

**IN THE UNITED STATES DISTRICT COURT
FOR THE DISTRICT OF NEW JERSEY**

NEWARK EDUCATION)	
WORKERS CAUCUS et al.,)	
)	
Plaintiffs,)	Case No. 2:18-cv-11025
)	
v.)	Judge Esther Salas
)	Magistrate Judge Cathy L. Waldor
CITY OF NEWARK, et al.,)	
)	
Defendants.)	
_____)	

Declaration of Jonathan S. Shefftz

I, Jonathan S. Shefftz, do hereby affirm and state:

Introduction and Qualifications

1. I have been retained by Plaintiffs in this matter to provide an expert analysis of financial aspects of the “Order to Show Cause Why this Court Should Not Grant Preliminary Injunctive Relief” (filed September 26, 2018), ECF No. 41. Specifically, I have been asked to opine on the anticipated costs of the measures in Plaintiffs’ Proposed Order.

2. My opinion is based on my expertise in financial economic analysis, as further detailed in the Curriculum Vitae included as Attachment A to this Declaration. I hold both undergraduate and graduate degrees with a focus on economics in various contexts. I have been qualified numerous times as an expert witness on various financial economics matters in U.S. District Court, in U.S. Environmental Protection Agency (“EPA”) administrative hearings, and in state courts.

3. I have specific expertise in the assessment of environmental costs for municipalities and other governmental entities. The expenditures that I have assessed for my case work have included: civil penalties for violations of the federal Clean Water Act, Safe Drinking Water Act, and other statutes; cleanup cost contributions at Superfund sites and other types of cleanups; and capital investments for drinking water and wastewater systems. The

municipalities have ranged in size from far smaller than Newark to other major metropolitan areas, e.g., Baltimore, Baltimore County, Chicago, Cincinnati, Detroit, Honolulu, Indianapolis, Miami-Dade County, Nassau County, New Orleans, Los Angeles, Newport, Portland (Oregon), Prince George's County, St. Petersburg, San Diego, Seattle, and Washington D.C.

4. In addition, I have provided broad-ranging assistance to the EPA Office of Water in its review of the federal Safe Drinking Water Act small community affordability criteria for new drinking water standard rules. First, I assisted Office of Water staff during an EPA Science Advisory Board review of the existing criteria. Then, I assisted Office of Water staff during a series of stakeholder meetings on the topic. Stakeholders included representatives from small community water systems concerned about the strength of their municipal finances, water industry engineers, and public health advocates. My assistance included both qualitative and quantitative tasks, ranging from investigating outside sources of finances (e.g., Drinking Water State Revolving Fund) to running data for thousands of U.S. counties through alternative affordability criteria.

Estimates for Included Households and Persons under Proposed Order

5. The measures in Plaintiffs' Proposed Order would apply to households meeting any of the following criteria: a) at least one child aged six

or under; b) a woman who is pregnant or nursing; c) drinking water tested above 10 parts per billion for lead in water within the past 24 months; d) served by a lead service line or whose service line is yet to be characterized by the City of Newark; e) building with lead pipes or copper pipes with lead solder. Table 1—following the main text of this Declaration—provides the inputs and initial calculations that I use to develop my estimates for the anticipated number of such households and their residents. My calculations in Table 1 focus exclusively on criteria (a), (b), (d), and (e). The population for the omitted criterion (c) is most likely almost entirely a subset of the population for criteria (d) and (e), i.e., households testing positive for above 10 parts per billion for lead in water are most likely to have lead service lines and/or lead plumbing.

6. As shown in Table 1, for criterion (a), I use U.S. Census Bureau information for the count of Newark households with children under six years of age, supplemented with an extrapolation for the Census count of Newark households with children 17 years old and younger (yet without children under six years old). For criterion (b), I use information from the Census and the Centers for Disease Control to combine the Newark count for childbearing-age women with historical statistics on birth rates and pregnancy outcomes. I understand that Newark has claimed that it does not maintain records for such household demographic information. However, my estimates can be viewed as

the upper-bound of the range for households that would qualify under such a program.

7. For criteria (d) and (e), I use Newark's own information for residential water accounts with lead or unknown service lines and/or plumbing, as provided in the Declaration of Tiffany Stewart, Assistant Corporation Counsel and Manager of Billing and Customer Service with the Newark Department of Water and Sewer Utilities (filed October 2, 2018), ECF No. 49-5. However, instead of relying on Ms. Stewart's very rough approximations for households per residential account in large multifamily buildings, I apply the percentage of residential accounts with lead or unknown service lines and/or plumbing to the total number of households in Newark according to the U.S. Census Bureau. Although any approach is only an estimate of the true yet unknown number, I believe that the U.S. Census estimates for households and persons provide a more accurate result.

8. With the inputs and initial calculations from Table 1, I can then derive estimates for the number of households and persons who would be included in the Proposed Order, as shown in Table 2. For the criterion of a child age 6 or younger, I estimate that 13,343 households and 47,767 persons would qualify for inclusion under the Proposed Order. For the criterion of a pregnant mother, I estimate that an additional 2,321 households and 4,641

persons would qualify. For both of these demographic criteria combined, the totals would be 15,663 households and 52,408 persons.

9. Turning to the lead or unknown service line and/or plumbing criterion in Table 2, I estimate that 54,822 households and 151,308 persons would qualify, although these figures overlap with those included under the demographic criteria. (My figure of 54,822 households is significantly higher than the corresponding 40,907 figure from Ms. Stewart's Declaration.) Netting out the overlap, I estimate that 46,120 households and 127,291 persons have lead or unknown service lines and/or plumbing yet are not included under the demographic criteria. For all criteria combined, I estimate that 61,783 households and 176,699 persons would be included under the Proposed Order.

Estimates for Costs of Injunctive Relief under Proposed Order

10. In Table 3, I develop estimates of the per-household and per-person costs for the key injunctive relief measures: bottled drinking water, faucet filtration system installation, and drinking water testing. I use Newark's own cost estimates for the bottled drinking water distribution and for the faucet filter system installation. Specifically, for the bottled water distribution, I start with Ms. Stewart's annual cost estimates for buying and distributing bottled water for households with lead or unknown service lines and/or plumbing, and also convert her initial start-up cost for truck purchases to an annual lease

cost equivalent. From that I derive both a per-person annual water purchase cost and a per-household annual delivery cost (i.e., including both labor and truck leasing). For the faucet filter system installation, I start with Ms. Stewart's per-household costs for faucet filter systems and replacement filters, and then add to that her city-wide installation costs recalculated on a per-household basis.

11. For drinking water testing, although Newark claims it is already providing such services to residents, I include such testing as a cost element since the implementation of the Proposed Order would most likely lead to an increase in households requesting such tests. I use retail prices as proxies for the injunctive relief costs, even though the economies of scale for such a program should be able to achieve significant cost savings. Therefore, my cost estimate for testing should be viewed as an upper-bound figure.

12. Finally, Table 4 combines the per-household and per-person costs of Table 3 with the counts for the included households and persons of Table 2. I base my results on a split, with one out of every three households electing to receive bottled water, and the other two households out of every three electing to receive faucet filters. For the testing, I base my results on a scenario under which one out of four households elects to receive this service (i.e., over and

above whatever baseline of households are already electing to receive testing services from the City).

13. As with Table 2, I provide both the total figures in Table 4 across all inclusion criteria and also the per-criterion figures, along with a demographic-criteria subtotal. Lines 1 through 6 of Table 4 correspond with the inclusion criteria and subtotals or combinations from Table 2. As shown in the final column of Table 4, the total annual costs would be \$31,567,607 for households qualifying under any criterion (i.e., Line 6).

14. Table 4 also includes cost estimates for three alternative scenarios: if relief is provided only for households with children six or under or pregnant women; if the City provides three cases of water per person, per week, rather than four (i.e., 75 percent of the amount in the Proposed Order); and if all households receive filters instead of bottled water.

15. As shown in the final column of Table 4, on Line 3, the total annual cost would be \$9,000,513 if the relief covered only households with children aged six or under or pregnant women.

16. Alternatively, Table 4 also provides a Line 7 for lower amounts of bottled water consumption. Specifically, Table 3 had calculated 48 liters per week per included household resident under the terms of the Proposed Order. Line 7 of Table 4 uses 75 percent of this figure (i.e., three cases instead of four),

for per-person daily bottled water consumption of slightly over five liters. (The other cost estimates stay the same in Line 7, since the reduction in the bottled drinking water cost is derived from lower consumption for the same number of households and persons, while the households electing faucet filtration system installation and drinking water testing both remain unchanged.) As shown in the final column of Table 4 for Line 7, the total annual costs would be \$24,757,587 for households qualifying under any inclusion criterion with the water consumption reduced to 75 percent of that required in the Proposed Order.

17. Table 4 also includes a Line 8 for a scenario in which 100 percent of included households receive water filters (i.e., as opposed to bottled water). As shown in the final column of Table 4 for Line 8, the total annual costs would then be \$5,334,054 for households qualifying under any inclusion criterion.

18. A direct comparison with my Table 4 versus the final results in the Stewart Declaration is difficult because of an “apples and oranges” problem. Specifically, my results mainly rely on the same underlying cost estimates as the Stewart Declaration, as I previously explained in detail. But I apply these same underlying cost estimates to a different number of households, based upon multiple inclusion criteria. Ms. Stewart applies the costs to her estimates

of either 72,078 for the total number of serviced households or 40,907 for the number of households with lead or unknown service lines and/or plumbing. By contrast, my cost estimate results across all inclusion criteria in Table 4 (i.e., Lines 6, 7, and 8) are based on 61,783 households, with the derivation for that figure described earlier in this Declaration, and detailed in my Table 1 and Table 2. I also provide for various combinations of costs in my Table 4, whereas Ms. Stewart examines either the distribution of bottled water or the installation of faucet filters.

19. The annual cost figures under different scenarios in Table 4 would continue to be incurred until sufficient improvements in drinking water quality are achieved. Plaintiffs' counsel has informed me that this will occur somewhere from half-a-year to a full year from the date that Newark implements corrosion control treatment ("CCT"). My understanding is that under the current schedule, the New Jersey Department of Environmental Protection is not expected to approve the City's CCT recommendation until October 2019. If the City were to then implement that recommendation immediately, the water system would not start seeing sufficient drinking water quality improvements until somewhere between April and October of 2020. Alternatively, with delays on behalf of either NJDEP or the City, the injunctive relief measures and their costs might continue into somewhere

between April and October of 2021. Given that my report is being prepared as of October 2018, the bottom line is that the annually recurring costs in my Table 4 might be incurred for anywhere from two to three years. However, I would expect the costs to diminish over time. For example, some households with unknown service lines will drop out of the program once their lines are surveyed and determined not to contain lead. And many other households with faucet filtration systems will not require reinstallation or other professional servicing after the first year.

I declare under penalty of perjury that the foregoing is true and correct.



Jonathan S. Shefftz

October 11, 2018

Date