacks.History at 0x2546507bf10> Out[11]: In [12]: model**.**save("forest1.h5")

|  |
| --- |
| *#import load\_model from keras.model***from** keras.models **import** load\_model *#import image class from keras* **from** tensorflow.keras.preprocessing **import** image  *#import numpy* **import** numpy **as** np *#import cv2* **import** |

In [13]:

In [15]: *#load the saved model* model **=** load\_model("forest1.h5")

In [16]: img**=**image**.**load\_img(r'C:\Users\dhine\Downloads\archive\Dataset\Dataset\test\_set\with fire\skynx**=**image**.**img\_to\_array(img) res **=** cv2**.**resize(x, dsize**=**(128, 128), interpolation**=**cv2**.**INTER\_CUBIC) *#expand the image shape* x**=**np**.**expand\_dims(res,axis**=**0)

In [17]: pred**=**model**.**predict(x)

1/1 [==============================] - 5s 5s/step

pred