

# 2023 Q2 (April-June) Air Quality Monitoring Results



## Air Quality Health Index (AQHI) Ratings

The AQHI is calculated by the Government of Alberta using data collected at FAP air monitoring stations. The AQHI is a measure of air quality as it pertains to human health.

AQHI levels are low, moderate, high or very high. Risk to health increases as the index level rises.

Visit our [Alberta Quality Health Index](#) more information. Seven of FAP's 10 continuous air monitoring stations monitor substances whereby the AQHI can be calculated.

| FAP – 2023 Q2      |                 | Risk Level (% of time in each) |             |            |            |
|--------------------|-----------------|--------------------------------|-------------|------------|------------|
| Station Name       | Hours Monitored | Low                            | Moderate    | High       | Very High  |
| Bruderheim         | 2122            | 78.61%                         | 17.34%      | 1.22%      | 2.83%      |
| Elk Island         | 2133            | 78.06%                         | 16.45%      | 3.52%      | 1.97%      |
| Fort Saskatchewan  | 2086            | 74.69%                         | 18.79%      | 3.74%      | 2.78%      |
| Gibbons            | 2107            | 76.27%                         | 18.98%      | 3.85%      | 0.90%      |
| Lamont             | 2149            | 77.71%                         | 16.94%      | 3.68%      | 1.67%      |
| Redwater           | 2054            | 79.45%                         | 14.61%      | 3.21%      | 2.73%      |
| Newbrook*          | 2132            | 80.68%                         | 14.54%      | 2.25%      | 2.53%      |
| <b>Total hours</b> | <b>14783</b>    | <b>11520</b>                   | <b>2485</b> | <b>453</b> | <b>325</b> |

\*The Keith Purves Portable station is located near Newbrook.

## Hours with a High or Very High Risk AQHI Rating

| FAP Continuous Air Quality Monitoring Station |            |                |            |                |            |                |           |                |           |                |           |                |           |                |             |                                     |
|---|------------|----------------|------------|----------------|------------|----------------|-----------|----------------|-----------|----------------|-----------|----------------|-----------|----------------|-------------|-------------------------------------|
| Event Dates                                   | Bruderheim |                | Elk Island |                | Fort Sask. |                | Gibbons   |                | Lamont    |                | Redwater  |                | Newbrook  |                | Total Hours | Attributed Cause                    |
|   | High Risk  | Very High Risk | High Risk  | Very High Risk | High Risk  | Very High Risk | High Risk | Very High Risk | High Risk | Very High Risk | High Risk | Very High Risk | High Risk | Very High Risk |             |                                     |
| Apr 1   |            |                |            |                | 1          |                |           |                |           |                |           |                |           |                | 1           |                                     |
| May 16-23                                     | 12         | 60             | 32         | 42             | 34         | 58             | 37        | 19             | 29        | 35             | 20        | 56             | 19        | 54             | 361         | Wildfire smoke and summer-time smog |
| May 27-28, 31                                 | 3          |                | 3          |                | 1          |                | 2         |                | 6         |                |           |                |           |                | 9           | Wildfire smoke                      |
| June 7-9                                      | 7          |                | 20         |                | 16         |                | 11        |                | 12        |                | 5         |                | 5         |                | 49          | Wildfire smoke and summer-time smog |
| June 10-16                                    | 4          |                | 18         |                | 24         |                | 31        |                | 29        | 1              | 40        |                | 24        |                | 149         | Wildfire smoke                      |
| June 19                                       |            |                | 2          |                | 2          |                |           |                | 1         |                | 1         |                |           |                | 10          | Wildfire smoke                      |
| June 29                                       |            |                |            |                |            |                |           |                | 2         |                |           |                |           |                | 4           | Summertime smog                     |
| <b>Total Hours</b>                            | 26         | 60             | 75         | 42             | 78         | 58             | 81        | 19             | 79        | 36             | 66        | 56             | 48        | 54             | <b>583</b>  |                                     |

### Summary of Exceedances

There were 544 exceedances of the 1-hr and 88 exceedances of the 24-hour Alberta Ambient Air Quality Objectives (AAQOs) in the second quarter of 2023.

| One Hour Exceedances    |             |            |                                    |
|-------------------------|-------------|------------|------------------------------------|
| Parameter               | Exceedances | Date       | Attributed Cause                   |
| <b>Benzene</b>          | 3           | May 12-15  | Unidentified                       |
| <b>PM<sub>2.5</sub></b> | 393         | May 16-23  | Wildfire smoke                     |
| <b>H<sub>2</sub>S</b>   | 1           | May 25     | Undetermined                       |
| <b>Ozone</b>            | 8           | May 19,21  | Wildfire smoke and summertime smog |
| <b>Ozone</b>            | 10          | May 27, 28 | Wildfire smoke and summertime smog |
| <b>PM<sub>2.5</sub></b> | 101         | June 8-19  | Wildfire smoke                     |
| <b>Ozone</b>            | 27          | June 8-13  | Wildfire smoke and summertime smog |
| <b>Ozone</b>            | 1           | June 29    | Summertime smog                    |

| 24-Hour Exceedances     |             |           |                                    |
|-------------------------|-------------|-----------|------------------------------------|
| Parameter               | Exceedances | Date      | Attributed Cause                   |
| <b>PM<sub>2.5</sub></b> | 2           | April 1   | Regional meteorological conditions |
| <b>PM<sub>2.5</sub></b> | 35          | May 16-25 | Wildfire smoke                     |
| <b>PM<sub>2.5</sub></b> | 6           | June 2-3  | Wildfire smoke                     |
| <b>PM<sub>2.5</sub></b> | 42          | June 8-14 | Wildfire smoke                     |
| <b>PM<sub>2.5</sub></b> | 3           | June 16   | Wildfire smoke                     |