



Air Quality Analysis for Ozone

The following information is for the ambient air monitors operated by the state. This information is reported to the U.S. Environmental Protection Agency's Air Quality System database. The monitoring information provided in the chart below includes the preliminary design values for the ozone National Ambient Air Quality Standard, or NAAQS.

In March 2008, EPA strengthened the ozone NAAQS by setting it at a level of 0.075 parts per million (ppm) measured over 8 hours. Based on 2008-2010 monitoring data, the department recommended the St. Louis area as the only nonattainment area in the state with a boundary encompassing St. Louis City and St. Louis, St. Charles, Jefferson, and Franklin counties. In April 2012, the EPA finalized St. Louis as a nonattainment area for the 2008 ozone standard. In April 2016, EPA determined that the area has until July 20, 2016, to attain the standard. Missouri is following up that action by requesting that EPA review 2013 to 2015 ozone monitoring data to verify the area met the standard, and Missouri is working on plans so that EPA can formally redesignate the area back to attainment.

In October 2015 (effective in December 2015), EPA further strengthened the ozone NAAQS by setting it at a level of 0.070 ppm measured over 8 hours. Based on 2013 to 2015 monitoring data, only the West Alton site in the St. Louis area exceeds the standard. Missouri will submit recommended designations for the entire state by October 2016, and EPA will make final designations, likely based on 2014 to 2016 monitoring data, by October 2017.

More information on ozone health effects, the ozone standard, and the designation process is online at <http://dnr.mo.gov/env/apcp/ozone.htm>



8-Hour Ozone Design Values^a

Weekly Reporting Date 5/22/2017

| Site | County | 4th High 8-hr Average (ppb) | | | | | CV - 70 | # of Exceedances > 70 ppb (15 Std) | Design Value | | |
|-------------------------|----------------|-----------------------------|------|------|------|-------------------|---------|---------------------------------------|--------------|-------|--------------------|
| | | Year-to-Date | | | | | | | Year-to-Date | | |
| | | 2013 | 2014 | 2015 | 2016 | 2017 ^c | | 2017 [^] | 13-15 | 14-16 | 15-17 ^c |
| St. Louis | | | | | | | | | | | |
| Arnold West | Jefferson | 69 | 72 | 69 | 70 | 43 | 74 | 0 | 70 | 70 | 60 |
| Blair Street* | St. Louis City | 66 | 66 | 63 | 68 | 61 | 82 | 0 | 65 | 65 | 64 |
| Foley West [^] | Lincoln | 72 | 67 | 65 | 65 | 60 | 83 | 0 | 68 | 65 | 63 |
| Maryland Hts | St. Louis | 70 | 72 | 69 | 73 | 60 | 71 | 0 | 70 | 71 | 67 |
| Orchard Farm | St. Charles | 71 | 72 | 66 | 76 | 61 | 71 | 0 | 69 | 71 | 67 |
| Pacific | St. Louis | 67 | 65 | 65 | 67 | 61 | 81 | 0 | 65 | 65 | 64 |
| West Alton | St. Charles | 71 | 72 | 70 | 75 | 63 | 68 | 1 | 71 | 72 | 69 |
| Ste. Genevieve | | | | | | | | | | | |
| Bonne Terre | Ste. Genevieve | 65 | 69 | 63 | 67 | 61 | 83 | 1 | 65 | 66 | 63 |
| South East | | | | | | | | | | | |
| Farrar | Perry | 65 | 67 | 67 | 69 | 63 | 77 | 0 | 66 | 67 | 66 |
| Kansas City | | | | | | | | | | | |
| Liberty | Clay | 67 | 65 | 62 | 66 | 61 | 85 | 0 | 64 | 64 | 63 |
| RG South | Cass | 64 | 65 | 65 | 61 | 60 | 87 | 0 | 64 | 63 | 62 |
| Rocky Creek | Clay | 71 | 66 | 68 | 69 | 63 | 76 | 0 | 68 | 67 | 66 |
| Trimble | Clinton | 71 | 64 | 68 | 69 | 63 | 76 | 0 | 67 | 67 | 66 |
| Watkins Mill | Clay | 67 | 67 | 64 | 66 | 61 | 83 | 0 | 66 | 65 | 63 |
| Springfield | | | | | | | | | | | |
| Fellows Lake | Greene | 64 | 60 | 61 | 59 | 62 | 93 | 0 | 61 | 60 | 60 |
| Hillcrest H.S. | Greene | 62 | 60 | 61 | 58 | 60 | 94 | 0 | 61 | 59 | 59 |
| Outstate | | | | | | | | | | | |
| Alba | Jasper | 69 | 65 | 61 | 59 | 57 | 93 | 0 | 65 | 61 | 59 |
| Branson | Taney | 63 | 58 | 59 | 56 | 56 | 98 | 0 | 60 | 57 | 57 |
| Eldorado Spgs. | Cedar | 64 | 65 | 60 | 60 | 58 | 93 | 0 | 63 | 61 | 59 |
| Finger Lakes | Boone | 62 | 64 | 63 | 65 | 59 | 85 | 0 | 63 | 64 | 62 |
| Mark Twain* | Monroe | 61 | 60 | 58 | 59 | 58 | 96 | 0 | 59 | 59 | 58 |
| New Bloomfield | Callaway | 61 | 64 | 65 | 64 | 58 | 84 | 0 | 63 | 64 | 62 |
| Savannah | Andrew | 66 | 64 | 64 | 62 | 58 | 87 | 0 | 64 | 63 | 61 |

^aQuality assured data through December 31, 2016.

^cYear-to-date preliminary data. Do not quote, do not cite.

*Year-round ozone monitoring.

[^]Monitor relocated less than a mile east of the previous site (within the same neighborhood scale of representativeness) beginning March 1, 2017.

Design values in red are violations of 2015 standard.

2017^c **Four Highest 8-Hour Ozone Values (ppb) Year-To-Date**

| <i>ST. LOUIS</i> | 1st High | 2nd High | 3rd High | 4th High | CV - 70 |
|-------------------------|----------|----------|----------|----------|---------|
| Arnold West | 47 | 43 | 43 | 43 | 74 |
| Blair Street* | 69 | 63 | 63 | 61 | 82 |
| Foley West^ | 65 | 62 | 61 | 60 | 83 |
| Maryland Hts | 64 | 64 | 62 | 60 | 71 |
| Orchard Farm | 64 | 64 | 61 | 61 | 71 |
| Pacific | 64 | 62 | 61 | 61 | 81 |
| West Alton | 72 | 63 | 63 | 63 | 68 |

Ste. Genevieve

| | | | | | |
|-------------|----|----|----|----|----|
| Bonne Terre | 71 | 66 | 62 | 61 | 83 |
|-------------|----|----|----|----|----|

South East

| | | | | | |
|--------|----|----|----|----|----|
| Farrar | 68 | 64 | 63 | 63 | 77 |
|--------|----|----|----|----|----|

Kansas City

| | | | | | |
|--------------|----|----|----|----|----|
| Liberty | 68 | 62 | 61 | 61 | 85 |
| RG South | 63 | 62 | 60 | 60 | 87 |
| Rocky Creek | 70 | 65 | 64 | 63 | 76 |
| Trimble | 68 | 66 | 65 | 63 | 76 |
| Watkins Mill | 69 | 62 | 62 | 61 | 83 |

Springfield

| | | | | | |
|----------------|----|----|----|----|----|
| Fellows Lake | 64 | 62 | 62 | 62 | 93 |
| Hillcrest H.S. | 63 | 60 | 60 | 60 | 94 |

Outstate

| | | | | | |
|----------------|----|----|----|----|----|
| Alba | 60 | 58 | 58 | 57 | 93 |
| Branson | 61 | 58 | 57 | 56 | 98 |
| Eldorado Spgs | 60 | 59 | 59 | 58 | 93 |
| Finger Lakes | 63 | 61 | 60 | 59 | 85 |
| Mark Twain* | 62 | 60 | 60 | 58 | 96 |
| New Bloomfield | 60 | 59 | 59 | 58 | 84 |
| Savannah | 61 | 60 | 59 | 58 | 87 |

The Critical Value (CV) is the current Year's 4th highest value which, if monitored, could yield a violation of the Ozone NAAQS for the most current three year period. (CV = 213ppb – Last year's 4th highest value – previous year's 4th highest value).

CV - 70:

^cYear-to-date preliminary data. Do not quote, do not cite.

*Year-round ozone monitoring

2017- maxium 8-hour average (ppm)^

| Past reporting dates | Area's Maxi | Site's Maxi | Count of Maxi | 1-Mar | 2-Mar | 3-Mar | 4-Mar | 5-Mar | 6-Mar |
|-----------------------|--------------|--------------|---------------|-------|-------|-------|-------|-------|-------|
| <u>ST. LOUIS</u> | 0.072 | | | | | | | | |
| Arnold West | | 0.047 | 1 | 0.033 | 0.032 | 0.031 | 0.043 | 0.037 | 0.029 |
| Blair Street | | 0.069 | 1 | 0.038 | 0.038 | 0.037 | 0.052 | 0.043 | 0.037 |
| Foley West | | 0.065 | 1 | 0.036 | 0.039 | 0.039 | 0.053 | 0.045 | 0.037 |
| Maryland Hts | | 0.064 | 2 | 0.038 | 0.039 | 0.037 | 0.053 | 0.045 | 0.037 |
| Orchard Farm | | 0.064 | 2 | 0.037 | 0.038 | 0.037 | 0.050 | 0.044 | 0.037 |
| Pacific | | 0.064 | 1 | 0.040 | 0.042 | 0.039 | 0.057 | 0.046 | 0.038 |
| West Alton | | 0.072 | 1 | 0.038 | 0.038 | 0.039 | 0.052 | 0.044 | 0.038 |
| <u>Ste. Genevieve</u> | 0.071 | | | | | | | | |
| Bonne Terre | | 0.071 | 1 | 0.043 | 0.045 | 0.041 | 0.056 | 0.048 | 0.041 |
| <u>South East</u> | 0.068 | | | | | | | | |
| Farrar | | 0.068 | 1 | 0.044 | 0.044 | 0.044 | 0.052 | 0.049 | 0.043 |
| <u>Kansas City</u> | 0.070 | | | | | | | | |
| Liberty | | 0.068 | 1 | 0.040 | 0.041 | 0.040 | 0.057 | 0.043 | 0.038 |
| RG South | | 0.063 | 1 | 0.041 | 0.043 | 0.050 | 0.058 | 0.044 | 0.040 |
| Rocky Creek | | 0.070 | 1 | 0.041 | 0.043 | 0.043 | 0.059 | 0.044 | 0.040 |
| Trimble | | 0.068 | 1 | 0.040 | 0.040 | 0.040 | 0.058 | 0.043 | 0.039 |
| Watkins Mill | 0.069 | 1 | 0.042 | 0.044 | 0.043 | 0.061 | 0.046 | 0.040 | |
| <u>Springfield</u> | 0.064 | | | | | | | | |
| Fellows Lake | | 0.064 | 1 | 0.043 | 0.049 | 0.047 | 0.058 | 0.050 | 0.037 |
| Hillcrest H.S. | | 0.063 | 1 | 0.042 | 0.049 | 0.043 | 0.057 | 0.049 | 0.036 |
| <u>Outstate</u> | 0.063 | | | | | | | | |
| Alba | | 0.060 | 1 | 0.041 | 0.045 | 0.058 | 0.060 | 0.047 | 0.038 |
| Branson | | 0.061 | 1 | 0.040 | 0.046 | 0.044 | 0.054 | 0.048 | 0.037 |
| Eldorado Spgs | | 0.060 | 1 | 0.041 | 0.045 | 0.048 | 0.060 | 0.047 | 0.036 |
| Finger Lakes | | 0.063 | 1 | 0.041 | 0.040 | 0.042 | 0.057 | 0.047 | 0.040 |
| Mark Twain | | 0.062 | 1 | 0.035 | 0.038 | 0.040 | 0.054 | 0.045 | 0.037 |
| New Bloomfield | | 0.060 | 1 | 0.038 | 0.040 | 0.039 | 0.052 | 0.044 | 0.037 |
| Savannah | 0.061 | 1 | 0.038 | 0.038 | 0.040 | 0.056 | 0.041 | 0.040 | |

^All the 2017 data has not been quality assured and is preliminary. Do not quote, do not cite.

Ozone season is from March 1 to October 31.

| 7-Mar | 8-Mar | 9-Mar | 10-Mar | 11-Mar | 12-Mar | 13-Mar | 14-Mar | 15-Mar | 16-Mar | 17-Mar | 18-Mar |
|-------|-------|-------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
|-------|-------|-------|--------|--------|--------|--------|--------|--------|--------|--------|--------|

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|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| 0.036 | 0.042 | 0.040 | 0.030 | 0.028 | 0.031 | 0.028 | 0.030 | 0.033 | 0.026 | 0.026 | 0.029 |
| 0.046 | 0.047 | 0.052 | 0.038 | 0.034 | 0.041 | 0.035 | 0.038 | 0.043 | 0.035 | 0.035 | 0.041 |
| 0.046 | 0.048 | 0.048 | 0.040 | 0.037 | 0.040 | 0.039 | 0.041 | 0.045 | 0.036 | 0.045 | 0.041 |
| 0.046 | 0.050 | 0.050 | 0.040 | 0.035 | 0.041 | 0.037 | 0.041 | 0.044 | 0.037 | 0.042 | 0.041 |
| 0.045 | 0.045 | 0.049 | 0.040 | 0.038 | 0.040 | 0.040 | 0.043 | 0.046 | 0.037 | 0.043 | 0.043 |
| 0.046 | 0.052 | 0.050 | 0.042 | 0.036 | 0.040 | 0.039 | 0.039 | 0.044 | 0.042 | 0.038 | 0.042 |
| 0.046 | 0.045 | 0.048 | 0.040 | 0.038 | 0.042 | 0.038 | 0.042 | 0.042 | 0.038 | 0.039 | 0.038 |

| | | | | | | | | | | | |
|-------|-------|-------|---|---|---|---|---|---|---|---|---|
| 0.046 | 0.054 | 0.048 | m | m | m | m | m | m | m | m | m |
|-------|-------|-------|---|---|---|---|---|---|---|---|---|

| | | | | | | | | | | | |
|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| 0.047 | 0.052 | 0.051 | 0.043 | 0.038 | 0.046 | 0.037 | 0.040 | 0.044 | 0.042 | 0.035 | 0.045 |
|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|

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|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| 0.043 | 0.052 | 0.044 | 0.041 | 0.039 | 0.040 | 0.040 | 0.042 | 0.040 | 0.049 | 0.044 | 0.051 |
| 0.044 | 0.057 | 0.041 | 0.040 | 0.031 | 0.039 | 0.036 | 0.038 | 0.040 | 0.047 | 0.044 | 0.049 |
| 0.044 | 0.052 | 0.041 | 0.041 | 0.038 | 0.038 | 0.040 | 0.042 | 0.036 | 0.049 | 0.043 | 0.052 |
| 0.044 | 0.049 | 0.039 | 0.039 | 0.039 | 0.038 | 0.039 | 0.041 | 0.038 | 0.050 | 0.043 | 0.053 |
| 0.046 | 0.053 | 0.046 | 0.041 | 0.040 | 0.042 | 0.040 | 0.042 | 0.042 | 0.048 | 0.044 | 0.050 |

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|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| 0.047 | 0.055 | 0.045 | 0.043 | 0.038 | 0.044 | 0.036 | 0.040 | 0.045 | 0.041 | 0.044 | 0.051 |
| 0.047 | 0.052 | 0.043 | 0.043 | 0.038 | 0.043 | 0.036 | 0.040 | 0.044 | 0.040 | 0.041 | 0.052 |

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|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| 0.015 | 0.055 | 0.042 | 0.041 | 0.032 | 0.039 | 0.031 | 0.036 | 0.041 | 0.043 | 0.041 | 0.049 |
| 0.044 | 0.052 | 0.040 | 0.037 | 0.034 | 0.040 | 0.032 | 0.035 | 0.040 | 0.037 | 0.037 | 0.048 |
| 0.045 | 0.057 | 0.041 | 0.041 | 0.038 | 0.041 | 0.034 | 0.040 | 0.041 | 0.046 | 0.045 | 0.059 |
| 0.045 | 0.052 | 0.045 | 0.042 | 0.036 | 0.041 | 0.048 | 0.046 | 0.047 | 0.045 | 0.043 | 0.047 |
| 0.046 | 0.043 | 0.043 | 0.038 | 0.036 | 0.039 | 0.040 | 0.042 | 0.047 | 0.040 | 0.044 | 0.041 |
| 0.044 | 0.052 | 0.042 | 0.038 | 0.034 | 0.038 | 0.038 | 0.038 | 0.043 | 0.041 | 0.042 | 0.047 |
| 0.044 | 0.046 | 0.039 | 0.039 | 0.039 | 0.038 | 0.038 | 0.040 | 0.037 | 0.048 | 0.043 | 0.051 |

| 19-Mar | 20-Mar | 21-Mar | 22-Mar | 23-Mar | 24-Mar | 25-Mar | 26-Mar | 27-Mar | 28-Mar | 29-Mar | 30-Mar |
|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|

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|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| 0.022 | 0.036 | 0.032 | 0.033 | 0.027 | 0.037 | 0.032 | 0.015 | 0.013 | 0.023 | 0.028 | 0.023 |
| 0.036 | 0.054 | 0.040 | 0.039 | 0.036 | 0.049 | 0.048 | 0.023 | 0.024 | 0.030 | 0.032 | 0.034 |
| 0.034 | 0.052 | 0.047 | 0.042 | 0.042 | 0.050 | 0.046 | 0.029 | 0.027 | 0.034 | 0.035 | 0.031 |
| 0.035 | 0.051 | 0.047 | 0.043 | 0.041 | 0.050 | 0.048 | 0.029 | 0.023 | 0.034 | 0.037 | 0.034 |
| 0.037 | 0.052 | 0.048 | 0.045 | 0.040 | 0.052 | 0.052 | 0.029 | 0.031 | 0.040 | 0.039 | 0.037 |
| 0.034 | 0.052 | 0.045 | 0.044 | 0.045 | 0.051 | 0.047 | 0.026 | 0.022 | 0.030 | 0.039 | 0.033 |
| 0.037 | 0.052 | 0.046 | 0.044 | 0.039 | 0.051 | 0.050 | 0.027 | 0.029 | 0.038 | 0.035 | 0.037 |

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|---|---|---|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| m | m | m | 0.044 | 0.051 | 0.052 | 0.053 | 0.033 | 0.043 | 0.035 | 0.043 | 0.038 |
|---|---|---|-------|-------|-------|-------|-------|-------|-------|-------|-------|

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|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| 0.034 | 0.045 | 0.042 | 0.047 | 0.047 | 0.050 | 0.053 | 0.036 | 0.047 | 0.034 | 0.046 | 0.047 |
|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|

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|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| 0.049 | 0.053 | 0.049 | 0.044 | 0.053 | 0.040 | 0.029 | 0.021 | 0.022 | 0.030 | 0.030 | 0.025 |
| 0.049 | 0.062 | 0.047 | 0.044 | 0.054 | 0.045 | 0.028 | 0.028 | 0.021 | 0.031 | 0.034 | 0.020 |
| 0.051 | 0.055 | 0.048 | 0.044 | 0.055 | 0.045 | 0.027 | 0.021 | 0.026 | 0.030 | 0.030 | 0.024 |
| 0.050 | 0.052 | 0.046 | 0.043 | 0.055 | 0.043 | 0.022 | 0.022 | 0.025 | 0.026 | 0.028 | 0.025 |
| 0.050 | 0.054 | 0.048 | 0.043 | 0.053 | 0.044 | 0.026 | 0.022 | 0.019 | 0.028 | 0.028 | 0.024 |

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|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| 0.049 | 0.053 | 0.041 | 0.048 | 0.058 | 0.052 | 0.049 | 0.041 | 0.041 | 0.040 | 0.043 | 0.025 |
| 0.048 | 0.051 | 0.040 | 0.045 | 0.056 | 0.051 | 0.048 | 0.041 | 0.041 | 0.040 | 0.041 | 0.023 |

| | | | | | | | | | | | |
|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| 0.049 | 0.049 | 0.042 | 0.044 | 0.053 | 0.047 | 0.028 | 0.040 | 0.032 | 0.037 | 0.047 | 0.023 |
| 0.045 | 0.056 | 0.036 | 0.044 | 0.054 | 0.049 | 0.044 | 0.040 | 0.043 | 0.039 | 0.042 | 0.029 |
| 0.053 | 0.057 | 0.043 | 0.045 | 0.053 | 0.048 | 0.038 | 0.037 | 0.025 | 0.036 | 0.042 | 0.024 |
| 0.037 | 0.054 | 0.057 | 0.046 | 0.056 | 0.047 | 0.042 | 0.025 | 0.030 | 0.041 | 0.035 | 0.024 |
| 0.036 | 0.049 | 0.047 | 0.042 | 0.042 | 0.046 | 0.043 | 0.024 | 0.026 | 0.032 | 0.030 | 0.025 |
| 0.035 | 0.054 | 0.045 | 0.042 | 0.052 | 0.045 | 0.040 | 0.030 | 0.022 | 0.033 | 0.033 | 0.028 |
| 0.050 | 0.051 | 0.045 | 0.041 | 0.052 | 0.042 | 0.019 | 0.022 | 0.027 | 0.027 | 0.028 | 0.025 |

| 31-Mar | 1-Apr | 2-Apr | 3-Apr | 4-Apr | 5-Apr | 6-Apr | 7-Apr | 8-Apr | 9-Apr | 10-Apr | 11-Apr |
|--------|-------|-------|-------|-------|-------|-------|-------|-------|-------|--------|--------|
| 0.020 | 0.035 | 0.030 | 0.025 | 0.024 | 0.028 | 0.029 | 0.034 | 0.043 | 0.039 | 0.037 | 0.022 |
| 0.031 | 0.046 | 0.042 | 0.036 | 0.033 | 0.040 | 0.043 | 0.048 | 0.060 | 0.054 | 0.047 | 0.030 |
| 0.033 | 0.047 | 0.047 | 0.040 | 0.034 | 0.039 | 0.042 | 0.048 | 0.060 | 0.053 | 0.050 | 0.036 |
| 0.032 | 0.047 | 0.044 | 0.033 | 0.034 | 0.042 | 0.041 | 0.048 | 0.060 | 0.054 | 0.052 | 0.033 |
| 0.035 | 0.049 | 0.047 | 0.041 | 0.035 | 0.045 | 0.045 | 0.049 | 0.061 | 0.054 | 0.047 | 0.033 |
| 0.032 | 0.050 | 0.045 | 0.036 | 0.035 | 0.044 | 0.044 | 0.048 | 0.061 | 0.054 | 0.051 | 0.031 |
| 0.034 | 0.047 | 0.044 | 0.039 | 0.036 | 0.044 | 0.040 | 0.045 | 0.061 | 0.055 | 0.049 | 0.032 |
| | | | | | | | | | | | |
| 0.029 | 0.047 | 0.050 | 0.046 | 0.045 | 0.048 | 0.044 | 0.051 | 0.062 | 0.059 | 0.055 | 0.034 |
| | | | | | | | | | | | |
| 0.032 | 0.048 | 0.047 | 0.045 | 0.045 | 0.046 | 0.045 | 0.050 | 0.060 | 0.059 | 0.049 | 0.030 |
| | | | | | | | | | | | |
| 0.030 | 0.037 | 0.035 | 0.031 | 0.035 | 0.044 | 0.044 | 0.051 | 0.056 | 0.045 | 0.040 | 0.054 |
| 0.031 | 0.031 | 0.035 | 0.036 | 0.033 | 0.043 | 0.046 | 0.049 | 0.056 | 0.044 | 0.046 | 0.041 |
| 0.030 | 0.035 | 0.036 | 0.029 | 0.036 | m | m | 0.052 | 0.058 | 0.047 | 0.038 | 0.053 |
| 0.030 | 0.036 | 0.036 | 0.028 | 0.037 | 0.044 | 0.044 | 0.051 | 0.059 | 0.046 | 0.037 | 0.055 |
| 0.029 | 0.038 | 0.035 | 0.031 | 0.035 | 0.043 | 0.043 | 0.053 | 0.057 | 0.045 | 0.039 | 0.049 |
| | | | | | | | | | | | |
| 0.031 | 0.036 | 0.046 | 0.043 | 0.043 | 0.041 | 0.046 | 0.054 | 0.062 | 0.054 | 0.054 | 0.040 |
| 0.033 | 0.036 | 0.044 | 0.041 | 0.043 | 0.042 | 0.047 | 0.052 | 0.060 | 0.053 | 0.050 | 0.037 |
| | | | | | | | | | | | |
| 0.033 | 0.033 | 0.042 | 0.040 | 0.035 | 0.042 | 0.046 | 0.053 | 0.058 | 0.046 | 0.055 | 0.034 |
| 0.037 | 0.034 | 0.040 | 0.045 | 0.049 | 0.039 | 0.042 | 0.048 | 0.061 | 0.051 | 0.052 | 0.037 |
| 0.031 | 0.032 | 0.043 | 0.042 | 0.031 | 0.042 | 0.045 | 0.052 | 0.059 | 0.047 | 0.055 | 0.039 |
| 0.031 | 0.045 | 0.040 | 0.037 | 0.030 | 0.047 | 0.043 | 0.053 | 0.063 | 0.053 | 0.050 | 0.040 |
| 0.034 | 0.046 | 0.042 | 0.029 | 0.035 | 0.039 | 0.043 | 0.049 | 0.062 | 0.051 | 0.051 | 0.042 |
| 0.028 | 0.043 | 0.040 | 0.037 | 0.029 | 0.036 | 0.041 | 0.050 | 0.059 | 0.050 | 0.050 | 0.038 |
| 0.030 | 0.038 | 0.033 | 0.024 | 0.036 | 0.043 | 0.043 | 0.051 | 0.057 | 0.047 | 0.032 | 0.043 |

| 12-Apr | 13-Apr | 14-Apr | 15-Apr | 16-Apr | 17-Apr | 18-Apr | 19-Apr | 20-Apr | 21-Apr | 22-Apr | 23-Apr |
|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
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|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| 0.032 | 0.036 | 0.033 | 0.038 | 0.033 | 0.026 | 0.030 | 0.025 | 0.027 | 0.021 | 0.027 | 0.041 |
| 0.046 | 0.054 | 0.046 | 0.052 | 0.049 | 0.039 | 0.046 | 0.041 | 0.043 | 0.030 | 0.035 | 0.054 |
| 0.050 | 0.050 | 0.047 | 0.051 | 0.045 | 0.053 | 0.048 | 0.041 | 0.040 | 0.036 | 0.045 | 0.053 |
| 0.050 | 0.053 | 0.046 | 0.053 | 0.046 | 0.050 | 0.046 | 0.039 | 0.041 | 0.033 | 0.040 | 0.054 |
| 0.051 | 0.056 | 0.049 | 0.054 | 0.048 | 0.056 | 0.051 | 0.043 | 0.043 | 0.037 | 0.042 | 0.056 |
| 0.050 | 0.051 | 0.046 | 0.052 | 0.045 | 0.043 | 0.046 | 0.039 | 0.041 | 0.029 | 0.037 | 0.054 |
| 0.049 | 0.057 | 0.050 | 0.053 | 0.047 | 0.049 | 0.051 | 0.044 | 0.043 | 0.035 | 0.042 | 0.053 |

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|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| 0.051 | 0.054 | 0.054 | 0.053 | 0.043 | 0.044 | 0.045 | 0.041 | 0.038 | 0.028 | 0.029 | 0.056 |
|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|

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|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| 0.053 | 0.055 | 0.053 | 0.050 | 0.039 | 0.047 | 0.043 | 0.041 | 0.035 | 0.029 | 0.035 | 0.055 |
|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|

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|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| 0.049 | 0.059 | 0.052 | 0.047 | 0.045 | 0.052 | 0.044 | 0.043 | 0.041 | 0.040 | 0.048 | 0.058 |
| 0.051 | 0.055 | 0.053 | 0.047 | 0.040 | 0.049 | 0.044 | 0.041 | 0.038 | 0.037 | 0.047 | 0.060 |
| 0.050 | 0.060 | 0.053 | 0.048 | 0.044 | 0.054 | 0.045 | 0.044 | 0.041 | 0.039 | 0.048 | 0.060 |
| 0.048 | 0.058 | 0.052 | 0.048 | 0.043 | 0.053 | 0.048 | 0.045 | 0.041 | 0.038 | 0.047 | 0.059 |
| 0.049 | 0.059 | 0.051 | 0.047 | 0.046 | 0.053 | 0.044 | 0.043 | 0.040 | 0.039 | 0.047 | 0.057 |

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|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| 0.052 | 0.052 | 0.052 | 0.051 | 0.051 | 0.040 | 0.044 | 0.039 | 0.039 | 0.033 | 0.037 | 0.051 |
| 0.050 | 0.050 | 0.050 | 0.050 | 0.051 | 0.040 | 0.040 | 0.037 | 0.038 | 0.033 | 0.038 | 0.052 |

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|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| 0.055 | 0.050 | 0.056 | 0.046 | 0.047 | 0.040 | 0.047 | 0.036 | 0.034 | 0.037 | 0.037 | 0.049 |
| 0.047 | 0.048 | 0.052 | 0.049 | 0.041 | 0.032 | 0.039 | 0.037 | 0.029 | 0.028 | 0.030 | 0.047 |
| 0.051 | 0.051 | 0.055 | 0.048 | 0.046 | 0.043 | 0.049 | 0.040 | 0.036 | 0.033 | 0.038 | 0.052 |
| 0.054 | 0.050 | 0.048 | 0.050 | 0.032 | 0.054 | 0.047 | 0.044 | 0.035 | 0.039 | 0.049 | 0.056 |
| 0.049 | 0.049 | 0.044 | 0.050 | 0.044 | 0.053 | 0.048 | 0.042 | 0.036 | 0.038 | 0.049 | 0.057 |
| 0.048 | 0.047 | 0.045 | 0.049 | 0.038 | 0.049 | m | m | 0.035 | 0.034 | 0.045 | 0.054 |
| 0.044 | 0.052 | 0.049 | 0.043 | 0.044 | 0.052 | 0.045 | 0.043 | 0.039 | 0.039 | 0.047 | 0.058 |

| 24-Apr | 25-Apr | 26-Apr | 27-Apr | 28-Apr | 29-Apr | 30-Apr | 1-May | 2-May | 3-May | 4-May | 5-May |
|--------|--------|--------|--------|--------|--------|--------|-------|-------|-------|-------|-------|
| 0.030 | 0.039 | 0.029 | 0.018 | 0.010 | 0.020 | 0.029 | 0.024 | 0.030 | 0.029 | 0.034 | 0.035 |
| 0.059 | 0.061 | 0.045 | 0.033 | 0.014 | 0.030 | 0.042 | 0.038 | 0.049 | 0.039 | 0.047 | 0.046 |
| 0.065 | 0.061 | 0.044 | 0.038 | 0.025 | 0.028 | 0.042 | 0.039 | 0.046 | 0.043 | 0.048 | 0.049 |
| 0.064 | 0.062 | 0.047 | 0.035 | 0.018 | 0.029 | 0.044 | 0.039 | 0.048 | 0.040 | 0.047 | 0.048 |
| 0.064 | 0.064 | 0.046 | 0.041 | 0.023 | 0.028 | 0.042 | 0.039 | 0.047 | 0.043 | 0.048 | 0.047 |
| 0.061 | 0.062 | 0.042 | 0.033 | 0.018 | 0.031 | 0.045 | 0.040 | 0.048 | 0.042 | 0.044 | 0.049 |
| 0.063 | 0.063 | 0.042 | 0.039 | 0.021 | m | 0.044 | 0.041 | 0.048 | m | m | m |
| | | | | | | | | | | | |
| 0.059 | 0.066 | 0.052 | 0.033 | 0.029 | 0.040 | 0.045 | 0.040 | 0.047 | 0.038 | 0.046 | 0.049 |
| | | | | | | | | | | | |
| 0.058 | 0.063 | 0.045 | 0.031 | 0.030 | 0.045 | 0.045 | 0.041 | 0.049 | 0.041 | 0.049 | 0.051 |
| | | | | | | | | | | | |
| 0.057 | 0.052 | 0.022 | 0.043 | 0.027 | 0.035 | 0.036 | 0.048 | 0.046 | 0.047 | 0.051 | 0.058 |
| 0.057 | 0.052 | 0.019 | 0.040 | 0.038 | 0.030 | 0.037 | 0.046 | 0.045 | 0.047 | 0.048 | 0.057 |
| 0.059 | 0.054 | 0.023 | 0.042 | 0.028 | 0.036 | 0.035 | 0.047 | 0.045 | 0.046 | 0.050 | 0.059 |
| 0.059 | 0.055 | 0.023 | 0.041 | 0.029 | 0.037 | 0.035 | 0.049 | 0.046 | 0.047 | 0.050 | 0.059 |
| 0.058 | 0.053 | 0.021 | 0.044 | 0.026 | 0.034 | 0.034 | 0.046 | 0.046 | 0.047 | 0.051 | 0.058 |
| | | | | | | | | | | | |
| 0.057 | 0.062 | 0.043 | 0.041 | 0.033 | 0.043 | 0.042 | 0.044 | 0.047 | 0.042 | 0.050 | 0.051 |
| 0.057 | 0.060 | 0.042 | 0.040 | 0.031 | 0.044 | 0.041 | 0.041 | 0.045 | 0.042 | 0.050 | 0.051 |
| | | | | | | | | | | | |
| 0.055 | 0.053 | 0.024 | 0.037 | 0.033 | 0.031 | 0.039 | 0.045 | 0.044 | 0.041 | 0.049 | 0.048 |
| 0.052 | 0.056 | 0.037 | 0.037 | 0.021 | 0.038 | 0.043 | 0.046 | 0.045 | 0.036 | 0.045 | 0.045 |
| 0.055 | 0.055 | 0.025 | 0.036 | 0.031 | 0.034 | 0.039 | 0.045 | 0.044 | 0.041 | 0.049 | 0.055 |
| 0.060 | 0.059 | 0.030 | 0.041 | 0.027 | 0.029 | 0.036 | 0.036 | 0.046 | 0.053 | 0.051 | 0.049 |
| 0.060 | 0.055 | 0.036 | 0.038 | 0.025 | 0.032 | 0.034 | 0.041 | 0.046 | 0.043 | 0.052 | 0.050 |
| 0.057 | 0.056 | 0.038 | 0.039 | 0.022 | 0.026 | 0.039 | 0.036 | 0.045 | 0.043 | 0.051 | 0.049 |
| 0.058 | 0.050 | 0.019 | 0.041 | 0.032 | 0.038 | 0.036 | 0.048 | 0.048 | 0.044 | 0.049 | 0.059 |

| 6-May | 7-May | 8-May | 9-May | 10-May | 11-May | 12-May | 13-May | 14-May | 15-May | 16-May | 17-May |
|----------|----------|----------|----------|--------|--------|--------|--------|--------|--------------|--------|--------|
| 0.038 | 0.040 | 0.034 | 0.038 | 0.027 | 0.030 | 0.043 | 0.047 | 0.039 | 0.030 | 0.035 | 0.031 |
| 0.051 | 0.057 | 0.056 | 0.063 | 0.051 | 0.040 | 0.054 | 0.069 | 0.059 | 0.063 | 0.057 | 0.047 |
| 0.051 | 0.054 | 0.052 | 0.062 | 0.047 | 0.038 | 0.056 | 0.059 | 0.056 | 0.053 | 0.053 | 0.050 |
| 0.052 | 0.056 | 0.052 | 0.059 | 0.047 | 0.042 | 0.055 | 0.064 | 0.056 | 0.053 | 0.056 | 0.051 |
| 0.052 | 0.054 | 0.057 | 0.059 | 0.050 | 0.046 | 0.058 | 0.061 | 0.057 | 0.060 | 0.055 | 0.048 |
| 0.053 | 0.054 | 0.048 | 0.060 | 0.047 | 0.037 | 0.057 | 0.064 | 0.056 | 0.047 | 0.055 | 0.051 |
| m | m | m | m | 0.046 | 0.046 | 0.056 | 0.063 | 0.059 | 0.072 | 0.058 | 0.050 |

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|-------|-------|-------|-------|-------|-------|-------|--------------|-------|-------|-------|-------|
| 0.056 | 0.055 | 0.053 | 0.061 | 0.049 | 0.045 | 0.054 | 0.071 | 0.058 | 0.050 | 0.060 | 0.054 |
|-------|-------|-------|-------|-------|-------|-------|--------------|-------|-------|-------|-------|

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|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| 0.055 | 0.057 | 0.050 | 0.061 | 0.051 | 0.050 | 0.053 | 0.068 | 0.063 | 0.063 | 0.064 | 0.050 |
|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|

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|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| 0.056 | 0.058 | 0.068 | 0.061 | 0.044 | 0.042 | 0.058 | 0.062 | 0.054 | 0.061 | 0.056 | 0.050 |
| 0.060 | 0.056 | 0.063 | 0.052 | 0.041 | 0.035 | 0.058 | 0.059 | 0.054 | 0.058 | 0.055 | 0.052 |
| 0.056 | 0.063 | 0.070 | 0.059 | 0.045 | 0.041 | 0.057 | 0.065 | 0.058 | 0.064 | 0.057 | 0.052 |
| 0.055 | 0.062 | 0.068 | 0.063 | 0.045 | 0.042 | 0.055 | 0.066 | 0.059 | 0.065 | 0.059 | 0.052 |
| 0.055 | 0.059 | 0.069 | 0.062 | 0.045 | 0.039 | 0.055 | 0.062 | 0.054 | 0.061 | 0.056 | 0.049 |

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|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| 0.057 | 0.060 | 0.064 | 0.062 | 0.046 | 0.038 | 0.054 | 0.061 | 0.055 | 0.055 | 0.056 | 0.047 |
| 0.057 | 0.059 | 0.060 | 0.058 | 0.042 | 0.040 | 0.054 | 0.063 | 0.052 | 0.054 | 0.054 | 0.046 |

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|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| 0.052 | 0.057 | 0.057 | 0.056 | 0.039 | 0.040 | 0.049 | 0.057 | 0.049 | 0.052 | 0.054 | 0.051 |
| 0.053 | 0.055 | 0.058 | 0.058 | 0.042 | 0.038 | 0.042 | 0.056 | 0.056 | 0.047 | 0.053 | 0.046 |
| 0.055 | 0.058 | 0.058 | 0.057 | 0.042 | 0.034 | 0.051 | 0.055 | 0.049 | 0.057 | 0.056 | 0.052 |
| 0.053 | 0.057 | 0.058 | 0.061 | 0.042 | 0.038 | 0.059 | 0.057 | 0.053 | 0.053 | 0.053 | 0.052 |
| 0.051 | 0.055 | 0.050 | 0.060 | 0.045 | 0.037 | 0.058 | 0.057 | 0.052 | 0.052 | 0.051 | 0.046 |
| 0.054 | 0.055 | 0.059 | 0.060 | 0.044 | 0.034 | 0.058 | 0.058 | 0.054 | 0.050 | 0.051 | 0.048 |
| 0.054 | 0.061 | 0.060 | 0.055 | 0.040 | 0.047 | 0.051 | 0.058 | 0.054 | 0.058 | 0.052 | 0.048 |

| 18-May | 19-May | 20-May | 21-May | 22-May | 23-May | 24-May | 25-May | 26-May | 27-May |
|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|

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|-------|-------|-------|-------|--|--|--|--|--|--|
| 0.024 | 0.027 | 0.021 | 0.029 | | | | | | |
| 0.052 | 0.049 | 0.039 | 0.043 | | | | | | |
| 0.047 | 0.024 | 0.039 | 0.043 | | | | | | |
| 0.050 | m | m | 0.044 | | | | | | |
| 0.054 | 0.036 | 0.042 | 0.043 | | | | | | |
| 0.047 | 0.042 | 0.031 | 0.044 | | | | | | |
| 0.056 | 0.040 | 0.043 | 0.044 | | | | | | |

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|-------|-------|-------|-------|--|--|--|--|--|--|
| 0.038 | 0.046 | 0.040 | 0.044 | | | | | | |
|-------|-------|-------|-------|--|--|--|--|--|--|

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|-------|-------|-------|-------|--|--|--|--|--|--|
| 0.037 | 0.046 | 0.047 | 0.041 | | | | | | |
|-------|-------|-------|-------|--|--|--|--|--|--|

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|-------|-------|-------|-------|--|--|--|--|--|--|
| 0.044 | 0.032 | 0.032 | 0.052 | | | | | | |
| 0.047 | 0.038 | 0.035 | 0.053 | | | | | | |
| 0.044 | 0.034 | 0.032 | 0.053 | | | | | | |
| 0.040 | 0.032 | 0.031 | 0.052 | | | | | | |
| 0.042 | 0.027 | 0.030 | 0.050 | | | | | | |

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|-------|-------|-------|-------|--|--|--|--|--|--|
| 0.046 | 0.041 | 0.041 | 0.049 | | | | | | |
| 0.045 | 0.040 | 0.039 | 0.049 | | | | | | |

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|-------|-------|-------|-------|--|--|--|--|--|--|
| 0.043 | 0.040 | 0.038 | 0.046 | | | | | | |
| 0.040 | 0.039 | 0.039 | 0.045 | | | | | | |
| 0.044 | 0.041 | 0.039 | 0.048 | | | | | | |
| 0.044 | 0.026 | 0.036 | 0.045 | | | | | | |
| 0.044 | 0.023 | 0.037 | 0.044 | | | | | | |
| 0.046 | 0.036 | 0.039 | 0.048 | | | | | | |
| 0.029 | 0.020 | 0.028 | 0.052 | | | | | | |