Update on Pre-Regulatory Landfill Parks (Soil Contamination) – March 2025 Playground Reports and Ongoing Waste Delineation Work

Background

April 2024
The decision to close playgrounds at the 5 parks was made out of an abundance of caution, through collaboration with NCDEQ, and the encouragement of the Public Community Working Group.

Over the next several months, the existing 14”-18” of playground materials (mulch, soil and rock) were removed, and the deeper soils underneath each playground were tested.

March 2025
The results of those deeper soil tests for each playground are provided in 5 separate park reports.

What were the playground soils tested for?

- Playground Soil Sampling – each site was analyzed for the following:
  - Volatile Organic Compounds
  - Semi-Volatile Organic Compounds
  - Metals
  - Mercury
  - Hexavalent Chromium
  - 1,4-Dioxane
  - Ammonia
  - Nitrate-N & Sulfate

At all of the playgrounds:

- Excavation work created dust particles in the air, which was monitored at every playground site. **No samples collected were over detection limits.**

- Once the existing 14-18” of mulch, soil, and gravel were removed, evidence of waste debris, such as brick, asphalt, glass, and plastic was found underneath every location.

Specific Playground Report Summaries:

Northgate Park
- 3 playground areas were categorized and evaluated as follows:
  - **1-SB** – Small play area, next to the shelter

        - **No levels of lead or other risk characteristics that exceed limits for residential use were found**
    - **2-SB** – Largest play area
        - **3 of 14 samples showed lead at or exceeding the USEPA health-based screening level of 200 milligrams per kilogram.**
        - Naturally occurring metal, manganese, found in one sample that exceeds normal levels. Since manganese occurs naturally in this environment, background sampling is currently being conducted to determine if any further action should be taken.
    - **3-SB** – Swing sets, next to parking lot
        - **No levels of lead or other risk characteristics that exceed limits for residential use were found.**

Lyon Park

- 2 playground areas were categorized and evaluated as follows:
    - **1-SB** – Swing Set area
    - **2-SB** – Larger playground, nearest the parking lot, off of W. Lakewood Ave.
- **At both playgrounds, no levels of lead or other risk characteristics that exceed limits for residential use were found.**

East Durham Park

- There is only 1 playground area on site, and it is categorized as **1-SB**
    - **6 of 14 samples showed lead at or exceeding the USEPA health-based screening level of 200 milligrams per kilogram.**
    - **No levels of other risk characteristics that exceed limits for residential use were found**.

East End Park

- 2 playground areas were categorized and evaluated as follows:
    - **1-SB** – Small play area, closest to parking lot
        - **2 of the 6 samples showed lead at or exceeding the USEPA health-based screening level of 200 milligrams per kilogram.**
        - **No levels of other risk characteristics that exceed limits for residential use were found**.
    - **2-SB** – Larger playground
        - **No levels of lead or other risk characteristics that exceed limits for residential use were found**.

Walltown Park

- There is only 1 playground area on site, and it is categorized as **1-SB**

- **1 of the 11 samples showed lead at or exceeding the USEPA health-based screening level of 200 milligrams per kilogram.**
- **No levels of other risk characteristics that exceed limits for residential use were found**.

Continued Testing and Reports

1. **Air, Vapor, and Water Monitoring (Repeated over 6-9 months)**
   At each park, air, vapor, and water monitoring analysis will take place (above and below the surface), using gas probes and monitoring wells. This process may be repeated over the next 6-9 months to make sure there's enough sample readings.

- Gas samples will be analyzed for:
  - Volatile organic compounds
  - Methane
  - Hydrogen Sulfide
  - Mercury
- Groundwater, surface water, and sediment samples will be analyzed for:
  - Volatile organic compounds
  - Semi-volatile organic compounds
  - 1,4 Dioxane
  - Metals (17)
  - Ammonia
  - Nitrate-N & Sulfate

- Data from this analysis will give us more needed information on the conditions (above and below the surface) of each park and the playgrounds.

- East Durham Park air and water monitoring began in March 2025. It's anticipated to take about 2 weeks, with a findings report to be available in May 2025.
  - Estimated timelines for all other parks are forthcoming.
  - We anticipate receiving the same findings report for the remaining 4 parks sometime in July 2025.

2. **Waste Delineation Activities Reports (Spring 2025)**

- In December 2024, we received the East Durham Waste Delineation Report. This report provided:
  - The estimated boundary of the waste
  - The thickness of waste throughout the boundary
  - There's a smaller waste boundary and less areas with lead and other risk factors than previously thought.
- We anticipate receiving the same report for the remaining 4 parks in March or April, 2025.

3. **Report (May-June 2025)**
    - We anticipate having reports for all 5 parks that will inform us of:
        - The estimated boundary of the waste
        - The thickness of waste throughout the boundary
        - Risk data for above or below ground air, vapor, or water concerns
        - Background sample data reports that provide site-specific background levels for chemicals that will be used to evaluate the cover soils for all 5 parks. Background data will also be used to evaluate the borrow soils before importing them to the sites.

How will all of this testing help the community and the future of the parks/playgrounds?

- These tests, analysis, and data are needed to inform our community conversations and the actions we can take. With further information we may be able to:
    - Re-open areas of some of the parks
    - Re-open some playgrounds and/or relocate
    - Inform residents (via NCDEQ) if waste goes beyond City of Durham properties and into their adjacent private property.
- With all of this data, we can learn about and inform the community on remediation options. We can also determine how to identify funding and spend previously allocated Capital Improvement Program money ($5 million).
- We can continue to have informed conversations with the community and connect them with public health resources.