# Radon Testing 2024

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## What is Radon?

Radon is an odorless, colorless, tasteless gas that is naturally occurring.

Radon is created when uranium in rocks breaks down.

Radon is radioactive

# Why Do We Care About Radon?

The radioactive radon gas is inhaled and can cause lung cancer if there is prolonged exposure.

Radon exposure is the second leading cause of lung cancer (behind smoking).

Not everyone exposed to radon will develop lung cancer. There are a number of factors that determine the health risk, including individual differences, exposure dose, and exposure time.

The highest chance for exposure is at home, but school is the second highest chance for exposure for school age children.

# Radon Testing Procedures

Schools are not required to test for radon, but the Minnesota Department of Health (MDH) encourages testing.

Districts that choose to test must follow the MDH "Radon Testing Plan" with testing conducted by licensed individuals.

ISD 709 tests for radon every 5 years.

IEA, Inc was hired to perform radon testing in FY24.

Results are required to be presented to the school board and to MDH.

# MDH Radon Result Requirements

| RESULTS (pCi/L)  | RECOMMENDED ACTION   |  |  |
|--|--|--|--|
| LESS THAN 4  | Re-test after changes to foundation or HVAC and every 5 years  |  |  |
| GREATER THAN 4   | Conduct CRM short-term testing during winter months  |  |  |
| LESS THAN 4 ( <u>DURING OCCUPANCY</u> ) AFTER<br>CRM TESTING | Repeat CRM testing if not conducted during winter or if conducted during abnormal ventilation. Otherwise consider re-testing after changes to foundation or HVAC and every 5 years |  |  |
| GREATER THAN 4 ( <u>DURING OCCUPANCY</u> ) AFTER CRM TESTING | Reduce radon in rooms to less than 4 through radon mitigation.  Conduct CRM testing to verify radon reduction.   |  |  |

CRM: Continuous Radon Monitor

Pico = 0.000 000 000 001

# 2024 Radon Testing Results

All schools had passing radon testing results below the MDH action level of 4.0 pCi/L (picocuries per liter) (Pico = 0.000 000 001)

The initial round of short-term testing showed two rooms that needed follow up continuous radon monitoring (CRM) testing. The follow up testing was well below the 4.0 pCi/L action level.

Congdon Park Elementary rm 126B (small staff workroom) - CRM 1.2 pCi/L

Lincoln Park Middle School rm 1532 (small calming room) - CRM 2.4 pCi/L

# **Building Specific Testing Results**

Congdon Park Elementary School

### **Short-Term Monitoring**

| TABLE 11: CONGDON PARK ELEMENTARY SCHOOL RANGE OF RESULTS |  |  |  |  |  |
|---|--|--|--|--|--|
|   | $0.0 - 1.9 \text{ pCi/L}$ $2.0 - 2.9 \text{ pCi/L}$ $3.0 - 3.9 \text{ pCi/L}$ $\geq 4 \text{ pCi/L}$ |  |  |  |  |
| <b>Number of Tests</b> 40 5 0 1 1                         |  |  |  |  |  |
| <sup>1</sup> Room 126B – 5.0 pCi/L                        |  |  |  |  |  |

### **Continuous Monitoring**

| Room | Day 1 Average |                  | Day 2 Average    |                  | Overall Average  |                  |
|------|---------------|------------------|------------------|------------------|------------------|------------------|
|      | (pCi/L)       |                  | (pCi/L)          |                  | (pCi/L)          |                  |
| 126B | ¹0.2          | <sup>2</sup> 5.1 | <sup>1</sup> 1.7 | <sup>2</sup> 5.9 | <sup>1</sup> 1.2 | <sup>2</sup> 5.5 |

Readings during occupied times: 7 a.m. to 5 p.m.

Readings during unoccupied times: 12 a.m. to 7 a.m. and 5 p.m. to 11:59 p.m.

Lincoln Park Middle School

### **Short-Term Monitoring**

| TABLE 8: LINCOLN PARK MIDDLE SCHOOL RANGE OF RESULTS       |  |  |  |  |  |
|--|--|--|--|--|--|
|  | $0.0 - 1.9 \text{ pCi/L}$ $2.0 - 2.9 \text{ pCi/L}$ $3.0 - 3.9 \text{ pCi/L}$ $\geq 4 \text{ pCi/L}$ |  |  |  |  |
| Number of Tests         81         9         0         1 1 |  |  |  |  |  |
| <sup>1</sup> Room 1532 – 4.1 pCi/L                         |  |  |  |  |  |

### **Continuous Monitoring**

| Room | Day 1 Average    |                  | Day 2 Average    |                  | Overall Average  |                  |
|------|------------------|------------------|------------------|------------------|------------------|------------------|
|      | (pCi/L)          |                  | (pCi/L)          |                  | (pCi/L)          |                  |
| 1532 | <sup>1</sup> 2.0 | <sup>2</sup> 6.5 | <sup>1</sup> 2.9 | <sup>2</sup> 6.5 | <sup>1</sup> 2.4 | <sup>2</sup> 6.5 |

Readings during occupied times: 7 a.m. to 5 p.m.

Readings during unoccupied times: 12 a.m. to 7 a.m. and 5 p.m. to 11:59 p.m.

## Denfeld High School

| TABLE 2: DENFELD HIGH SCHOOL RANGE OF RESULTS  |  |  |  |  |  |
|--|--|--|--|--|--|
| $0.0 - 1.9 \text{ pCi/L}$ $2.0 - 2.9 \text{ pCi/L}$ $3.0 - 3.9 \text{ pCi/L}$ $\geq 4 \text{ pCi/L}$ |  |  |  |  |  |
| <b>Number of Tests</b> 123 1 0 0 1   |  |  |  |  |  |
| <sup>1</sup> All below action level  |  |  |  |  |  |

### East High School

| TABLE 14: DULUTH EAST HIGH SCHOOL RANGE OF RESULTS   |  |  |  |  |  |
|--|--|--|--|--|--|
| $0.0 - 1.9 \text{ pCi/L}$ $2.0 - 2.9 \text{ pCi/L}$ $3.0 - 3.9 \text{ pCi/L}$ $\geq 4 \text{ pCi/L}$ |  |  |  |  |  |
| <b>Number of Tests</b> 126 0 0 0 1   |  |  |  |  |  |
| <sup>1</sup> All below action level  |  |  |  |  |  |

#### Ordean East Middle School

| TABLE 5: ORDEAN EAST MIDDLE SCHOOL RANGE OF RESULTS  |  |  |  |  |  |
|--|--|--|--|--|--|
| $0.0 - 1.9 \text{ pCi/L}$ $2.0 - 2.9 \text{ pCi/L}$ $3.0 - 3.9 \text{ pCi/L}$ $\geq 4 \text{ pCi/L}$ |  |  |  |  |  |
| Number of Tests 83 1 0 0 1   |  |  |  |  |  |
| <sup>1</sup> All below action level  |  |  |  |  |  |

## Rockridge Academy

| TABLE 7: ROCKRIDGE ACADEMY RANGE OF RESULTS |  |  |  |  |  |  |
|---|--|--|--|--|--|--|
|   | $0.0-1.9 \text{ pCi/L}$ $2.0-2.9 \text{ pCi/L}$ $3.0-3.9 \text{ pCi/L}$ $\geq 4 \text{ pCi/L}$ |  |  |  |  |  |
| Number of Tests 50 1 0 0 1                  |  |  |  |  |  |  |
| <sup>1</sup> All below action level         |  |  |  |  |  |  |

### Homecroft Elementary School

| TABLE 9: HOMECROFT ELEMENTARY SCHOOL RANGE OF RESULTS  |  |  |  |  |  |
|--|--|--|--|--|--|
| $0.0 - 1.9 \text{ pCi/L}$ $2.0 - 2.9 \text{ pCi/L}$ $3.0 - 3.9 \text{ pCi/L}$ $\geq 4 \text{ pCi/L}$ |  |  |  |  |  |
| <b>Number of Tests</b> 35 0 1 0 <sup>1</sup>   |  |  |  |  |  |
| <sup>1</sup> All below action level  |  |  |  |  |  |

### Lakewood Elementary School

| TABLE 3: LAKEWOOD ELEMENTARY SCHOOL RANGE OF RESULTS |  |  |  |  |  |  |
|--|--|--|--|--|--|--|
|  | $0.0 - 1.9 \text{ pCi/L}$ $2.0 - 2.9 \text{ pCi/L}$ $3.0 - 3.9 \text{ pCi/L}$ $\geq 4 \text{ pCi/L}$ |  |  |  |  |  |
| <b>Number of Tests</b> 38 0 0 0 0 1                  |  |  |  |  |  |  |
| <sup>1</sup> All below action level                  |  |  |  |  |  |  |

Laura MacArthur Elementary School

| TABLE 1: LAURA MACARTHUR ELEMENTARY SCHOOL RANGE OF RESULTS |  |  |  |  |  |
|---|--|--|--|--|--|
|   | $0.0 - 1.9 \text{ pCi/L}$ $2.0 - 2.9 \text{ pCi/L}$ $3.0 - 3.9 \text{ pCi/L}$ $\geq 4 \text{ pCi/L}$ |  |  |  |  |
| <b>Number of Tests</b> 55 0 0 0 0 1                         |  |  |  |  |  |
| <sup>1</sup> All below action level                         |  |  |  |  |  |

### Lester Park Elementary School

| TABLE 10: LESTER PARK ELEMENTARY SCHOOL RANGE OF RESULTS |                 |                 |                 |           |
|--|-----------------|-----------------|-----------------|-----------|
|  | 0.0 – 1.9 pCi/L | 2.0 – 2.9 pCi/L | 3.0 – 3.9 pCi/L | ≥ 4 pCi/L |
| Number of Tests  | 45              | 0               | 0               | 0 1       |
| <sup>1</sup> All below action level                      |                 |                 |                 |           |

### Lowell Elementary School

| TABLE 4: LOWELL ELEMENTARY SCHOOL RANGE OF RESULTS |                 |                 |                 |                |
|--|-----------------|-----------------|-----------------|----------------|
|  | 0.0 – 1.9 pCi/L | 2.0 – 2.9 pCi/L | 3.0 – 3.9 pCi/L | ≥ 4 pCi/L      |
| Number of Tests                                    | 83              | 0               | 0               | 0 <sup>1</sup> |
| <sup>1</sup> All below action level                |                 |                 |                 |                |

### Myers-Wilkins Elementary School

| TABLE 6: MYERS-WILKINS ELEMENTARY SCHOOL RANGE OF RESULTS |                 |                 |                 |           |
|---|-----------------|-----------------|-----------------|-----------|
|   | 0.0 – 1.9 pCi/L | 2.0 – 2.9 pCi/L | 3.0 – 3.9 pCi/L | ≥ 4 pCi/L |
| Number of Tests   | 41              | 0               | 0               | 0 1       |
| <sup>1</sup> All below action level                       |                 |                 |                 |           |

### Piedmont Elementary School

| TABLE 12: PIEDMONT ELEMENTARY SCHOOL RANGE OF RESULTS |                 |                 |                 |           |
|---|-----------------|-----------------|-----------------|-----------|
|   | 0.0 – 1.9 pCi/L | 2.0 – 2.9 pCi/L | 3.0 – 3.9 pCi/L | ≥ 4 pCi/L |
| Number of Tests                                       | 57              | 0               | 0               | 0 1       |
| <sup>1</sup> All below action level                   |                 |                 |                 |           |

### Stowe Elementary School

| TABLE 13: STOWE ELEMENTARY SCHOOL RANGE OF RESULTS |                 |                 |                 |           |
|--|-----------------|-----------------|-----------------|-----------|
|  | 0.0 – 1.9 pCi/L | 2.0 – 2.9 pCi/L | 3.0 – 3.9 pCi/L | ≥ 4 pCi/L |
| Number of Tests                                    | 63              | 0               | 0               | 0 1       |
| <sup>1</sup> All below action level                |                 |                 |                 |           |

# Thank you!

References: Radon Testing In Minnesota Schools. Minnesota Department of Health. April, 2021.