Lead in Drinking Water in Child Care Facilities: Ensuring the Future for New Jersey's Children

Report of the Jersey Water Works Lead in Drinking Water Task Force

JERSEY WATER WORKS

Smart infrastructure. Strong communities.

Nov. 2021

Acknowledgments

Jersey Water Works is grateful to The Fund for New Jersey for its generous financial support, which made this report possible. We thank New Jersey Future and its staff, especially Gary Brune, who served as the report's lead author with the support of Yash Yadev, intern, and Chris Sturm, who served as the manager of the report. Jersey Water Works also thanks the New Jersey Future Communications Team for providing communications support, including project coordination, copyediting, and formatting.

About Jersey Water Works

Jersey Water Works is a collaborative effort of many diverse organizations and individuals who embrace the common purpose of transforming New Jersey's inadequate water infrastructure by investing in sustainable, cost-effective solutions that provide communities with clean water and waterways; healthier, safer neighborhoods; local jobs; flood and climate resilience; and economic growth. Under the auspices of Jersey Water Works, a Lead in Drinking Water Task Force issued a report in Oct. 2019, identifying 19 statewide recommendations to address the problem. Membership is free. Learn more and join the collaborative at jerseywaterworks.org.

Lead-Free NJ is an inclusive collaborative that strives to remove all sources of lead from New Jersey's environment in a holistic way. The collaborative seeks to eliminate racial and economic inequities by focusing on legacy lead hazards in low-income communities and/or communities of color, while also creating the conditions for children to be free from lead poisoning statewide. See leadfreenj.org.

JERSEY WATER WORKS

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Jersey Water Works Lead in Drinking Water Task Force
Subcommittee on Lead in Drinking Water in Child Care Facilities

Special thanks go to the subcommittee members listed below, who provided insights into child care operations, management issues, and relevant initiatives in other states. Without their participation, this report would not have been possible.

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**Subcommittee members whose names are marked with an asterisk do not participate in the larger Lead in Drinking Water Task Force, but were selected based on their extensive knowledge of the child care industry in New Jersey.*

Disclaimer:
Participation by task force subcommittee members does not necessarily constitute individual or organizational endorsement of every recommendation. This includes state agency representatives, who took part solely to inform the discussions and ensure technical accuracy.

In the case of the NJ Department of Children and Families, representatives provided technical advice, including an overview of the child care facility landscape in New Jersey, but did not participate in developing the legislative, regulatory, or fiscal recommendations of this report, and their involvement should not be considered an agency endorsement or directive.

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View this report online at www.jerseywaterworks.org/resources/lead-in-drinking-water-in-child-care-facilities

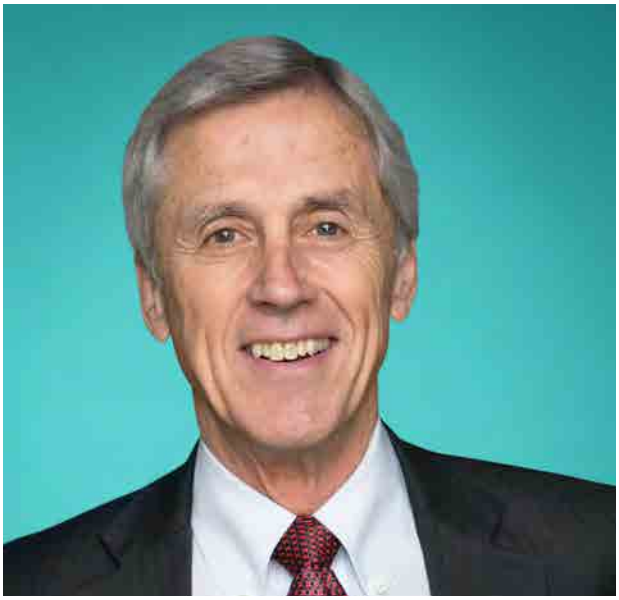
LETTER FROM THE CO-CHAIRS

Due to our nation's aging infrastructure, the dangers posed by lead in drinking water have become more urgent to address. The threat exists in our homes, schools, child care facilities, and wherever lead service lines and indoor lead plumbing exist. The concentration of young children in child care settings is a special concern, particularly for infants fed with formula mixed with water that contains lead. By taking strong action now, we can protect future generations.

The 10 recommendations identified in this report were prioritized by a subcommittee of the Jersey Water Works Lead in Drinking Water Task Force, a natural follow-up to a larger, statewide report issued in Oct. 2019. The group, which included both selected task force members and others with in-depth expertise in New Jersey's child care industry, identified key measures in lead testing, training, remediation, communication, and financial assistance. The successful implementation of those measures requires a set of legislative, regulatory, and policy changes, and the associated cost is reasonable.

This is only one step in the larger effort to eliminate lead exposure. There is much work to be done, and you can help make a difference. Simply join Jersey Water Works, a cross-sector, statewide collaborative of over 600 members whose goal is to strengthen water infrastructure across the state. You can also become a member of Lead-Free NJ, a broad-based, diverse collaborative with a holistic focus on removing all sources of lead, including paint, water, and soil. Membership in each organization is free.

Together, we can accomplish so much more than any individual or organization could achieve on their own. We owe it to our children and grandchildren to eliminate sources of lead exposure. Let's work together to get the job done.



Chris Daggett, co-chair of the Lead in Drinking Water Task Force and former commissioner of the New Jersey Department of Environmental Protection

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Important Context

FAMILY CHILD CARE CENTER PROVIDERS

In New Jersey, child care providers must obtain a license from the NJ Department of Children and Families (DCF); however, family child care providers who care for no more than five children at a time are not required to register.[1] Licensing is a time-consuming process, including pre-service training, child abuse and criminal background checks, staff/child ratios, physical plant requirements (e.g., home inspection), environmental testing (e.g., for radon), CPR/First Aid certification, and general agreement to comply with DCF's manual of requirements.

Although registration allows family child care providers to accept state-funded child care subsidies, the reimbursement rate for family child care lags substantially behind the rate for child care center providers (i.e., for many family child care homes, there is little to no economic incentive to register). From 2001 through 2016, the number of registered family child care providers rapidly declined at a rate that exceeded the national average, dropping 59% (2,800) from approximately 4,700 in 2001 to roughly 1,900 in 2016.[2]

This report primarily addresses providers that are state-registered.

"LICENSING" VS "REGISTRATION"

In this report, there is frequent mention of the terms "licensing" and "registration." Generally:

- Licensing, as administered by DCF, confirms that a child care provider complies with all applicable state regulatory provisions and thus is allowed to furnish care (i.e., apart from a few exemptions, such as church-operated facilities, it is illegal to operate a child care center in New Jersey without a license).
- Registration refers to the voluntary entry into the State's regulatory system, which some child care providers do to access state-funded child care subsidies and other resources.[3]

KEY DEFINITIONS

In New Jersey, child care services are provided by several different types of entities, including larger centers and family-run operations. Not all of the latter are registered with the State, and those operations are not fully regulated. Listed below are key definitions used in this report.

- **Child Care Facilities** (CCFs) refers to *all* child care providers, regulated and unregulated.
- **Child Care Centers** (CCCs) refers only to licensed child care facilities that are not run by individual families.
- **State-Regulated Child Care Programs** (SRCCPs) represents all *regulated* facilities, including state-licensed child care centers and family child care (FCC) homes that have voluntarily registered with the State.
- **Family Child Care homes**, or "FCC homes," refers to family-operated services that have voluntarily registered with the State.

EXECUTIVE SUMMARY

Across New Jersey, an estimated 400,000 children spend part of their day in child care facilities. Although science confirms that exposure to even minor amounts of lead can permanently harm infants, toddlers, and preschoolers, the extent of lead contamination in these facilities from all sources (i.e., water, paint, and soil) is unknown. How well does New Jersey's current regulatory system protect these children from lead in drinking water, what gaps exist, and what can we do to ensure their health?

This report provides a blueprint for permanently removing this scourge from state-regulated child care programs (SRCCPs), which include state-licensed child care centers (CCCs) and family child care (FCC) homes that have voluntarily registered with the State. Since lead exposure from drinking water represents a rare public health problem where both the source and the solution are known, the terrible damage it inflicts is entirely preventable and, once fixed, it will not recur. (Note: children will not be fully protected from lead poisoning until lead in paint is also addressed.)

ABOUT THIS REPORT

This report, which identifies 10 priority recommendations to protect young children from lead in drinking water in the state's regulated child care facilities, is designed to achieve the following overarching goal:

Within 10 years, no children in regulated child care facilities in New Jersey, including licensed facilities and registered FCC homes, are at risk of lead exposure from drinking water due to a coordinated program of water testing, remediation, funding, communications, and regulations.

This report complements a larger statewide review issued in 2019 by the Jersey Water Works Lead in Drinking Water Task Force ("Lead in Drinking Water: A Permanent Solution for New Jersey").

As identified by a subcommittee of task force members and experts drawn from New Jersey's child care industry, these measures will require a combination of legislation, regulatory action, and state policy initiatives, primarily in the NJ Department of Children and Families (DCF). Particular emphasis is placed on aggressive water testing, remediation of known or suspected lead sources, financial assistance, improved outreach to parents and child care providers, and re-examination of the level of lead in drinking water that should trigger a regulatory response. Due to the difficulty of identifying unregistered family child care homes, the recommendations focus primarily on State-regulated child care programs.

RECOMMENDED ACTIONS IN BRIEF

The 10 recommendations are divided into five action categories. Unless otherwise noted, they are directed at State-regulated child care programs:

ACTION 1: Ensure comprehensive, accurate, and transparent water testing.
ACTION 2: Require and fund replacement of lead service lines (LSLs), faucets, fixtures, and fountains.
ACTION 3: Encourage family child care (FCC) homes to take lead-safe actions.
ACTION 4: Support SRCCPs with educational and financial resources.
ACTION 5: Enact protective rules to ensure safe drinking water.

The specific recommendations listed below are divided between initiatives that could be reasonably implemented in the short term (up to two years) or over the long term (10 years or less). Finally, while the estimated 1,400 registered FCC homes are generally considered to be a small fraction of the actual total, the larger questions of maximizing registration of such facilities, which would increase effectiveness in assisting them, involves a series of issues that are beyond the scope of this report.

ACTION 1

ENSURE COMPREHENSIVE, ACCURATE, AND TRANSPARENT WATER TESTING

1.1 Require comprehensive water testing and reporting (regulation and policy)
The NJ Department of Children and Families (DCF) should amend its regulations to require that state-regulated child care programs (SRCCPs) test all water taps for lead and notify parents of the results. DCF should publish all results by facility and statewide.

1.2 Offer free testing for SRCCPs (legislation)
As a contingency in case its existing federal Water Infrastructure Improvements for the Nation (WIIN) grant for comprehensive testing is not renewed, DCF should request broad budget language authorizing funding from State appropriations for testing costs. Also, water utilities should provide comprehensive, free water testing to SRCCPs upon request.

1.3 Train SRCCP staff (policy)
To ensure water testing accuracy, DCF should provide water sampling training to designated SRCCP staff when their facility's license is renewed during each three-year sampling cycle.

ACTION 2

REQUIRE REPLACEMENT OF LEAD SERVICE LINES, FAUCETS, FIXTURES, AND FOUNTAINS

2.1 Require SRCCPs to implement remediation plans, if funded (policy)
Assuming that corresponding state funding is provided, DCF should establish a reasonably expedited deadline for SRCCPs that are served by a LSL or have lead readings that exceed the lead action level (currently 15 parts per billion (ppb)) to develop and implement a remediation plan.

2.2 Prioritize LSL replacement (regulation or legislation)
Require water utilities to replace LSLs at SRCCPs on an expedited basis, possibly through the use of separate crews, with no customer cost share required. Regardless of lead in drinking water readings, establish a deadline for SRCCP-owned facilities to participate in the water utilities' LSL replacement program or face penalties to be established in regulations developed by DCF. For rented facilities, require landowner participation and protect SRCCPs from the loss of their lease.

ACTION 3:

SUPPORT FAMILY CHILD CARE (FCC) HOMES IN TAKING LEAD-SAFE ACTIONS

3.1 Provide education, a certification program, and funding (policy)
DCF should partner with communities to provide educational information on the dangers of lead exposure, a "lead-safe" marketing/certification program to unregistered FCC homes, and state financial support for remediation.

ACTION 4:

SUPPORT SRCCPS WITH EDUCATIONAL AND FINANCIAL RESOURCES

4.1 Implement a statewide educational campaign (policy)
DCF and DOH should undertake an educational campaign that informs parents and child care provider staff of the dangers of lead in drinking water, including a statewide map of test results, practical action steps, and useful resources that prompt them to act.

4.2 Create a Child Care Healthy Drinking Water Fund (legislation)
The State should appropriate funds to a DCF-managed fund that supports all aspects of remediating lead in drinking water at SRCCPs, including drinking water remediation plans and replacement of indoor lead faucets, fixtures, and fountains for facilities with lead in water readings above the state action level (currently 15 ppb).

ACTION 5:

ENACT PROTECTIVE RULES TO ENSURE SAFE DRINKING WATER

5.1 Require the use of certified filters in rental properties (legislation)
If a SRCCP operates in rental property that is served by a LSL, and if the landlord rejects the water utility's offer to replace the LSL, state law should require the landlord to install certified filters on each tap used for drinking or cooking until the LSL is removed.

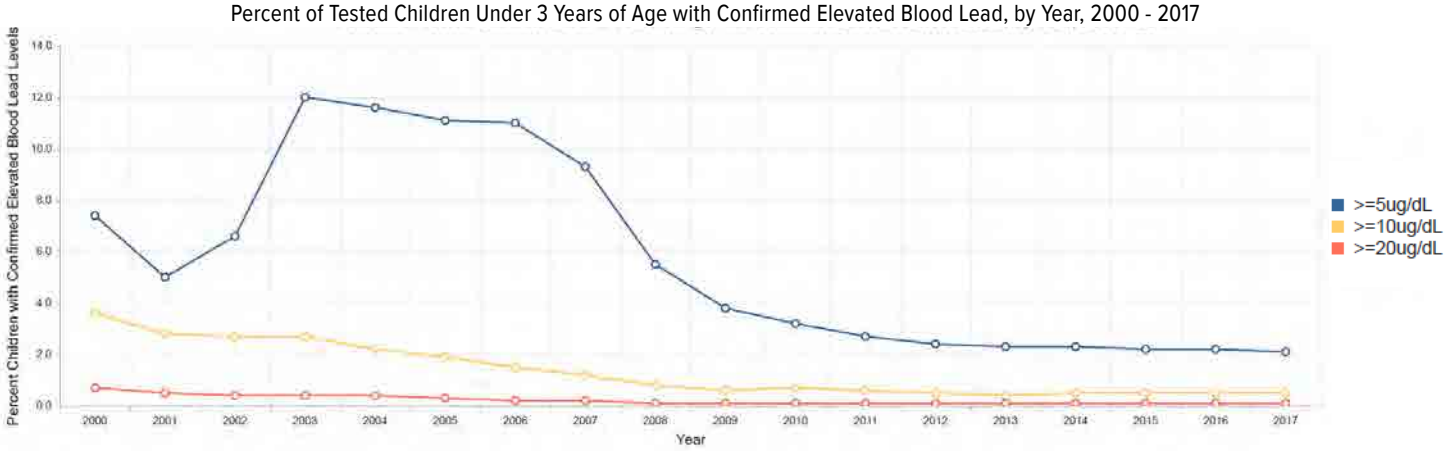
5.2 Reduce the action level for lead in drinking water for SRCCPs (regulation)
NJ Department of Environmental Protection (DEP) should reduce the action level for lead in drinking water at SRCCPs to 5 parts per billion by Jan. 2023.

BACKGROUND

Though lead exposure poses a risk to people of all ages, children are most vulnerable. Even in small doses, infants, toddlers, and pre-schoolers up to age six are particularly susceptible, as their growing bodies absorb lead much faster than those of adults.

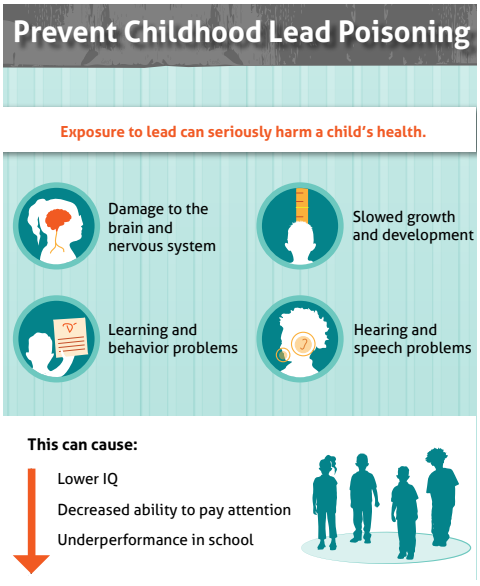
There is no safe level of lead exposure.[4] For children, prolonged exposure can cause irreversible damage to the brain and nervous system, slowing growth and development and prompting behavioral, hearing, and speech problems. And the long-term damage is not just physical. Lead exposure can also trigger serious learning disabilities, as well as emotional and social health impacts. Studies indicate that children with even low levels of lead are six times more likely to enter the juvenile justice system, seven times more likely to drop out of school, and 30% more likely to fail third grade reading and math.[5]

New Jersey State Health Assessment Data
Percent of Tested Children Under 3 Years of Age with Confirmed Elevated Blood Lead, by Year, 2000 - 2017



Progress has stalled at reducing the percent of children with confirmed elevated blood lead levels since relatively rapid gains prior to 2011.

Numerous studies of brain development[6] during the first six years of life, when brain neurons develop more rapidly and the rate of learning is higher than at any other time in life, document the largely irreversible effects of lead. Lead-related learning deficiencies reduce the benefits of early childhood education which, according to national research, helps ensure educational achievement, higher earnings, improved health, and positive social impacts (e.g., reduced crime) in a benefit/cost ratio ranging from $6 to $9 for every dollar spent.[7] Drawbacks in foundational learning, the ability to concentrate, and compromised listening skills are well documented.



Children with elevated lead levels in early childhood have significantly worse outcomes, generally in the 20 - 30% range, on markers of school success, and higher rates of adverse events in adolescence and early adulthood, compared to their non-exposed peers, representing a sizable societal cost in the loss of human capital, the burden on local support systems, and the persistence of inequality.[8]

"Children with elevated lead levels in early childhood have significantly worse outcomes, generally in the 20 - 30% range, on markers of school success, and higher rates of adverse events in adolescence and early adulthood, compared to their non-exposed peers..."

The failure to act not only affects future generations but also triggers large, avoidable costs for health care, special education, and social services. Studies confirm that the benefits of lead remediation far exceed the costs, but because benefits are spread out and costs are concentrated, that story is not well understood.

- According to a study published in *Environmental Health Perspectives* in 2009, for every dollar spent on controlling lead hazards, $17 to $221 would be returned in health benefits, increased IQ, higher lifetime earnings, tax revenue, reduced spending on special education, and reduced criminal activity.[9]
- A study completed by the Robert Wood Johnson Foundation and The Pew Charitable Trusts in 2017, which analyzed 10 policies to reduce lead, concluded that removing LSLs from the homes of children born in 2018 would protect more than 350,000 children and yield $2.7 billion in future benefits, or about $1.33 per dollar invested. Those benefits would likely be much higher at child care facilities, where more children are present than at home settings, and at smaller facilities and FCC homes that are more likely to be served by a LSL.[10]

The cost of proper testing and remediation, effective communication, and ongoing monitoring will be significant, but lead hazard control is well worth the price.

Special Characteristics and Practical Limitations

Child care settings have several unique characteristics that heighten concern over potential lead exposure. Young children spend a large portion of their day in child care settings (over six hours, according to the U.S. Department of Agriculture's National Center for Education Statistics). Long periods of water stagnation (e.g., weekends, overnight) and inconsistent water use patterns can increase the leaching of lead into drinking water. Finally, the sheer diversity of child care providers, including large, corporate-based facilities, small after-school care centers, faith-based preschools, and family home settings complicate lead-related planning and remediation.

Most SRCCPs operate on tight margins and typically need to be at full capacity to meet existing financial obligations. This situation was exacerbated by the pandemic, when many SRCCPs were forced to close or lost clients. "Many providers are experiencing such razor thin margins that even a closure of two weeks due to quarantining could put them out of business."[11]

Given that many families are presently struggling to pay the existing cost of child care service, studies suggest that it is unrealistic to expect providers to pay any significant portion of the additional costs required to address lead exposure. As a point of reference:

> **"Comparing the overall average cost of child care service (i.e., infant to age four) to the national median income for married couples with children under 18, it would take more than 10% of household income to cover the child care prices for one child, well above the Department of Health and Human Services recommendation that child care consume no more than 7% of household income. For a single parent, the picture is bleak—36% of household income would be used to cover child care prices for one child."[12]**

Financial assistance from state or federal government, as well as from water utilities (e.g., LSL replacement without a customer cost share), will be vital to implementing the recommendations highlighted in this report. Unfunded regulatory mandates are unlikely to be successful.

"Many providers are experiencing such razor thin margins that even a closure of two weeks due to quarantining could put them out of business."

Sources of Lead in Drinking Water

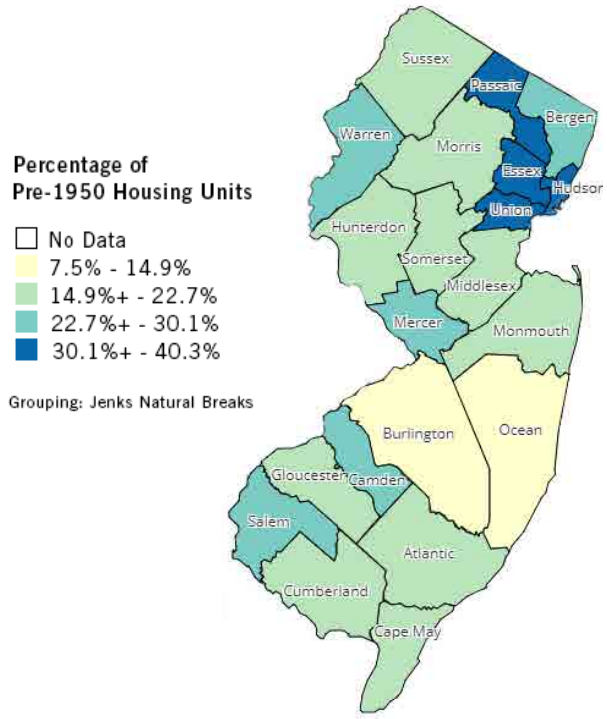
Typically, water derived from reservoirs and groundwater is lead-free. The primary sources of lead in drinking water are LSLs, which connect residences to water mains, and indoor plumbing (e.g., fixtures, faucets, soldered pipes). The Environmental Protection Agency (EPA) estimates that an average of 50% to 75% of lead in drinking water exposure is attributable to LSLs (when present).[13] Since LSLs tend to be smaller-diameter pipes, and since school buildings are typically served by large, non-lead (e.g., cast iron) service lines, SRCCPs are much more likely than schools to be served by a LSL. Both child care settings and schools may have indoor lead plumbing; however, it is particularly prevalent in buildings constructed before 1950.

Though water utilities strive to minimize the problem through corrosion control treatment (CCT, which limits the leaching of lead from pipes through the application of inhibitors or ph adjustments that reduce the corrosivity of the water), that technology cannot achieve zero concentrations, is sensitive to fluctuations in water characteristics (e.g., corrosivity) and is not foolproof. Even with CCT, lead can leach into the drinking water, particularly during periods when the water flow is stagnant (e.g., overnight or, in the case of child care settings, during weekends).

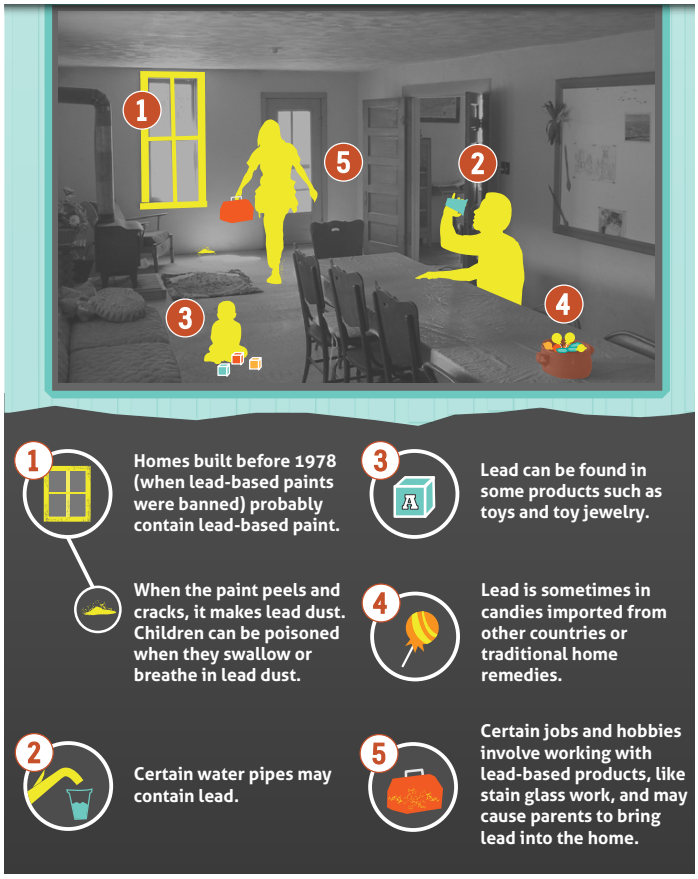
According to the EPA, drinking water can comprise 20% or more of a typical person's total lead exposure, but infants who consume formula mixed mostly with water can receive 40% to 60% of their exposure to lead from drinking water. SRCCPs pose a particular area of concern, as infants are more likely to be bottle-fed, and many children will drink water from taps in these facilities.

Given the danger that lead poses to young children, every SRCCP in New Jersey should minimize lead in drinking water as quickly as possible.

> Infants who consume formula mixed mostly with water can receive 40% to 60% of their exposure to lead from drinking water.



Lead can be found throughout a child's environment.



Child Care Facilities in New Jersey

There are two major categories of child care in New Jersey: approximately 4,200 fully licensed child care centers (CCCs, which serve six or more children under age 13 for fewer than 24 hours per day) and smaller family child care (FCC) homes (i.e., less than six children), the latter of which are divided between those that have voluntarily registered with DCF (currently about 1,400) and an undetermined number that have not.[14] Voluntary registrations of FCC homes are down sharply from 15 years ago, most likely due to expansion of state-funded, pre-K programs and increased regulatory requirements.

The generic term "day care" actually covers three separate types of operations: those serving children aged 0-2, pre-kindergarten, and early childhood. While these centers are often lumped together in common references (e.g., day care centers, nursery schools, pre-schools, or infant-toddler centers), each population of children is distinct in its development and potential exposure risk.

Prior to the pandemic, approximately 25% of licensed CCCs were located in schools. To increase efficiency, the NJ Department of Education adopted regulations in July 2020 shortening its lead testing cycle in schools from six years to three years to coincide with the schedule for SRCCPs.[15]

Family Child Care In New Jersey

County	# of Providers 2016	Estimated # of Slots
Atlantic	73	365
Bergen	62	310
Burlington	98	490
Camden	121	605
Cape May	16	80
Cumberland	53	265
Essex	264	1,320
Gloucester	41	205
Hudson	234	1,170
Hunterdon	21	105
Mercer	54	270
Middlesex	150	750
Monmouth	93	465
Morris	60	300
Ocean	54	270
Passaic	280	1,400
Salem	37	185
Somerset	20	100
Sussex	17	85
Union	121	605
Warren	38	190
New Jersey	**1,907**	**9,535**

As reported by New Jersey Department of Children and Families as of December 31, 2016

Regulation of Lead in Drinking Water in New Jersey Child Care Settings

Presently, New Jersey is one of only 11 states that test for lead in drinking water at SRCCPs.[16] Using protocols established by the NJ Department of Environmental Protection (DEP), the regulations for testing, remediation, and public education are administered by DCF.

To date, DCF has not released a statewide accounting of lead testing results, due in part to the limitations of its existing database and the lack of a complete data set. However, the latter problem will be solved no later than July 2023, by which time all SRCCPs and as many registered FCC homes as possible will have been tested through a federal WIIN grant. DCF's policy decisions regarding the transparency of that data, including its use in creating statewide and local maps that show the breadth of the problem, will be vital to protect public health.

The experience of other states suggests that there is cause for concern.[17] In a 2019 study, the Environmental Defense Fund (EDF) tested lead in drinking water at 11 child care settings serving more than 1,000 children in Illinois, Michigan, Mississippi, and Ohio. At seven of the facilities, the amount of lead in at least one drinking water outlet exceeded the level that EDF scientists considered protective.[18] Three facilities had results that were well above the EPA's recommended action level at the time (20 ppb),[19] including two facilities that had readings that were about four times higher.[20]

Action Limit

In New Jersey, the action limit for lead in drinking water at SRCCPs and schools is 15 ppb, reflecting the federal lead and copper rule (LCR). This level is not a health standard, but rather a technology-based standard that gauges the effectiveness of corrosion control treatment that water utilities use to minimize the leaching of lead into drinking water from LSLs and plumbing.

Licensing and Remediation

Beginning in 2017, SRCCPs were subjected to lead testing and short-term remediation requirements. Major provisions include:

- At initial application, license renewal, relocation, or at any other time designated by DCF's Office of Licensing, SRCCPs must certify in writing (including lab results) that potable water is provided. (Note: SRCCP licenses are individually renewed every three years on their anniversary date.) Testing is required at all drinking water taps and more than 50% of the remaining water faucets. Licensed facilities built prior to 1978 must complete a lead risk assessment.

- If an elevated level of lead is detected, the SRCCP must discontinue the use of all drinking water sources, substitute an alternative source (e.g., bottled water) for drinking and cooking, notify affected parents, prominently post the test results in the facility, and notify DCF.

- There is no requirement for long-term mitigation. Remediation costs can be sizable, and since SRCCPs typically operate on small margins, this poses a significant problem.

- If the lead source is remediated, the SRCCP must forward approvals from DEP (e.g., "no further action" letter) and DOH (e.g., safe building interior certification) to DCF's Office of Licensing confirming that additional measures are not required.

For family-run child care settings that serve five children or less, licensing is optional, and there are no State requirements for water testing.

(For a comprehensive listing of sampling requirements at SRCCPs versus schools in New Jersey, see https://www.state.nj.us/dep/watersupply/pdf/ntnc-school-crosswalk.pdf.)

DETAILED POLICY RECOMMENDATIONS

OVERARCHING GOAL: *Within 10 years, no children in State-regulated child care programs in New Jersey will be at risk of lead exposure from drinking water due to a coordinated program of water testing, remediation, funding, communications, and regulations.*

The 10 recommendations are broadly organized into five major action categories and then further subdivided into initiatives that could be implemented in the short term (up to two years) or over the long term (10 years or less). Unless otherwise noted, the recommendations are directed at State-regulated child care programs:

ACTION 1: Ensure comprehensive, accurate, and transparent water testing.
ACTION 2: Require and fund replacement of lead service lines (LSLs), faucets, fixtures, and fountains.
ACTION 3: Encourage family child care (FCC) homes to take lead-safe actions.
ACTION 4: Support SRCCPs with educational and financial resources.
ACTION 5: Enact protective rules to ensure safe drinking water.

In addition, there are two other important points to note:

- While the estimated 1,400 registered FCC homes are generally considered to be a small fraction of the actual total, the larger issue of maximizing registration of such facilities, which would increase effectiveness in assisting them, involves a series of issues that are beyond the scope of this report.
- Children will not be fully protected from lead poisoning until lead in paint is also addressed.

ACTION 1

ENSURE COMPREHENSIVE, ACCURATE, AND TRANSPARENT WATER TESTING

GOAL: *Since we can best protect ourselves when we are fully aware of any potential threat, lead in water testing at all child care centers should be comprehensive, accurate, transparent, and supported by an ongoing funding source.*

SHORT TERM

1.1 Require comprehensive water testing and reporting (regulation and policy)

The NJ Department of Children and Families (DCF) should amend its existing regulations to require that state-regulated child care programs (SRCCPs) test all water taps for lead and notify parents of the results. DCF should publish all results by facility and statewide.

DCF's existing regulations require SRCCPs to test "… all faucets and other sources used for drinking water or food preparation and at least 50% of all indoor water faucets utilized by the center." The selection of taps is left to individual providers, and since lead testing is not an area of expertise at most SRCCPs, the current approach is confusing to some. Sampling all taps would be simpler and more protective.

- Sampling often detects a wide range of lead across taps in the same SRCCP, but the associated cost for comprehensively sampling all taps is relatively low.[21]
- Since children could drink from any faucet, sampling every tap maximizes protection.

When its comprehensive testing effort concludes in July 2023, DCF should publish the results on its website, showing all test results by SRCCP and providing a statewide map of non-compliant facilities, preferably by locality. This information should be updated after each three-year testing cycle.

1.2 Offer free testing for SRCCPs (legislation)

As a contingency in case its existing federal Water Infrastructure Improvements for the Nation (WIIN) grant for comprehensive testing is not renewed, DCF should request broad budget language authorizing funding from State appropriations for testing costs. Also, water utilities should provide comprehensive, free water testing to SRCCPs upon request.

In 2017, when the NJ Department of Education (DOE) initially tested lead in drinking water in schools, and again in the Fiscal Year 2022 State Budget, a State appropriation was provided to reimburse school districts. A similar approach should be taken for SRCCPs. Since it is not presently clear whether the federal WIIN grant, which currently supports SRCCP testing, will be renewed, DCF should request budget language authorizing State support for these costs.

Legislation (S-830) approved by the New Jersey Senate and Assembly would require water systems to provide free water testing during an action level exceedance or after a partial LSL replacement upon request from customers. Since test results may vary over time—and given the current lack of a health-based standard for interpreting the findings—a more aggressive approach is recommended. New legislation should offer free annual testing to SRCCPs and registered FCC homes upon request. DCF should notify providers about this initiative and encourage them to take a more proactive role.[22]

ACTION 1

ENSURE COMPREHENSIVE, ACCURATE, AND TRANSPARENT WATER TESTING

LONG TERM

1.3 Train SRCCP staff (policy)

To ensure water testing accuracy, DCF should provide water sampling training to designated SRCCP staff when their facility's license is renewed during each three-year sampling cycle.

DCF should investigate North Carolina's "Clean Water for Carolina Kids" program, a cost-effective, virtual approach to training child care provider staff and related measures (https://www.cleanwaterforcarolinakids.org/). Desirable features include:

- Pre-enrollment training webinars and "how to" videos, with attendance verified through the issuance of personal codes;
- Center-specific test kits provided to SRCCPs based on an enrollment survey;
- Test kits mailed to SRCCPs; samples forwarded to a certified lab via UPS;
- Online portal collects and reports data (e.g., by county/locality, map of results);
- Notification/interpretation of results to SRCCPs, parents, and health agencies;
- Information on lead exposure and low-cost remedial measures.[23]

Since the program began in July 2020, 82% of North Carolina's 4,400 licensed child care facilities have enrolled, and 71% have completed testing. (An estimated 1,200 FCC homes will be addressed in 2022.) Funded through a federal WIIN grant, the program is administered by several state public health agencies[24] and a nonprofit research institute (RTI International). The $726,000 cost supports 30,000 tests ($24 per test). To encourage accuracy, state-regulated child care facilities pay for any required retests. An online map shows facility-specific results (https://www.cleanwaterforcarolinakids.org/data). Nearly 80% of the samples detected at least some lead, 8% of child care facilities exceeded the 15 ppb action level in at least one outlet, and 2% of all initial samples exceeded 15 ppb.

(See the References/Appendix for a summary of how technical assistance is provided to child care staff in Illinois and California.)

ACTION 2

REQUIRE AND FUND REPLACEMENT OF LEAD SERVICE LINES, FAUCETS, FIXTURES, AND FOUNTAINS

GOAL: *Within 10 years, no licensed child care centers or voluntarily-registered FCC homes are served by a LSL or a lead-bearing kitchen fixture, and the major sources of lead in water have been virtually eliminated.*

SHORT TERM

2.1 Require SRCCPs to implement remediation plans, if funded (policy)

Assuming that corresponding state funding is provided, DCF should establish a reasonably expedited deadline for SRCCPs that are served by a LSL or have lead readings that exceed the lead action level (currently 15 ppb) to develop and implement a remediation plan.

DCF's existing regulations do not require SRCCPs served by a community water system to remediate if water sampling results exceed the action limit.[25] Facilities may simply close off access to the affected water outlets and substitute an alternative water source (e.g., bottled water). Leaving known lead sources in place while assuming that protective measures, such as corrosion control treatment, continue to operate properly is inherently risky. Subtle changes in water chemistry (e.g., pH, alkalinity) can increase the corrosivity of the water, allowing more lead to leach in from the pipe network. A more aggressive approach is needed for SRCCPs.

For SRCCPs and FCC homes that exceed the lead action level or are served by a LSL, remedial actions should be identified in a drinking water management plan prepared by a trained consultant and certified by the facility director. Initiatives could include:

- LSL replacement;
- Replacement of visible indoor lead plumbing (e.g., faucets, fixtures), including a fully-installed kitchen faucet that complies with current regulatory requirements;
- Certification that a plan is in place to install filters on outlets used for drinking and cooking (see Recommendation 5.1 re: landlords) and to educate SRCCP staff, parents, and children on protective measures, such as proper flushing of water taps after periods of dormancy (e.g., overnight) before drinking.

The plan, which should be developed within six months of receiving confirmation of a LSL or exceedance of the lead action level, should be administered as follows:

- Submit to DCF and share with affected parents upon completion.
- Consultants would pre-qualify with DCF (in consultation with DEP).
- Associated costs, including necessary improvements, would be paid through State assistance distributed by DCF.
- To minimize the cost, DCF would offer a contracting alternative that bundles such work on a county basis, concentrating the plans for SRCCPs that choose this option in one contract or a small number of contracts.

ACTION 2

REQUIRE AND FUND REPLACEMENT OF LEAD SERVICE LINES, FAUCETS, FIXTURES, AND FOUNTAINS

LONG TERM

2.2 Prioritize LSL replacement (regulation or legislation)

Require water utilities to replace LSLs at SRCCPs on an expedited basis, possibly through the use of separate crews, with no customer cost share required. Regardless of lead in drinking water readings, establish a deadline for SRCCP-owned facilities to participate in the water utilities' LSL replacement program or face penalties to be established in regulations developed by DCF. For rented facilities, require landowner participation and protect SRCCPs from the loss of their lease.

While the methodical replacement of LSLs across entire neighborhoods would maximize efficiency, SRCCPs with LSLs should be individually prioritized to accelerate the health benefit to children. Several prerequisites are key:

- DCF should share the location and water test results of SRCCPs with water utilities.
- The LSL replacement plans that water utilities must create under state law (P.L.2021, c.183) should recognize SRCCPs with LSLs as a sensitive population that merits top priority and should not include a customer cost share, thus maximizing effectiveness, efficiency, and equity.
- As a public health measure, state law should ensure that utilities are authorized to replace LSLs for SRCCPs even when a landowner refuses permission or does not respond to requests for access to the property.
- State and local laws establishing moratoriums on road disturbances on newly-paved roads should be amended to create an exception for LSL replacement at SRCCPs.

Several major water utilities in other states have embraced this approach. For example, Denver Water prioritizes child care facilities and schools as "critical customers," sending special crews to those facilities as quickly as possible.[26] (See the References/Appendix for Denver Water's working map identifying child care facilities in its service area.) However, as highlighted in the mini case studies of water systems in Cincinnati and Cleveland listed in the References/Appendix of this report, even when water utilities offer to prioritize no-cost LSL replacement at SRCCPs, there are several obstacles, and effective communication is key.

ACTION 3:

SUPPORT FAMILY CHILD CARE (FCC) HOMES IN TAKING LEAD-SAFE ACTIONS

GOAL: *Awareness of the dangers of lead exposure should be heightened among all family child care homes, and they should be incentivized to implement measures to protect children.*

Note: While the estimated 1,400 registered FCC homes are generally considered to be a small fraction of the actual total, the larger issue of maximizing registration of such facilities, which would increase effectiveness in assisting them, involves a series of issues that are beyond the scope of this report.

SHORT TERM

3.1 Provide education, a certification program, and funding (policy)
DCF should partner with communities to provide educational information on the dangers of lead exposure in FCC homes, a "lead-safe" marketing/certification program to unregistered FCC homes, and state support for remediation.

Across the country, most states have struggled to devise effective programs to identify FCC homes and to help them understand the hazards posed by lead. In the short term, a mixture of enhanced education and marketing/financial incentives are recommended.

The FY2022 State Budget, which authorizes the spending of $100 million in federal American Rescue Plan funds to strengthen the state's child care network, could provide significant incentives for unregistered FCC homes. Budget language could authorize a set-aside for the following:

- **Education** - explanatory materials specifically geared toward FCC homes, preferably in partnership with existing child care resource and referral agencies.
- **Marketing** - a "gold-seal" certification from DCF for unregistered FCC homes that document the implementation of lead-related measures (e.g., LSL replacement, installation of certified filters), differentiating them from their competition.
- **Remediation** - funding to offset customer cost shares or to install certified filters in unregistered FCC homes to prompt them to test their facilities, particularly if they are homeowners.

In the long term, DCF should identify additional incentives to increase registration among FCC homes.

ACTION 4:

SUPPORT SRCCPS WITH EDUCATIONAL AND FINANCIAL RESOURCES

GOAL: *An effective media strategy and technical assistance package informs parents and facility staff about lead hazards in SRCCPs.*

SHORT TERM

4.1 Implement a statewide educational campaign (policy)

DCF and NJ Department of Health (DOH) should undertake an educational campaign that informs parents and child care provider staff of the dangers of lead in drinking water, including a statewide map of test results, practical action steps, and useful resources that prompt them to act.

Though the issue was nationally exposed in Flint, Michigan and Newark, New Jersey, the dangers of lead exposure are not commonly understood. Given the time that will be required to address lead sources (e.g., LSLs), a highly effective communications plan is the best short-term measure. If parents are not educated about the potential harm to their children, they will not press for solutions or aggressively seek compliant facilities.

A three-pronged strategy is recommended:

- **Statewide Media Campaign**
  In consultation with DEP, DCF and DOH should collaborate on a strategy that expands the use of social, television, billboard, and print media to reach SRCCP parents and vulnerable populations. Engage trusted community organizations to carry the message and include them on an Advisory Committee to identify the most effective measures.
- **Website Upgrade**
  While DOH's existing website for childhood lead provides a wealth of important information, it does not focus on the unique needs of child care facilities, about which many providers and parents are unaware. These measures are recommended:
  - Add information on lead exposure that is specific to child care. Two examples:
    - Children's Environmental Health Network's Lead-Safe Toolkit for Home-Based Child Care
    - State of Vermont Department of Health
  - Amend two existing documents distributed by DCF to highlight DOH's website:
    - Drinking Water Testing Checklist and Statement of Assurance - ask SRCCP staff to verify that they consulted DOH's website and list it in the section for "Drinking Water Testing Resources." [27]
    - DCF's Information to Parents - all parents are presently required to sign this form, which summarizes licensing requirements. The DOH website should be highlighted.[28]
  - Address language barriers, since many affected residents do not speak English.
    - All materials should be written at the 6th grade level and in multiple languages. Existing drop-down menus providing language choices should be moved to a prominent spot at the top of the DOH and DCF websites.
    - Expand the use of videos and targeted, cell phone-enabled social media ads to convey information more effectively.
  - Taking privacy concerns into account, DCF, DOH, and DEP should sign a data sharing agreement on water and blood lead test results and publish holistic state and local maps that show the extent of lead exposure near SRCCPs.[29]
  - Improve the linkage of all lead-related state websites.[30]

ACTION 4:

SUPPORT SRCCPS WITH EDUCATIONAL AND FINANCIAL RESOURCES

SHORT TERM CONT.

- **Standard Procedures Manual**
  DCF should create a standard procedures manual identifying measures that SRCCPs and parents can take to significantly reduce lead exposure, including certified filters, not using hot water to cook or prepare formula, flushing guidance on taps and hot water heaters (lead-filled sediment), and periodic cleaning of faucet aerators.

LONG TERM

4.2 Create a Child Care Healthy Drinking Water Fund (legislation)
The State should appropriate funds to a DCF-managed fund that supports all aspects of remediating lead in drinking water at SRCCPs, including drinking water remediation plans and replacement of indoor lead faucets, fixtures, and fountains for facilities with lead in water readings above the state action level (currently 15 ppb).

The proposed Fund would support the statewide and site-specific needs outlined below:

Statewide

- Communications/media package (including a standard procedures manual)
- Testing costs - as noted in recommendation 1.2, if DCF's existing federal WIIN grant is not renewed, budget language should authorize reimbursement for testing.

SRCCP-specific

- Replacement of LSLs (i.e., cost share reimbursement) and indoor lead faucet/fixtures/fountains
- Drinking water management plans that identify specific solutions for each SRCCP
- A training package that prepares designated SRCCP staff on sampling techniques and results, identifies short-term solutions, and helps interpret test results

To maximize efficiency, all communications, training, and testing efforts should be administered on a statewide basis. Remediation poses a different challenge, however. Since the state law (P.L.2021, c.183) enacted in July 2021 authorizing a LSL replacement program did not prohibit water utilities from charging customers, SRCCPs could incur significant costs.[31] Most SRCCPs do not have discretionary funds to address the lead problem, however.[32]

By making some assumptions about the presence of lead in New Jersey's 5,400 SRCCPs[33] and the average cost to replace the customer-owned LSL and modest upgrades to indoor lead plumbing, the need for remediation alone may range from $6 million to $10 million:

SCENARIO 1: LEAD @ ONE-THIRD OF SRCCPS		SCENARIO 2: LEAD @ HALF OF SRCCPS	
1,782 SRCCPs x $3,250 LSL share	= $5.8m	2,700 SRCCPs x $3,250 LSL share	= $8.8m
1,782 SRCCPs x $300 plumbing	= $0.5m	2,700 SRCCPs x $300 plumbing	= $0.8m
Total Need	$6.3m	Total Need	$9.6m

ACTION 4:

SUPPORT SRCCPS WITH EDUCATIONAL AND FINANCIAL RESOURCES

LONG TERM CONT.

Fortunately, significant federal and state resources may soon be available for lead in drinking water, some of which could be directed to SRCCPs:

- **American Rescue Plan (ARP)**
  New Jersey received $6.5 billion from this federal source, and LSL replacement is an eligible cost. The FY2022 Appropriations Act allocated $100 million to strengthen the state's child care network, and new budget language could authorize remediation costs from that source. Separately, pending legislation (S-4045) would appropriate $1.3 billion in ARP funds for LSL replacement statewide.

- **Biden Infrastructure Plan**
  Would provide $15 billion for LSL replacement nationwide.

- **Build Back Better Act**
  As of late Sept. 2021, this pending federal budget reconciliation bill included another $30 billion for LSL replacement. (Combined with the $15 billion noted above in the Biden Infrastructure Plan, this is estimated to provide sufficient funds to replace every LSL in the country.)

- **State Revolving Fund**
  The FY2022 State Budget appropriated $60 million to the New Jersey Water Bank, a portion of which could be used to support water utilities' LSL replacement programs.[34]

- **Preschool Facilities: Lead Remediation Grants**
  The FY 2022 State Budget also includes $1 million for lead remediation in public school districts with district-owned, preschool-only buildings. (Note: Public preschools are not eligible for funding provided by the 2018 Bond Act ($100 million) for lead remediation and water infrastructure in K-12 schools.)

ACTION 5:

ENACT PROTECTIVE RULES TO ENSURE SAFE DRINKING WATER

GOAL: *Enact a more protective lead action limit for SRCCPs and mandate that landlords who refuse to replace a LSL install certified filters to minimize lead exposure.*

SHORT TERM

5.1 Require the use of certified filters in rental properties (legislation)

If a SRCCP operates in rental property that is served by a LSL, and if the landlord rejects the water utility's offer to replace the LSL, state law should require the landlord to install certified filters on each tap used for drinking or cooking until the LSL is removed.

This measure is particularly important since many child care providers operate in rental property. In legislation (HB-3739) enacted in Aug. 2021, the State of Illinois authorized the following:

"If complete repair of a lead service line cannot be completed due to denial by the property owner, the community water supply commencing the repair shall request that the property owner sign a waiver developed by the Department. If a property owner of a nonresidential building or residence operating as rental properties denies a complete lead service line replacement, the property owner shall be responsible for installing and maintaining point-of-use filters compliant with NSF/ANSI standards 53 and 42 at all fixtures intended to supply water for the purpose of drinking, food preparation, and making baby formula. The filters shall continue to be supplied by the property owner until such time as the property owner has affected the remaining portions of the lead service line to be replaced."

After installing the initial filter, the landlord should provide replacement cartridges until the LSL is replaced.

LONG TERM

5.2 Reduce the action level for lead in drinking water for SRCCPs (regulation)

DEP should reduce the action level for lead in drinking water at SRCCPs to 5 ppb by Jan. 2023.

The current action level of 15 ppb set by the federal LCR has not changed since 1991. It is not a health-based standard, but rather a technology treatment measure that gauges the effectiveness of corrosion control treatment, which minimizes lead leaching. Since exposure to small amounts of lead can seriously impact children's health and cognitive development, and since current science cannot identify a safe level of exposure, lead concentrations in drinking water at SRCCPs should be kept as low as reasonably achievable.

A growing set of states, cities, and regulatory agencies have moved to stricter standards:

- Food and Drug Administration - 5 ppb threshold for bottled water (1994)
- EPA - added a lower "trigger limit" of 10 ppb in its revised LCR (2021) to "jumpstart mitigation earlier and in more communities." While lower than the LCR action level, it still anticipates an ongoing exposure level.
- States that have adopted maximum contaminant levels (MCLs) include Michigan (12 ppb), North Carolina (10 ppb), California (5 ppb, child care), Montana and New York (5 ppb, schools), Vermont (4 ppb, schools and child care), and Illinois (2 ppb, child care).[35] Proposals of 5 ppb are pending in Washington, Massachusetts, Maryland, and Pennsylvania.
- The American Academy of Pediatrics supports 1 ppb.
- Centers for Disease Control and Prevention - reduced the blood lead reference level from 10 to 5 micrograms per deciliter in 2012 and most recently reduced it further to 3.5 micrograms per deciliter in Oct. 2021.

The effective date for the new action limit should provide time for proper planning and should be contingent upon the provision of state assistance for remediation at SRCCPs.

CONCLUSION

Over the course of eight months, this nine-member subcommittee of the larger Lead in Drinking Water Task Force wrestled with a simple but important question: how to best protect young children from lead in drinking water in child care settings? The 10 recommendations in this report form a roadmap for how to accomplish that quickly and effectively.

The report highlights how a modest amount of financial assistance can pay dividends far into the future, yielding benefits that far exceed the costs. It shows how improved testing and training can aggressively identify problem areas, while demonstrating how to accelerate the removal of lead sources, sharpen regulations to maximize protection, and create more effective communications to raise awareness.

The solutions require a mix of legislation, regulatory change, and policy decisions at the state level. They also require a more concerted effort to convey the dangers of lead to child care providers, including the many unregistered family child care homes that serve children across New Jersey.

Finally, while this report represents an important step toward a lead-safe future, children will not be fully protected from lead poisoning until lead in paint is also addressed.

You can help ensure the successful implementation of these recommendations by joining two existing collaboratives, adding your voice to hundreds of others who are working on this issue:

- The newly established Lead-Free NJ campaign, which has adopted a holistic approach to eliminating all sources of lead poisoning, including water, paint, and soil, while addressing the racial and economic inequities attributable to legacy lead hazards in low-income communities and communities of color.

- Jersey Water Works, which includes over 600 members from many diverse organizations and individual advocates whose common goal is to strengthen New Jersey's water infrastructure as a way of creating safe, healthy communities.

Membership in each collaborative is free.

Acting together, we can take a vital step forward in protecting New Jersey's children.

REFERENCES/APPENDIX

STUDIES - LEAD IN DRINKING WATER IN CHILD CARE FACILITIES

- "Lead in Drinking Water at North Carolina Child Care Centers: Piloting a Citizen Science-Based Testing Strategy," Environmental Research Vol.183, April 2020: https://www.sciencedirect.com/science/article/pii/S0013935120300189
- "Georgia Department of Education's Partnership Helps Bring Cleaner Water to Schools," Valdosta Today.com, July 13, 2021: https://valdostatoday.com/news-2/region/2021/07/gdoes-new-partnership-helps-bring-cleaner-water-to-schools/
- Child Care Facilities: Federal Agencies Need to Enhance Monitoring and Collaboration to Help Assure Drinking Water is Safe From Lead, GAO-20-597, General Accounting Office, Sept. 2020: https://www.gao.gov/assets/gao-20-597.pdf
- Summary of Child Care Regulations for Licensed and Family Child Care Homes: https://www.nj.gov/dcf/providers/licensing/laws/index.html
- EPA Webinar Services: Case Studies About Reducing Lead in Drinking Water in Schools and Child Care Facilities: https://www.epa.gov/dwreginfo/webinar-series-case-studies-about-reducing-lead-drinking-water-schools-and-child-care
- "EPA - Concerned About Lead in Your Drinking Water?," infographic, 2017: https://www.epa.gov/sites/default/files/2017-08/documents/epa_lead_in_drinking_water_final_8.21.17.pdf
- "Reducing Lead in Drinking Water in California's Child Care Facilities: Implications for AB2370 Program Development from Los Angeles County," UCLA Luskin Center for Innovation and First 5 Los Angeles, Gregory Pierce, Silvia Gonzalez, and Eliza Amstutz, July, 2020: https://innovation.luskin.ucla.edu/wp-content/uploads/2020/05/Reducing_Lead_in_Drinking_Water_in_Californias_Childcare_Facilities-Full_Report.pdf

TECHNICAL ASSISTANCE

The approach to staff training in two other states, Illinois and California, are outlined below.

Elevate - Training Child Care Providers in Illinois

Elevate, a non-profit organization in Illinois that provides affordable access to heat, water, and power, assists child care providers in testing and mitigating lead in drinking water. Using initial grant funding and federal Water Infrastructure Improvements for the Nation (WIIN) grant funds, Elevate offers a free statewide testing program to licensed child care providers and researches best practices for LSL replacements. Although no actual remediation is currently covered, legislation enacted in Aug. 2021 requires water utilities to replace LSLs, including priority replacement at child care facilities, which are considered high-risk areas.

Child care facilities (CCFs) in home-based, group-based, and center-based facilities all fall under the requirements of mandatory lead water testing if their facility was built on or before Jan. 2000 and if they serve children under the age of six. Free testing kits are provided for all sources of cooking and drinking water, and samples are sent to Illinois' Environmental Protection Agency lab. The results are forwarded to Elevate's Lead Care Program and then on to the CCF along with information on how to interpret and mitigate the situation. The CCF is given four months to share the results with the Department of Children and Families and start a long-term mitigation plan. To verify effectiveness, CCFs must submit two consecutive, compliant re-tests.

Importantly, Illinois directly links the child care licensing process to the completion of certified training courses (e.g., lead safety). Elevate considers the mandatory nature of this training to be vital (i.e., CCFs probably would not participate on their own accord). Between 20,000 and 30,000 child care providers have taken this training in Illinois since it was made available.

Here are a few key points that Elevate recommends::

- Because many people are not aware of the dangers of lead exposure, effective communication is critical.
- Close contact with schools and CCFs is important, both to address questions and clarify policies. This is particularly true if the lead action level is reduced. Schools and CCFs often struggle to convey the "who, what, where, when, why, and how's" of new policy changes to parents.
- If training is offered or mandated, it should be as accessible as possible. Illinois offers training in three modes: live in-person, live online, or on-demand online courses that can be completed at any time by the child care provider.

California's Use of Child Care Resource Referral Networks

The California State Water Resources Control Board coordinates with the California Child Care Resource and Referral Network to provide technical assistance to the child care providers, including but not limited to:

1. Outreach to licensed child care providers to inform them about the opportunity to have drinking water tested for lead and the opportunity for remediation should lead be detected.
2. Assistance communicating and coordinating with landlords about the availability and need for drinking water testing for lead at a licensed child care center, should that provider be a tenant in a rented facility.

EFFECTIVE COMMUNICATION IN LSL REPLACEMENT PROGRAMS: TWO MINI-CASE STUDIES

The mini-case studies outlined below describe LSL replacement programs for child care facilities in Cincinnati and Cleveland and highlight the importance of effective public communications, even when customers are not required to pay a share of the cost.

Greater Cincinnati Water Works (GCWW)

Using a $725,000 grant from the state's H2Ohio program, GCWW began a program in Oct. 2020 to replace customer-owned LSLs at 184 licensed child care providers (including voluntarily-registered FCC homes). Though the grant covers the full cost, only 39 LSLs (21%) were replaced through June 2021 despite significant outreach to the affected facilities, many of which did not respond even after being notified that the property was served by a LSL.

The answer may lie in some combination of the following:

- Lack of understanding of both the no-cost offer and the threat posed by lead exposure.
- Mistrust of government agencies.
- Property access - many child care facilities operate in a rental property owned by a landlord who is not a willing partner. Some child care facilities fear that remediation costs may prompt landlords to decide not to extend the lease.
- Child care facilities are concerned that the work will temporarily shutter their business, or will create a poor public image, or are distracted by competing responsibilities.
- Since parents/consumers seldom raise the issue, it is best to "let sleeping dogs lie."

Cleveland Water

Cleveland Water, which serves over 1.4 million customers, will spend between $1.5 million and $2.5 million to replace lead service lines (LSLs) at up to 450 state-registered child care facilities over a three-year period.[36] A total of $1.5 million in state assistance has been received thus far, including a $500,000 state grant (H2Ohio program) and a $1 million principal forgiveness loan from Ohio's State Revolving Fund, and plans are in place to apply for a second $1 million principal forgiveness loan. Any remaining funds would be directed towards non-child care facilities (e.g., documented cases where a child has a high blood lead level in a home served by a LSL). When completed, this effort will address nearly 40% of the 1,200 total child care facilities of concern in the water utility's service area.

Though there is no cost to participating customers, Cleveland Water has found it difficult to get cooperation from child care providers. After several mailings, email notices, and phone calls to the 450 child care facilities, Cleveland Water received only 179 responses (40% response rate). Beyond a basic distrust of government officials, there was concern that water utility employees might uncover non-water related issues and alert other city departments, or would not properly restore the property, or that income would be lost due to the temporary closure of the facility.

Other important findings:

- Both child care providers and parents are generally unaware of the harmful effects of lead in drinking water and how the presence of a LSL could significantly lower the value of their property and complicate future efforts to sell it.
- Interagency data sharing was critical to success. Based on a master list of state-registered child care facilities provided by the Ohio Department of Jobs and Family Services (ODJFS), Cleveland Water used internal records and LSL "assumptions" (e.g., building age, pipe diameter) to gauge which facilities were likely to have LSLs.
- Parents do not know that their child care provider willfully rejected free LSL replacement.
- Monetary inducements (e.g., $100) did not incentivize child care providers to participate.
- Through interactions with the other state agencies, Cleveland Water representatives suggested that ODJFS consider requiring LSL disclosure and/or removal as part of the annual license renewal process.

LEAD ACTION LEVEL

Several other states have taken strong action to reduce the lead action level in child care facilities. Below is a brief overview of Vermont's experience.

Vermont Department of Health

Vermont enacted a law in 2019 lowering its lead action level in water from 15 ppb to 4 ppb for schools and child care facilities. A state appropriation of over $2.5 million covered initial and confirmatory testing (i.e., after remediation) and fixture replacement.

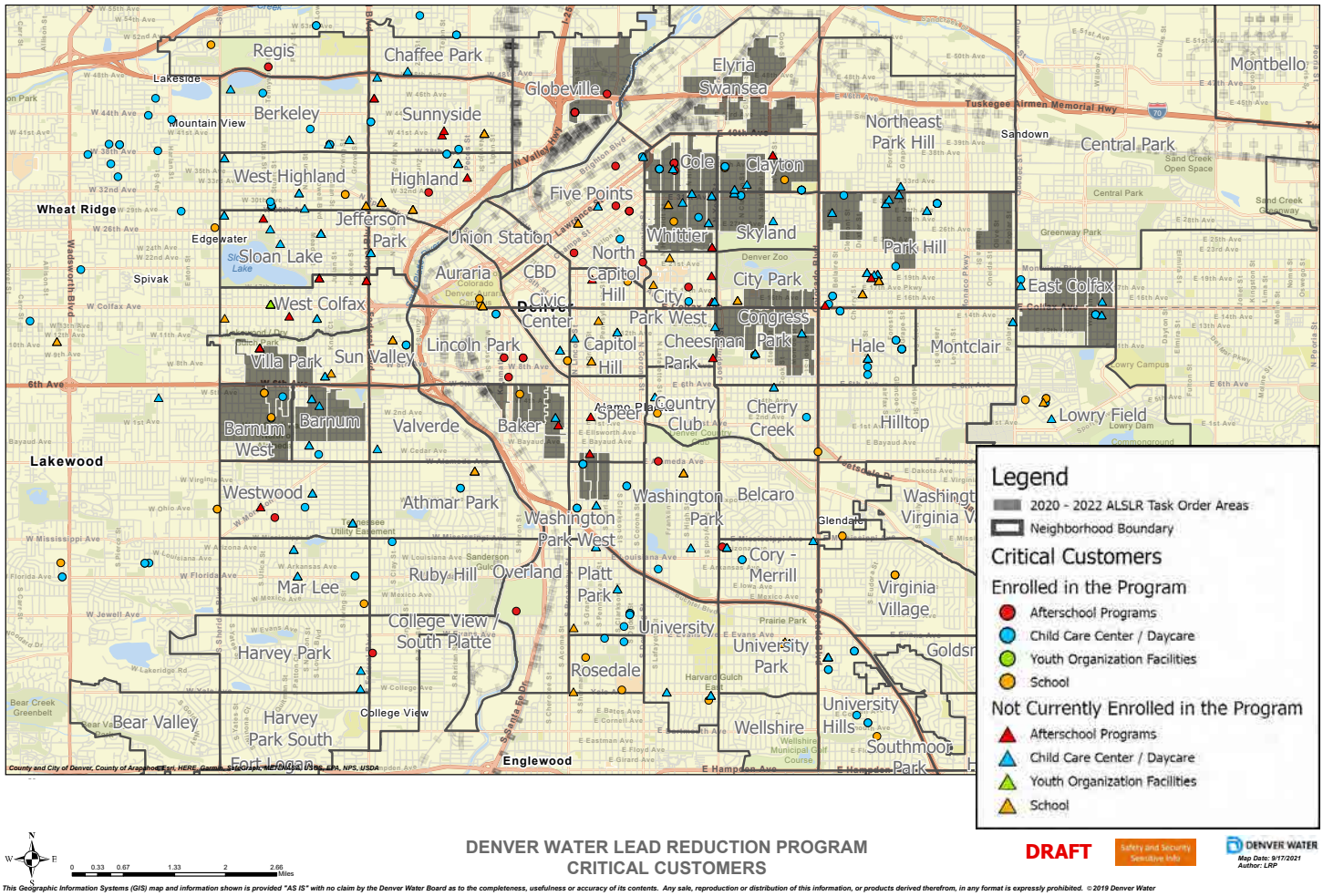
According to the Vermont Department of Health (VDOH), noteworthy "lessons learned" included:

- Enactment of a law enforcing an action limit is a far more effective way to secure the cooperation of the public than issuing general public health recommendations.
- Early outreach and communication is key to explaining new procedures (i.e., how a new law differs from the previous lead and copper rule).
- Teamwork between different departments is vital to maximizing efficiency in enforcing a new action limit. The close working relationship between VDOH and the Child Development Division on outreach and the training of technicians is a prime example.
- Fixture replacement costs vary, but typical costs were as follows:
    - Bottle stations: up to $1,800
    - Taps used for cooking: $650
    - Other outlets: $350-400

Test results and remediation data may be viewed at: https://leadresults.vermont.gov/.

Child Care Facilities in Denver Water's Service Area (Working Map)

Denver Water's working map identifying child care facilities in its service area.



ENDNOTES

1 Some child care programs, including those operated by churches and summer camps approved by the Department of Health, are exempt from licensure.

2 "Family Child Care in New Jersey: Challenges and Opportunities," Advocates for Children of New Jersey, https://files.eric.ed.gov/fulltext/ED585616.pdf, (Dellanno and Kaiser, July 2017).

3 Manual of Requirements for Child Care Centers: To be eligible for a license, a center shall demonstrate to the satisfaction of the Department of Human Services, or the duly authorized agency, that the center complies with all applicable provisions of the Manual of Requirements for Child Care Centers.
Manual of Requirements for Family Child Care Registration: Certificate of registration means a document issued by a sponsoring organization to the family child care provider acknowledging that the provider is in compliance with all applicable provisions of NJAC 3A:54, which reflect provisions that constitute minimum baseline requirements below which no family child care sponsoring organization or registered family child care provider that is subject to the authority of NJSA 30:5B-16 et seq. is legally permitted to operate.

4 The Environmental Protection Agency (EPA) acknowledged this point through its adoption of a maximum contaminant level goal (MCLG) of zero for lead.

5 "10 Policies to Prevent and Respond to Childhood Lead Poisoning," Health Impact Project, Robert Wood Johnson Foundation/Pew, http://www.pewtrusts.org/~/media/assets/2017/08/hip_childhood_lead_poisoning_report.pdf, 2018.

6 "Neurological and Behavioral Consequences of Childhood Lead Exposure," Bellinger DC, PLoS Medicine, May 27, 2008.

7 "Dynastic Benefits of Early Childhood Education," National Bureau of Economic Research, Garcia, Bennhoff, Leaf and Hickman, July 2021.

8 "Downstream Consequences of Childhood Lead Poisoning: A Longitudinal Study of Cleveland Children From Birth to Adulthood," Center on Urban Poverty and Community Development, Case Western Reserve University, Coulton, Garcia-Cobian Richter, Cho, Park, and Fischer, June 2020.

9 "Childhood Lead Poisoning: Conservative Estimates of the Social and Economic Benefits of Lead Hazard Control," Elise Gould, Environmental Health Perspectives, March 31, 2009.

10 "10 Policies to Prevent and Respond to Childhood Lead Exposure," Robert Wood Johnson Foundation/Pew: http://www.pewtrusts.org/~/media/assets/2017/08/hip_childhood_lead_poisoning_report.pdf, 2017.

11 Paycheck Protection Program: TA Forgiveness Final Report, Civitas Strategies, Jan. 2021.

12 "The US and the High Price of Child Care," Child Care Aware of America, 2019.

13 "Contributions of Service Line and Plumbing Fixtures to Lead and Copper Rule Compliance Issues," American Water Works Association, Water Research Foundation, Sendvig, et al., 2008.

14 The estimated number of SRCCPs is based on 2019 data, prior to the pandemic of 2020, when up to 40% of such facilities closed at least temporarily.

15 The standardization of the lead testing cycle between schools and child care facilities was one of the recommendations in the report, "Lead in Drinking Water: A Permanent Solution for New Jersey," issued by Jersey Water Works' Lead in Drinking Water Task Force in Oct. 2019. See https://www.jerseywaterworks.org/committees/lead-in-drinking-water-task-force/.

16 Besides NJ, the other 10 states that require testing are CA, CT, IL, ME, NC, NH, OR, RI, VT, and WA.

17 DCF presently operates a central database and a website summarizing SRCCP inspections and operational issues at many facilities; however, a statewide report of lead test results has not been publicly released.

18 EDF concluded the safe level to be 3.8 ppb, a relatively conservative number based on EPA's data and the analysis presented at the link here: http://blogs.edf.org/health/2017/02/28/health-based-action-level-for-lead-in-drinking-water/.

19 Subsequently, EPA removed the recommended lead in drinking water action level for SRCCPs and schools. but did not replace it with a new one. EPA's current recommendation reads, "If testing results show elevated levels of lead in drinking water, then you should implement remediation measures."

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23 In addition to training child care providers on sampling procedures, the second step of North Carolina's program prompts a visit from the health agency to retest and consult with facilities that have lead exceedances. Random sampling helps ensure protocols are followed and results are accurate.

24 North Carolina Department of Public Health, Division of Child Development, and the State Lab of Public Health.

25 The federal lead and copper rule requires SRCCPs that use well water to remediate.

26 "Lead Reduction Program: How We Are Identifying When and Where to Replace Lead Service Lines," Denver Water. Also, see https://www.denverwater.org/sites/default/files/Prioritization_model_fact_sheet.pdf).

27 See https://www.nj.gov/dcf/providers/licensing/DCF-DrinkingWaterTestingChecklistandStatmentofAssurance.pdf.

28 See https://www.nj.gov/dcf/providers/licensing/CCL.Information.to.Parents.Statement.pdf.

29 For example, a map that integrates lead in water data (whether that is water readings and/or presence of LSLs) with information on lead paint in child care facilities. The City of Paterson is piloting a map that would overlay lead paint inspection data with LSL data.

30 Most prominently, DCF (https://www.nj.gov/dcf/families/childcare/), DEP (https://www.state.nj.us/dep/watersupply/dwc-lead-consumer.html), DOH (https://www.state.nj.us/health/childhoodlead), and Human Services (https://www.state.nj.us/humanservices/dmahs/clients/lpprm/).

31 Legislation (HB3739) enacted in Illinois in Aug. 2021 eliminated any customer cost share requirement for LSL replacement in order to access state financial assistance.

32 "Mandatory Child Care Investments Are Crucial for Building a Long Term System," The Center for Law and Social Policy (Schmidt, Grimes, Kashen, and Boteach), July 2021. See https://nwlc.org/wp-content/uploads/2021/07/MandatoryCCInvestmentsFS.pdf.

33 The estimated 5,400 SRCCPs include 4.200 licensed centers and 1,200 registered FCC homes.

34 If State assistance is insufficient, New Jersey could prioritize available funds based on the approach adopted in California (SB 862) in 2018, which prioritized facilities that serve children zero to five years of age (with highest priority for centers serving children zero to three years of age), providers that operate only one center, and facilities with at least 50% of the children served receiving subsidized care.

35 In Illinois, if a child care facility test result exceeds 2 ppb, the facility must immediately disconnect those outlets, provide a safe water alternative, and send a long-term mitigation plan to the local DCFS licensing office as well as parents. Contaminated outlets are retested six months after initial testing and then annually until there are two consecutive years of compliance. Retesting of all affected fixtures must also be done less than 30 days after any plumbing changes.

36 The principal forgiveness loan to Cleveland Water is derived from a statewide allocation of $20 million that was transferred from the wastewater portion of the State Revolving Fund.

Jersey Water Works is a collaborative effort of many diverse organizations and individuals who embrace the common purpose of transforming New Jersey's inadequate water infrastructure by investing in sustainable, cost-effective solutions that provide communities with clean water and waterways; healthier, safer neighborhoods; local jobs; flood and climate resilience; and economic growth.
Learn more and join the collaborative at jerseywaterworks.org.

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Lead-Free NJ is an inclusive collaborative that strives to remove all sources of lead from New Jersey's environment in a holistic way. The collaborative seeks to eliminate racial and economic inequities by focusing on legacy lead hazards in low-income communities and/or communities of color, while also creating the conditions for children to be free from lead poisoning statewide.
See **leadfreenj.org**.

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