US Army Corps of Engineers
Chicago District

Chicago Area Waterway System
Dredged Material Management Plan

# What's in the sediment?

**Sediment management:**

Dredge

Sample

Monitor

## Sediment is a mix of soil and water. Sediment from industrial regions typically has higher levels of contamination.

**Illinois EPA regulates sediment based on contaminants:**

| Contaminant | Calumet River Sediment, 2014 (mg/kg) | Calumet Harbor Sediment, 2015 (mg/kg) | Chicago Metro Background in Soil (mg/kg) |
|---|---|---|---|
| Arsenic | 16 - 19 | 6 - 7 | 13 |
| Barium | 53 - 78 | 22 - 26 | 110 |
| Cadmium | 1.5 - 2.4 | 0.5 - 0.6 | 0.6 |
| Chromium | 54 - 64 | 20 - 23 | 16.2 |
| Copper | 55 - 120 | 21 - 27 | 19.6 |
| Lead | 120 - 270 | 34 - 37 | 36 |
| Manganese | 770 - 1600 | 540 - 610 | 636 |
| Mercury | 0.19 - 0.38 | 0.06 - 0.10 | 0.06 |
| Nickel | 31 - 43 | 18 - 22 | 18 |
| Zinc | 400 - 1000 | 120 - 140 | 95 |
| PCBs | 0.16 - 1.7 | <0.08 | Not Available |

**Where does the pollution in the sediment come from?**

- Historical dumping/discharges into the river (before the 1972 Clean Water Act)
- Stormwater runoff and combined sewer overflows

**How does the river become cleaner?**

- Dredging contaminated sediment removes pollution.
- Confining contaminated sediment keeps people and the environment safe.
- Treating wastewater prevents new pollution in the river.

**What do these numbers mean?**

- Lower numbers are better.
- Chicago Metro Background is what's typically found in Chicago soil.
- Ranges reflect variability in sediment quality.
- If uncontrolled, contaminants have increased potential to negatively impact human health and the environment.

**The quality of dredged material affects placement.**

| Material Quality | Open-water placement | Beneficial use | Confined disposal |
|---|---|---|---|
| Meets Clean Water Act standards | ✓ | ✓ | |
| Suitable for beneficial use | | ✓ | ✓ |
| Not suitable for beneficial use | | | ✓ |

Calumet Harbor sediment is *suitable for beneficial uses.*

Calumet River & Cal-Sag Channel sediment must go to confined disposal.

**Open-water placement**

Direct placement into water

**Beneficial use**

Parks

Roadbeds

Urban Redevelopment

Ecosystem Restoration

**Confined disposal**

Material safely enclosed


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