

# Chicago's Lead Crisis: New Policy Approaches

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## COSTS OF LEAD

- In the United States, lead contamination reduces economic output by \$55 billion annually through reduced productivity, increased rates of developmental disorders, and higher crime rates (Attina and Trasande).
- Since children are at higher risk, lead poisoning is particularly damaging for schools and childcare facilities. Frighteningly, over 40% of Illinois schools failed to test for lead in 2017 (Nowicki and Gomez).
- Due to residential segregation and underinvestment in infrastructure, Black communities bear the brunt of lead poisoning. Black children are three times more likely to develop lead poisoning (Clements-Boyd).

## POLICY LANDSCAPE

- Safe Drinking Water Act (1974)
  - **Success:** A threefold increase in contaminants being regulated and reduced pipe corrosion.
  - **Failure:** Lack of context-specific resolutions, funding for enforcement, and fracking regulation.
- Lead and Copper Rule (1991)
  - **Success:** Stricter regulations on lead concentration levels allowed in water across the country.
  - **Failure:** LCR still allows “permissible levels” meaning it doesn't really eradicate lead or copper.
- Public Act 099-0922 (2017)
  - **Success:** Mandated that lead water testing occur in many Chicago Public Schools by the end of 2018.
  - **Failure:** Did not require ongoing lead water testing.

### Corroded Lead Service Line

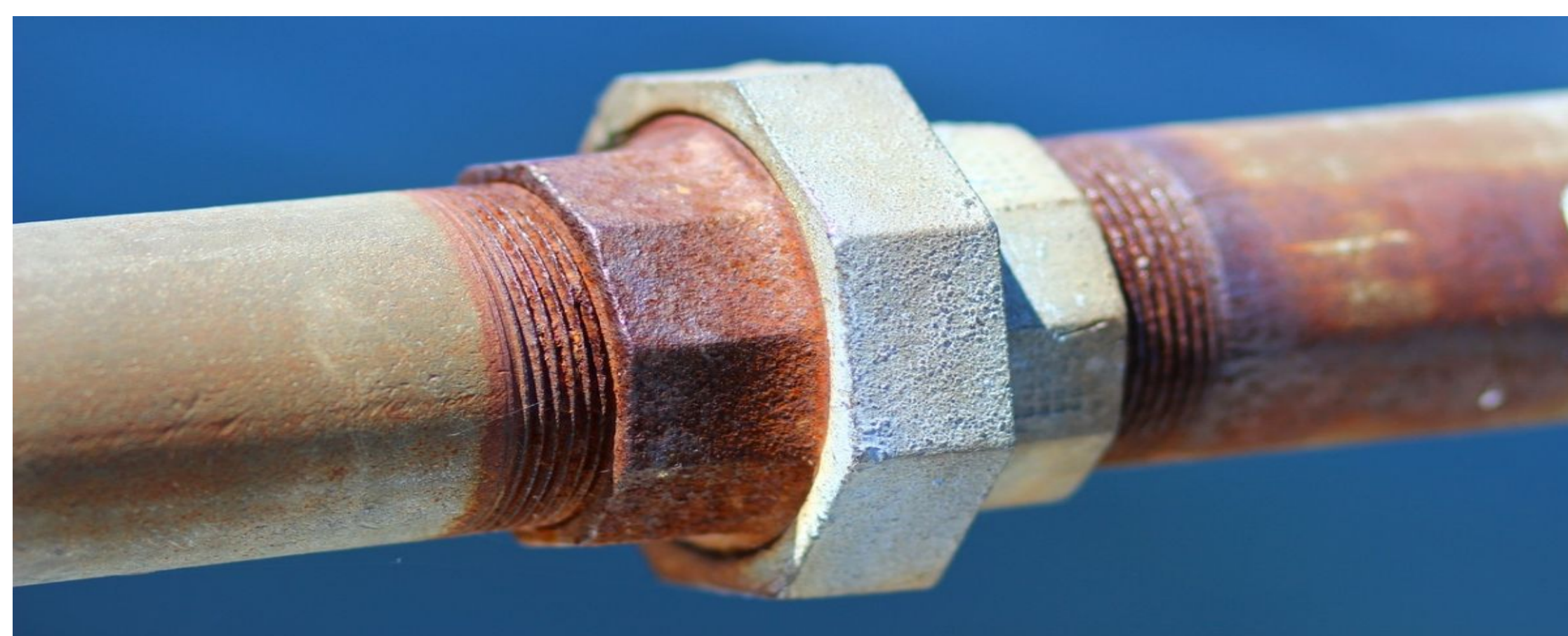
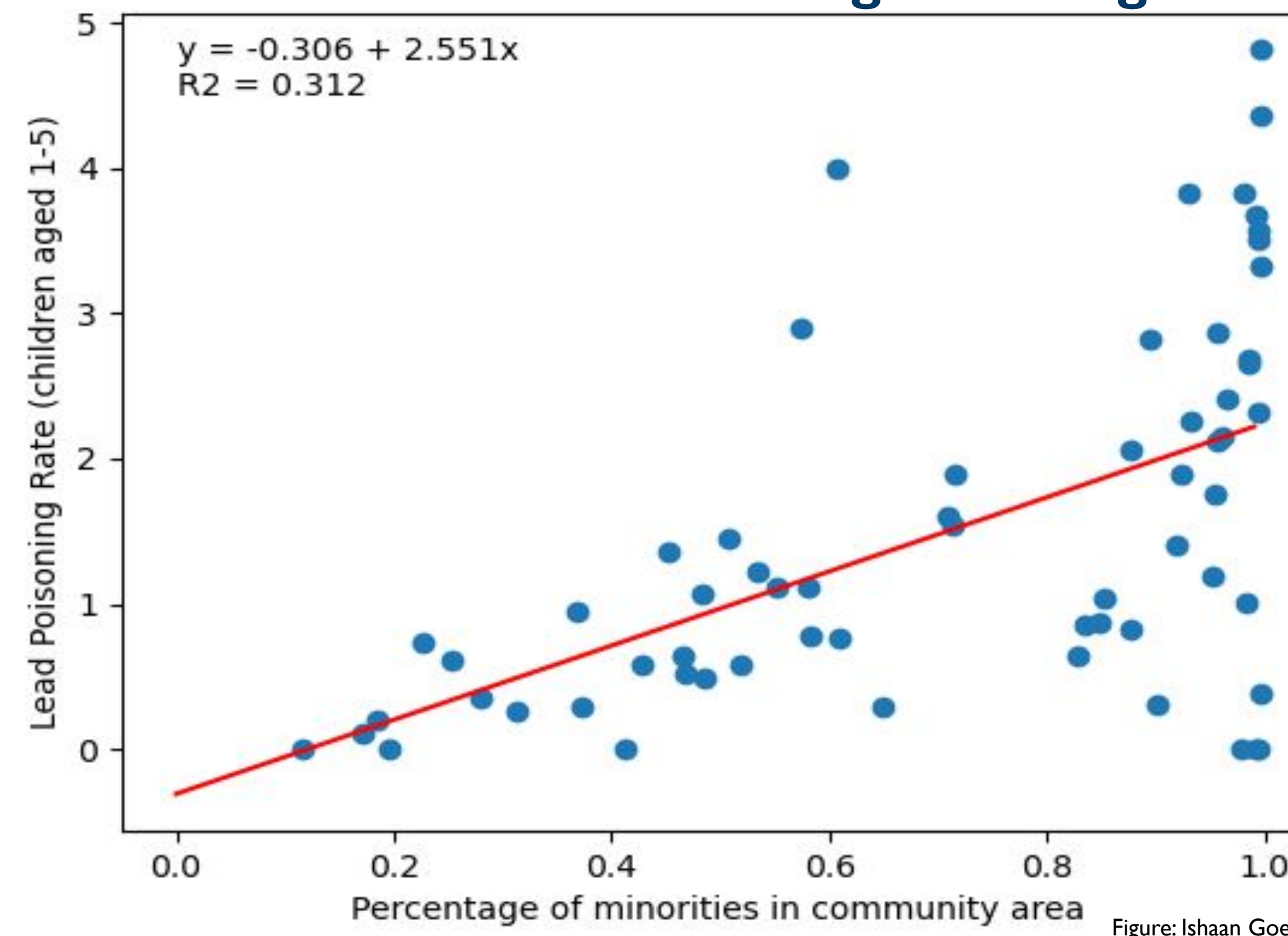


Figure: Alpha Plumbing

## LEAD TESTING

- Since December 2019, Chicago has conducted 33,656 tests for lead contamination. This figure represents just 3.11% of sites and is far too low considering the 400,000 lead pipes that contaminate water across the city (Chicago Department of Finance).
- **Recommendation:** To increase testing awareness Chicago should (1) publish clear graphics and visuals that are easily accessible by all residents and (2) conduct outreach to local community groups (Dana).
- Furthermore, the Public Act 099-0922 should be amended to require yearly, ongoing testing.

### Race and Lead Poisoning in Chicago



## PUBLIC SCHOOLS

- **Recommendation:** public schools receive 90 days to replace water fountains where lead concentration  $\geq 2$  ppm with activated carbon filtered water stations (95% removal rate and is the most affordable option).
- We estimate the maximum cost of installing water bottle filling stations across Chicago Public Schools to be \$3.2 million dollars and \$322,000 annually for filter replacements. Installation cost is feasible considering CPS' budget for 2023 is \$9.4 billion.
- Activated carbon filters could mitigate lifetime earning losses of \$14,284 per person (Verhougstraete et al).

## NEWARK'S POLICY

- Newark mandated lead service line (LSL) replacement at no cost to homeowners through a 2019 ordinance (Cunningham). The law also warranted right of city entry into residences and required proof of replacement during real estate sale.
- They provided transparency on which LSL were replaced, water filters plus orthophosphate for corrosion control.
- Newark expedited their goal to three years. In contrast, Chicago replaced only 280 lines since 2020 (Chase).
- Newark also opted for trenchless LSL replacement, which minimizes disturbance to roads and traffic (Peterson).

### Trenchless Line Replacement

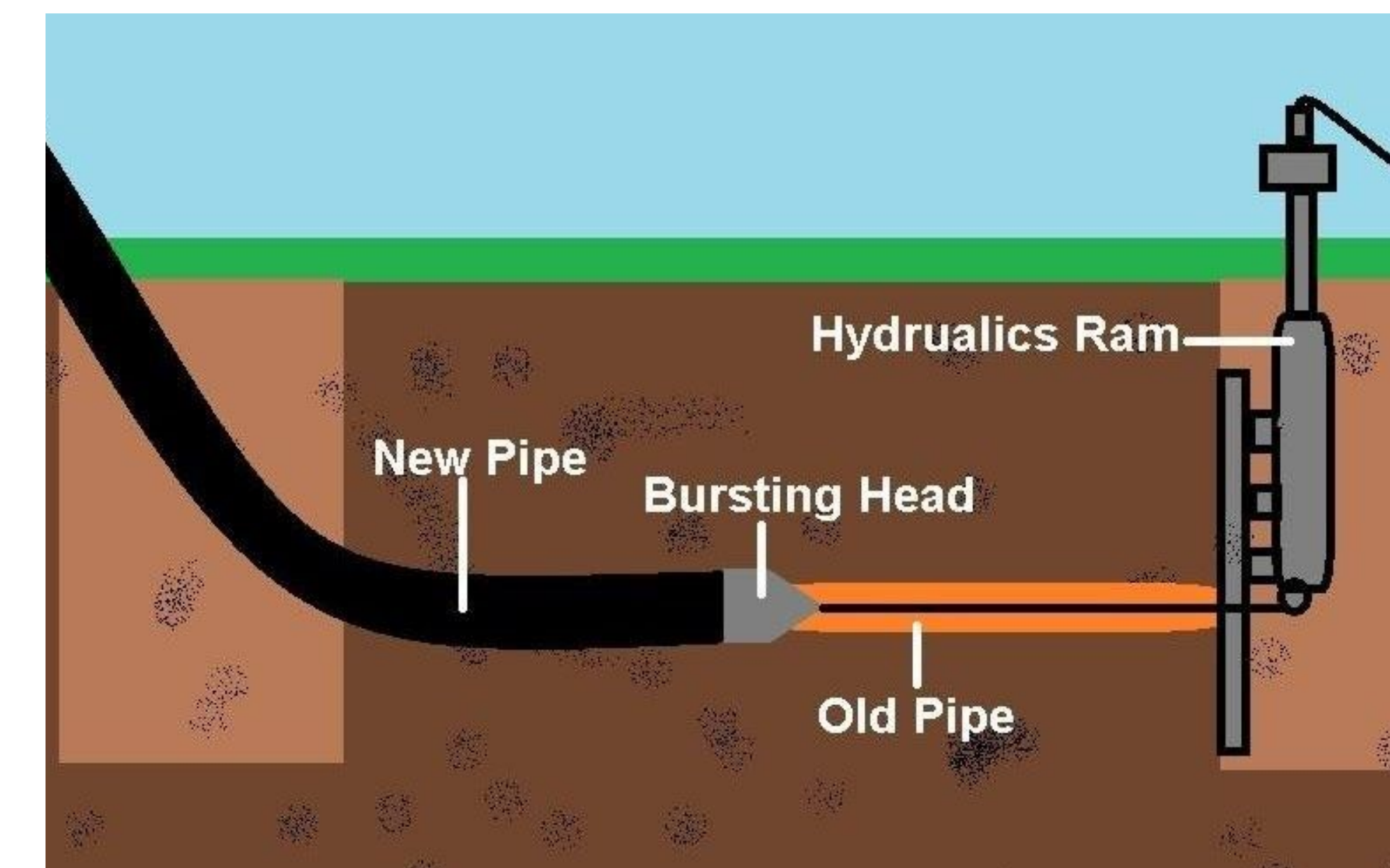


Figure: Plumber of Tucson

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