



Lead in Drinking Water: Lead Service Line Replacement and LCRI

National Lead and Healthy Homes Conference
August 5, 2025



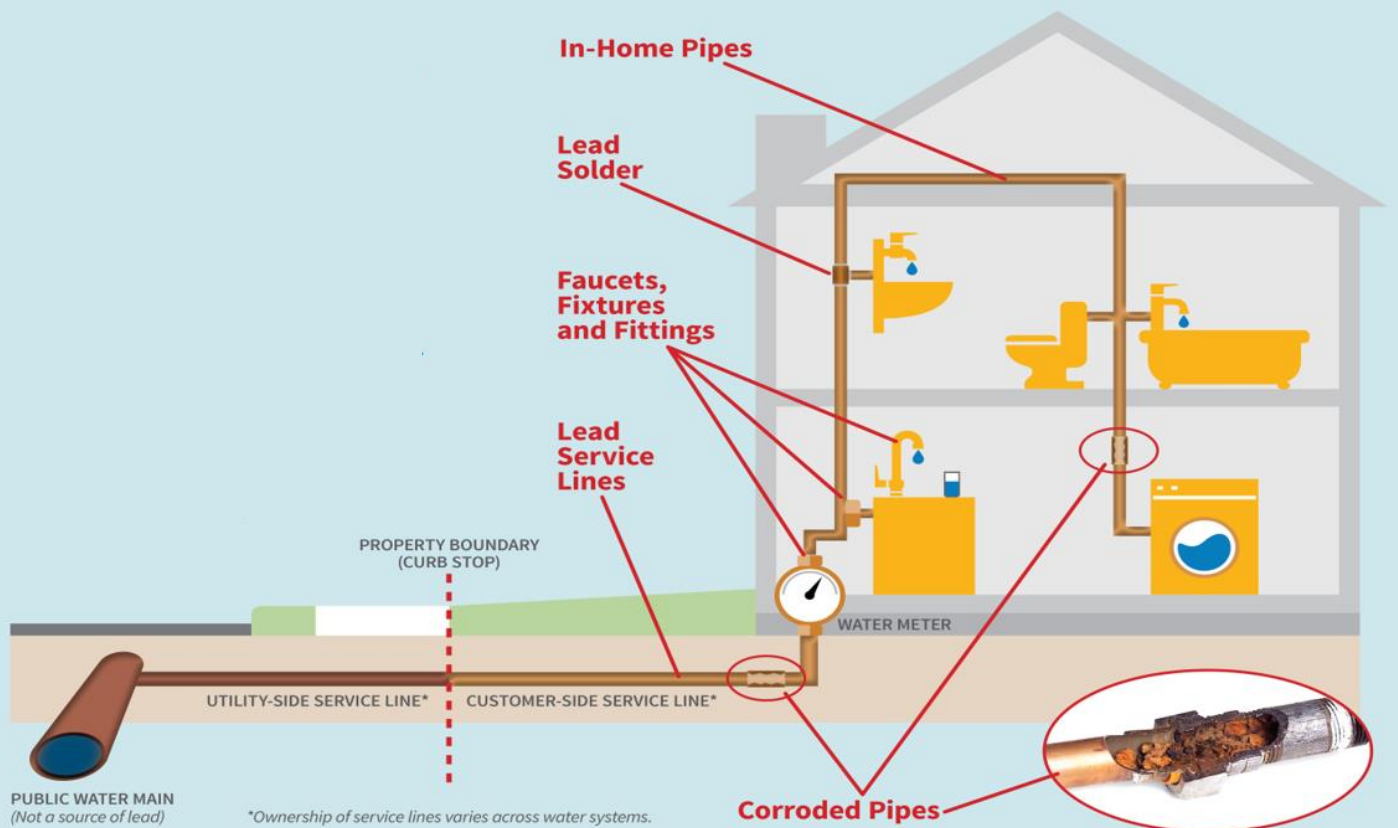
Agenda

- Lead Service Line Replacement 101
- Regulatory Updates
- Legal Landscape

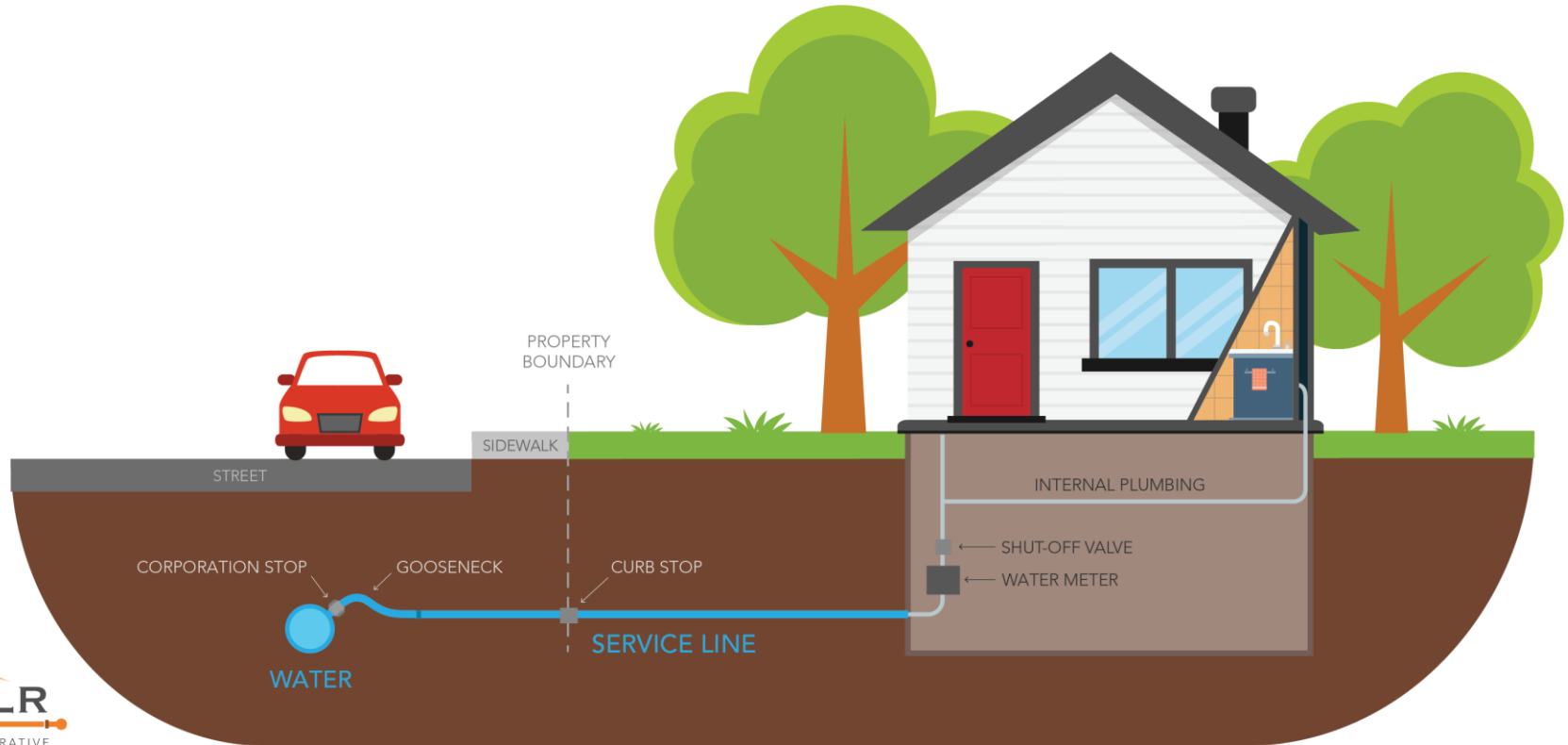


Lead Service Line Replacement 101

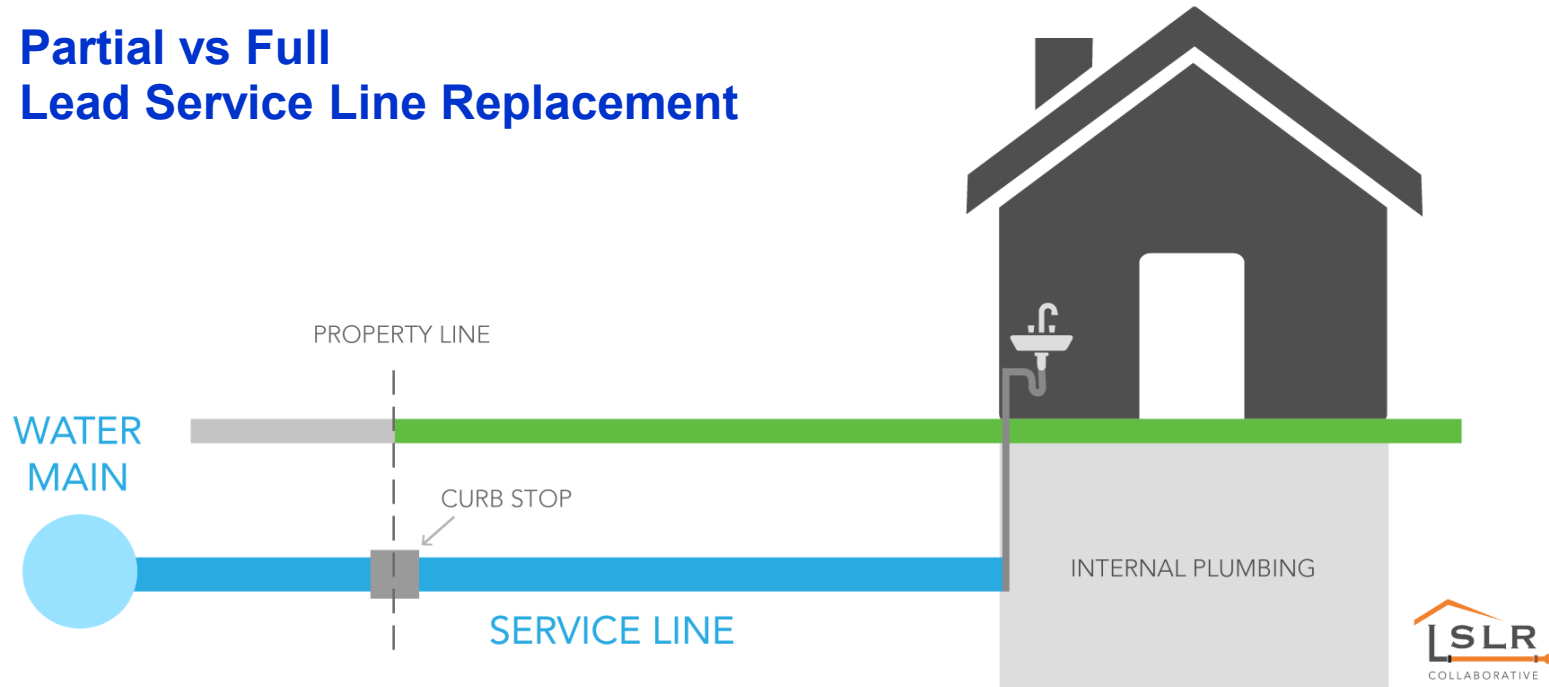
How Lead Gets Into Drinking Water



What Is a Lead Service Line?



Partial vs Full Lead Service Line Replacement



A typical **partial** lead service line replacement is replacing only this part of the service line

A **full** lead service line replacement is replacing the entire service line

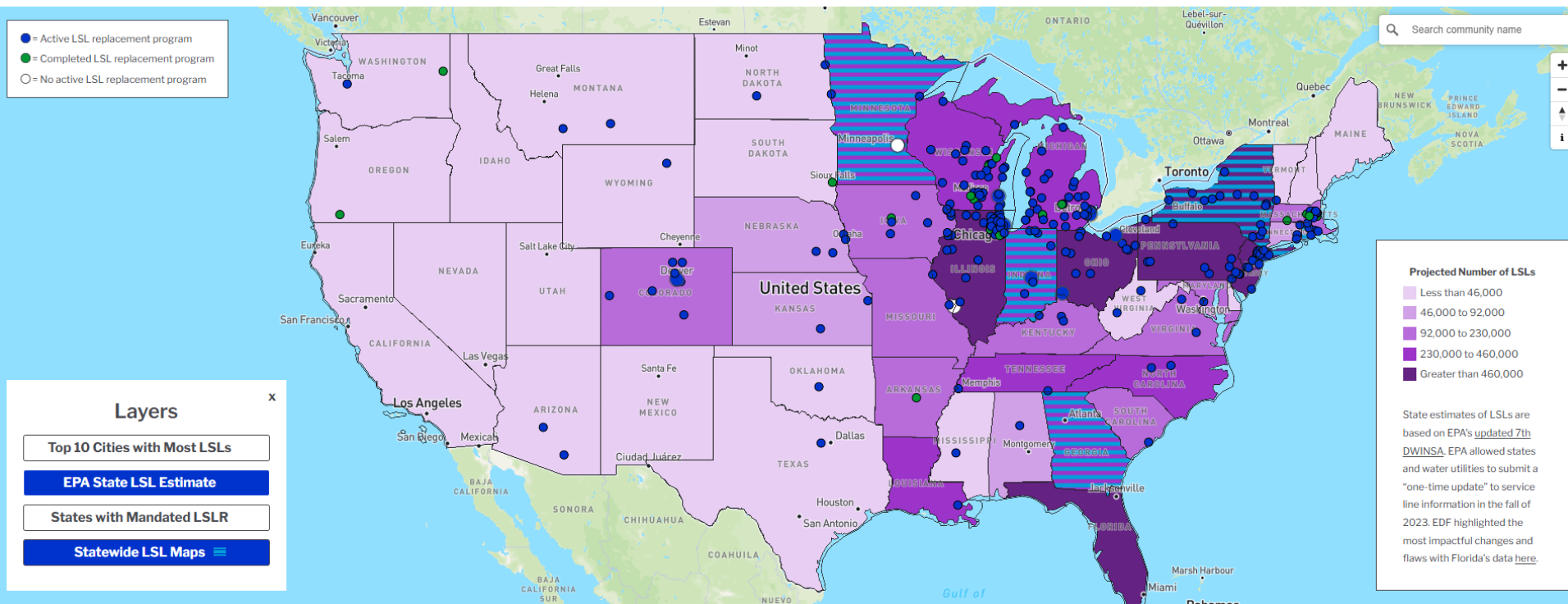
How to Investigate for a Lead Service Line

- Contact your water utility
- Conduct a visual inspection
 - npr.org/pipes
- Hire a licensed plumber



Lead service lines are generally dull gray in color and very soft. You can identify them by scratching with a key. If made of lead, it will turn a bright silver color.

EDF's Map of LSL Replacement Programs



edf.org/national-map-LSL-replacement-programs



Regulatory Updates - LCRI

Lead and Copper Rule

- **Lead and Copper Rule (LCR)**

- First established in 1991, regulates lead and copper under the Safe Drinking Water Act
- Public water systems (PWSs) must monitor lead and copper levels in drinking water at the tap
- Action level for lead is 15 parts per billion (ppb)
- Corrosion control is used as a treatment technique to help minimize lead levels

- **LCR Revisions (LCRR)**

- All PWSs required to develop a service line inventory and replacement plans by Oct 2024
- If the action level or trigger level is exceeded, the replacement plan is set into motion

- **LCR Improvements (LCRI)**

- Rule was finalized in October 2024
- Water utilities must comply by November 2027

Service Line Inventories

- Submitted to states on October 16, 2024
- Four material type classifications under LCRR
 - **Lead:** The service line is made of lead
 - **Galvanized Requiring Replacement (GRR):** Service line is or ever was at any time downstream of an LSL or is currently downstream of a lead status unknown service line.
 - **Non-lead:** Service line is determined through an evidence-based record, method, or technique that it is not lead or GRR.
 - **Lead status unknown:** Service line material is not known to be a lead, GRR, or non-LSL, such as where there is no documented evidence supporting material classification

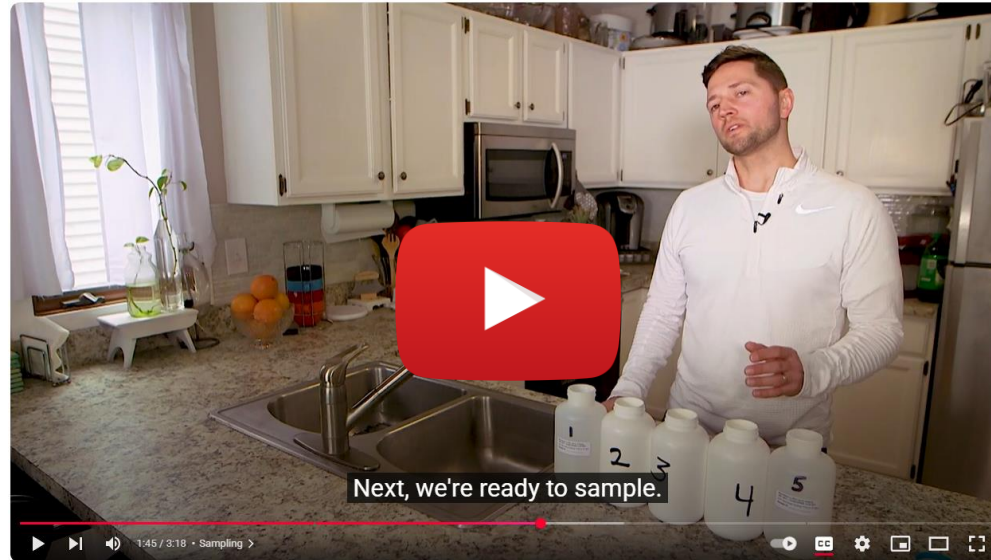
Lead and Copper Rule Improvements (LCRI)

- Requires lead pipes to be replaced in 10 years by the vast majority of water systems
 - Deferred deadlines are available, subject to the state's approval
 - Eligibility based on an annual replacement rate exceeded 39 replacements per 1,000 service connections (0.039)
- Strictly prohibits partial replacements
- Lowers the action level from 15 to 10 ppb
- Updated sampling protocol
 - Utilities will be required to take 1st and 5th liter samples

Socioeconomic and Health Benefits

- The public health and economic benefits of the final rule are estimated to be up to **13 times greater** than the costs
- Based on the reduction of lead levels in water as a result of two interventions
 - Lead service line replacement
 - Corrosion control treatment (CCT)

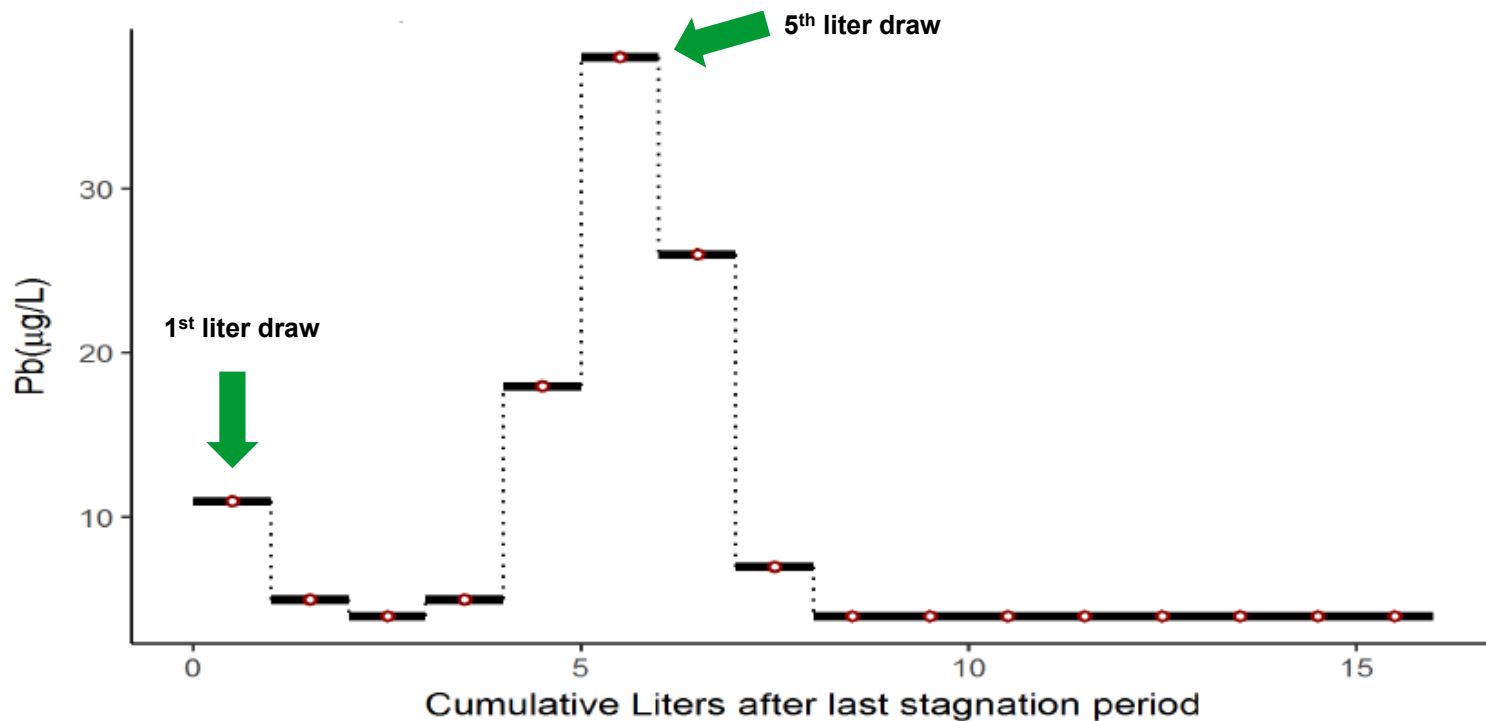
Updated Sampling Protocol



First and Fifth Liter Lead and Copper Water Sample Kit

Source: Michigan EGLE

Exhibit 5-3: Example of a Complete Consecutive Liter Profile of Lead Concentrations in Tap Water from a Location with a Lead Service Line



Source: EPA

Impact of Lowering the Lead Action Level

- Lead action level went from 15 ppb to 10 ppb, triggering certain notification requirements and requiring utilities to act sooner
- Still not a health-based standard, but based on what EPA believes is achievable by water systems for compliance
- At 15 ppb, 10% of water utilities are estimated to have exceeded the action level
- At 10 ppb, this number rises to 16.5%

Legal Landscape

- American Water Works Association (AWWA) filed a lawsuit regarding several of the more substantial provisions
- Challenging
 - Timeframe of 100% replacement by 2037
 - Affordability
 - Mandated replacement of LSLs “under the control” of the utility
- NRDC, Earthjustice, Newburgh Clean Water Project, and Sierra Club intervened to defend the rule on behalf of EPA
- On August 4, EPA announced they will defend the LCRI in court



Thank you!

Roya Alkafaji, Manager, Healthy Communities
ralkafaji@edf.org