NEWARK, NJ

Newark Earned a Water Quality and Compliance Grade of Fair in 2000 and 2001

The city has serious problems with lead, as well as with trihalomethanes and haloacetic acids.

▶ In both 2000 and 2001, tap water tests revealed **lead** levels that exceed the national action level. Newark says it is installing improved treatment to address this problem. Lead—which enters drinking water supplies from the corrosion of pipes or faucets—can adversely affect blood pressure, red blood cells, and kidney and nervous system function and, especially in infants and children, cause permanent brain damage, decreased intelligence, and problems with growth, development, and behavior.

▶ Newark has made some progress on its problems with **trihalomethanes** (TTHMs) and **haloacetic acids** (HAAs) but still has elevated levels. TTHMs and HAAs are by-products of chlorine disinfection that may cause cancer and possibly birth defects and miscarriages.

Noteworthy

▶ In general, a June 2001 New Jersey Department of Environmental Protection inspection rated Newark's reservoir system "unacceptable," citing such problems as an uncovered finished water reservoir that must be covered to protect it from contamination and a sludge lagoon leaking into the Charlotteburg Reservoir.[1]

Newark's Right-to-Know Reports Earned Failing Grades for 2000 and 2001

▶ The 2000 and 2001 reports complied with many but not all of the EPA's requirements and made no overarching claim that the water is absolutely safe, but they violated federal law by not providing information on the specific levels of arsenic and haloacetic acids.

▶ The reports buried information on the city's exceedance of the EPA action level for lead.

▶ In 2000, the city violated a federal requirement that the report be posted on the Internet.

Newark Earned a Source Water Protection Grade of Fair

▶ The EPA's Index of Watershed Indicators (IWI) has ranked the Passaic River Watershed, the city's water supply Watershed, as a 6 on a 1 to 6 scale, with 6 the worst possible rating. Although much of the upstream watershed is protected, significant sections of downstream rivers are degraded by water pollution sources and hazardous waste facilities, and constant development pressure threatens the upstream watershed. In addition, as noted above, Newark's reservoirs are threatened.

NEWARK
System Population Served **275,221**[2]
Water Quality and Compliance **2000▶Fair** **2001▶Fair**
Right-to-Know Report—Citizenship **2000▶Failing** **2001▶Failing**
Source Water Protection **Fair**
REPORT CARD

KEY CONTAMINANTS IN NEWARK'S WATER

The following contaminants have been found in Newark's drinking water supply. For more information on health threats posed by specific contaminants, see Chapter 5.

MICROBIOLOGICAL CONTAMINANTS

Total Coliform Bacteria

National Standard (MCL)
5% maximum in any month[3]

National Health Goal (MCLG)
0—no known fully safe level

1999 Levels
1% in highest month, total coliform positive

2000 Levels
0% in highest month, total coliform positive

2001 Levels
0.4% in highest month, total coliform positive

LEVELS PRESENT SOME CONCERN

Total coliform bacteria are microbial contaminants whose presence is a potential indicator that disease-causing organisms may be present in tap water. The highest reported level of coliform bacteria in any

month in Newark's Wanaque system was 1 percent, measured in 1999. The coliform bacteria finding in Newark is not seen as a serious health risk for healthy consumers; however, the finding of any coliform bacteria in the city's water distribution system is a potential indication that regrowth of bacteria may be occurring in city pipes.

INORGANIC CONTAMINANTS

Lead

National Standard (TT)
15 ppb (action level, at 90th percentile)[4]

National Health Goal (MCLG)
0—no known fully safe level

1999 Levels[5]
Wanaque System
24 ppb at the 90th percentile home
Pequannock System
13 ppb at the 90th percentile home

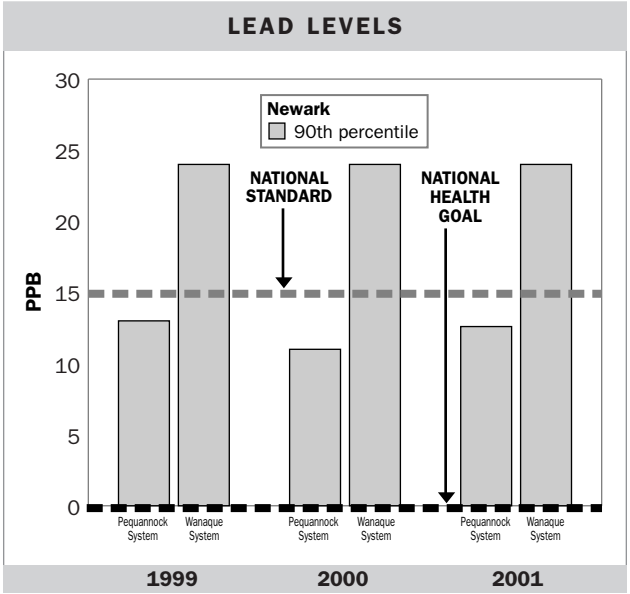
2000 Levels[6]
Wanaque System: 24 ppb at the 90th percentile home
Pequannock System: 11 ppb at the 90th percentile home

2001 Levels[7]
Wanaque System: 24 ppb at the 90th percentile home
Pequannock System: 12.6 ppb at the 90th percentile home

EXCEEDS ACTION LEVEL

Lead—which enters drinking water supplies from the corrosion of pipes or faucets—can cause permanent brain damage, decreased intelligence, and problems with growth, development, and behavior, as well as adversely affect blood pressure, red blood cells, and kidney and nervous system function. Newark's continued exceedance of the national action level for lead in the Wanaque system is of serious concern. Newark was required under the EPA's Lead and Copper Rule to have a corrosion control program in place by 1997. But it appears from the city's monitoring that it continues to provide water that corrodes plumbing sufficiently to cause exceedances of the action level. In its right-to-know report, the city asserted that in 2001 it used the corrosion inhibitor sodium silicate in the Pequannock supply zone and that lead levels in the zone, although still elevated in many homes, did not exceed the action level.[8] The same was not true in the Wanaque supply zone, where lead levels were well above the action level.[9] Newark says it installed a satellite feed station to add corrosion inhibitor to the water in that zone in late 2001. The city says that "once the satellite feed station is fully operational," there will be corrosion inhibitors added to the Wanaque water but made no promises that the lead problem will be fully resolved by this step.[10]

In the meantime, Newark points out, "infants and children who drink water containing lead in excess of the action level could experience delays in their physical or mental development. Children could show deficits in their attention span and learning abilities. Also, adults who drink this water over many years could develop kidney problems or high blood pressure."[11] Consumers, particularly those with infants or young children, may want to test their water for lead; to find a laboratory, contact the Drinking Water Hotline, 800-426-4791. Or consumers may choose to flush faucets of lead by running water for approximately one minute before ingestion. (Excess water may be saved for plants or other uses.)



ORGANIC CONTAMINANTS

Haloacetic Acids

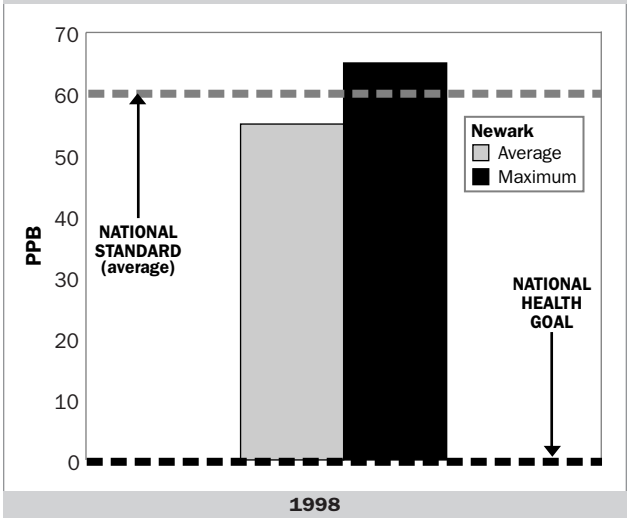
National Standard (MCL)
60 ppb (average) effective in 2002; no previous standard

National Health Goal (MCLG)
0—no known fully safe level[12]

1998 Levels[13]	Average	Maximum
	55 ppb	65 ppb

LEVELS PRESENT HIGH CONCERN

HALOACETIC ACID LEVELS



Haloacetic acids (HAAs), by-products of chlorine disinfection, may cause cancer and, potentially, reproductive and other health problems. Newark's last reported HAA levels are for 1998, and they were just shy of the new national standard. Newark has publicly reported no more data, but if the city switched to ozone disinfection, as it said in 2000 that it planned to do, HAA levels may have been reduced.

Total Trihalomethanes

National Standard (MCL)
100 ppb (average) effective through 2001
80 ppb (average) effective in 2002

National Health Goal (MCLG)
0—no known fully safe level[14]

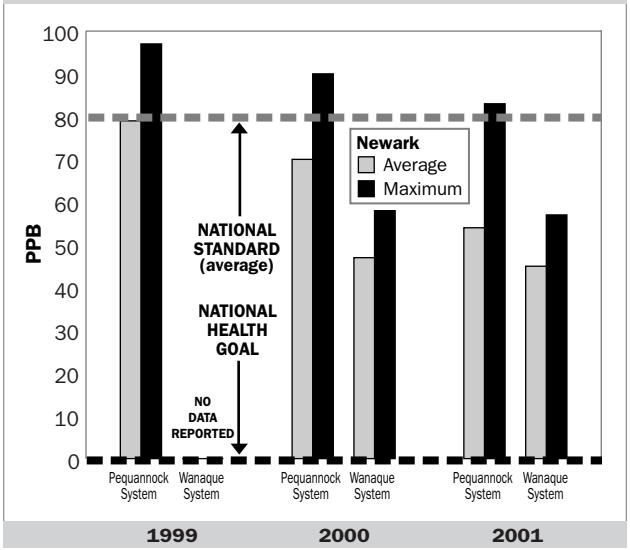
1998 Levels
195 ppb spike in September 1998

1999 Levels[15]	Average	Maximum
Pequannock System	79 ppb	97 ppb
2000 Levels	Average	Maximum
Pequannock System	70 ppb	90 ppb
Wanaque System	47 ppb	68 ppb
2001 Levels[16]	Average	Maximum
Pequannock System	54 ppb	83 ppb
Wanaque System	45 ppb	57 ppb[17]

LEVELS PRESENT HIGH CONCERN

Total trihalomethanes (TTHMs)—contaminants that result when chlorine is used to treat drinking water and then interacts with organic matter in the water—are linked with cancer and, potentially, to miscarriages and birth defects. TTHM levels have improved steadily

TOTAL TRIHALOMETHANE LEVELS



in Newark since 1998 with a particularly marked improvement in 2001, apparently due to the introduction of ozone as a primary disinfectant. The highest TTHM level reported by Newark in 2001 is considerably lower than the previous years' peak. As recently as 1998, a level of 195 ppb was recorded in the city's system. According to at least one scientific study, systems with average TTHM levels more than 75 ppb are associated with miscarriages, and early studies completed in New Jersey indicate some birth defect association with elevated TTHMs.

Newark says in its 2001 right-to-know report that "Newark receives water that meets the yearly MCL average for TTHMs. The New Jersey Drinking Water Supply Commission and Newark have recently modified treatment to further reduce TTHMs and now participate in a statewide study to help further reduce the amount of naturally occurring organics in the watershed. Newark is planning to modify its treatment process to further reduce its TTHMs by the use of ozone as a disinfectant."

NEWARK'S RIGHT-TO-KNOW REPORTS

Newark's Right-to-Know Reports Earned Failing Grades for 2000 and 2001

On the good-citizen side of the ledger:

▶ The 2000 and 2001 reports complied with many, but not all, of the EPA's rules for right-to-know reports

and made no overarching claim that the water is absolutely safe.

▸ The reports included required information on "special considerations regarding children, pregnant women, nursing mothers, and others," including specific information on nitrate and lead. However, the lead discussion in that section failed to point out that the water in parts of Newark exceeded the EPA's lead action level. Instead the report stated, "if you are concerned about lead levels in your home water, you may wish to flush your tap for 30 seconds to two minutes before using tap water."

On the could-be-a-better-citizen side of the ledger:

▸ For years, the city violated federal law by failing to post its right-to-know report on the Internet. In letters dated September 2000 and October 2001, the New Jersey Department of Environmental Protection threatened the city with enforcement action.[18] Finally, as of March 2002, the 2000 report was posted on the Web. The 2001 report was posted in a more timely way in 2002,[19] albeit in a location that is difficult to find.[20]

▸ Newark's 2000 and 2001 reports violated federal law by not providing information on the specific level of arsenic detected in the city's water supply in the report's table of contaminants. The 2000 report was completely silent on arsenic. The 2001 report buried in text on pages 5 and 6 the following: "while your drinking water meets the USEPA's standard for arsenic, it does contain low levels of arsenic. . . . In 2001, the level of arsenic was less than 8 ppb in Newark's water." No specific arsenic levels are revealed, contrary to EPA rules, simply an assertion that arsenic levels are *below* 8 ppb. The 2001 report then includes a statement, required by law to be issued to consumers who have more than 5 ppb of arsenic in their drinking water, that the EPA set the arsenic standard at 10 ppb based on a weighing of costs of treatment against health effects and that arsenic is "a mineral known to cause cancer in humans at high concentrations and is linked to other health effects such as skin damage and circulatory problems."

▸ Newark's 2000 and 2001 reports violated federal law by failing to include information on the levels of haloacetic acids found in city water. EPA rules require this information to be disclosed.[21]

▸ Newark's reports buried on page 5 information about its exceedance of the lead action level, obscuring the news in large blocks of single-spaced, small-font type. This presentation sharply contrasts with the far more prominent and rather misleading statement in boldface and all caps on the first page, asserting that, "Newark's drinking water meets or surpasses all federal and state drinking water standards." That statement did not mention that the Pequanock system exceeded the lead action level. The report also failed to acknowledge that Newark had a legal responsibility to reduce lead levels by 1997.

▸ The report violated the EPA's regulations by failing to state the number of tested households that exceeded the lead action level.[22]

▸ The 2001 report did not mention a violation that year of the lead-monitoring rules. The violation is highlighted on the EPA website's list of violations.[23] EPA rules require any violation in the past year to be discussed in the report.[24] (This violation could not be independently confirmed with the state at press time. Although the EPA website generally warns that it may contain errors, it is directly based upon reports filed by New Jersey with the EPA, and under federal law, state reports must be complete and accurate, subject to civil and criminal penalties.)

▸ A table in the report obscured important findings about hazardous contaminants by adding extensive entries for other regulated contaminants that were not of concern and were even not detected. This appears to have been a violation of EPA rules, which specifically prohibit water systems from burying important data in a sea of unimportant information. Specifically, EPA rules provide that "any additional monitoring results, which a community water system chooses to include in its report, must be displayed separately"[25] from the required tables, and "the systems may include such additional information as they deem necessary for public education consistent with, and not detracting from, the purpose of the report."[26]

▸ The format of the report was not user-friendly.

▶ Newark has not translated its reports into Spanish or any other language. According to the 2000 Census, 43 percent of Newark's residents do not speak English at home, and 28 percent of Newark's population speaks Spanish at home. In addition, about 15 percent of the city's population speaks Spanish and speaks English "less than very well." The EPA rules require that systems serving "a large proportion of non-English speaking residents" must provide information on the importance of the report in the relevant language(s) or a phone number or address where citizens can get a translated copy of the report or assistance in their language.[27] Newark does make a passing reference in Spanish in the reports to their importance but fails to provide a phone number for more information in Spanish—a step taken by some cities with significant Spanish-speaking populations. In all, about 7 percent of Newark residents speak "other Indo-European languages" or "Asian and Pacific Island languages" and also speak English "less than very well." This population apparently speaks a multitude of other languages, and although 2000 census data available at press time do not give a clear indication, it may be that no single translation would reach a large percentage of this population.

▶ The reports included no maps showing Newark's source of drinking water and nothing detailing specific sources of pollution in the city's source water. EPA rules require utilities to name known sources of any specific contaminant found in tap water.[28] Even where EPA rules do not require such specific notice about a polluter, or where the polluter cannot be tied with assurance to a particular contaminant, EPA rules encourage water systems to highlight significant sources of contamination in the watershed. It is helpful to citizens to be told what the known or potential pollution sources are in their source water in order to increase awareness of watershed protection.

▶ The reports did not discuss the health effects of certain regulated contaminants found at levels in excess of health goals. For example, the reports did not inform consumers that chlorination by-products, trihalomethanes, and haloacetic acids found at elevated levels in Newark's water are linked to cancer and possibly to reproductive problems. The report acknowledged only that, "in excessive quantities, these by-products may have harmful health effects." While EPA rules do not mandate that such information be provided, it would have helped consumers in protecting their drinking water and in making decisions about the health of their families.

THREATS TO NEWARK'S SOURCE WATER

Newark Earned a Source Water Protection Grade of Fair

The EPA's Index of Watershed Indicators (IWI) has ranked the overall health of the city water supply (the Passaic River Watershed) as a 6—the worst possible rating. In the EPA's words, "The overall IWI score . . . describes the health of the aquatic resources for this watershed. A score of 6 indicates more serious water quality problems—high vulnerability to stressors such as pollutant loadings."[29] While the upper reaches of Newark's Pequannock and Wanaque Watershed supplies are predominantly forested, largely protected, and relatively pristine, sections of these rivers, particularly downstream, are degraded by water pollution sources and waste facilities. In addition, even protected sections of the watershed face enormous development pressures.

Newark's source water, located in Morris, Sussex, and Passaic Counties, comes from the Wanaque and Pequannock Watersheds; they cover 150 square miles of mostly forested lands in north central New Jersey and ultimately flow into the Passaic River. Newark's 14.5-billion-gallon Pequannock supply comes from five upstream reservoirs: Charlottesburg, Echo Lake, Canistear, Clinton, and Oak Ridge. Most of the upper watershed generally has been fairly pristine but is under immense development pressure, and portions of the Pequannock River have been classified by the state as "biologically moderately impaired"—that is, moderately polluted with coliform bacteria, excessive biological oxygen demand, and other water quality problems.[30] In addition, some water pollution discharge permitees and numerous hazardous waste sites

are located in the watershed. Yet according to the state Department of Environmental Protection, the "great majority of the land within the Pequannock Watershed is forested and protected for water supply purposes and parklands."[31]

However, the cash-strapped city of Newark has over the past several years proposed a variety of possible development projects in the watershed to raise revenues. While the city contends these projects will not threaten water quality, to date, the schemes generally have been prohibited by state watershed protection laws. According to local press accounts, the state has had to purchase rights to approximately 9,000 of Newark's 33,000 acres of watershed land from 1990 to 2001, at a cost of more than $9 million.[32] For example, in 2000 and 2001, the city-controlled Newark Watershed Conservation and Development Corporation, whose name is emblematic of its schizophrenic approach, proposed to allow music promoter John Scher to build a 25,000-seat amphitheater on city watershed land.[33] The state Attorney General opposed the scheme as a violation of a 1988 state legislative moratorium on development of watershed land.[34] Ultimately, the state paid $1.4 million to buy conservation easements on 795 acres of Newark watershed land to keep the city from developing its open space holdings.[35] In November 2001, Morris County voters approved a $25 million increase in property taxes to pay for land conservation in the area, which includes much of the Newark watershed.[36]

In December 2001, the Newark City Council agreed to sell to the state development rights to an additional 9,300 acres for $9.9 million. The deal transpired, even though Newark Mayor Sharpe James simultaneously had been discussing the possible sale of the system to a private entity in order to raise cash; part of this plan involved opening up remaining portions of the watershed to development.[37] In late 2001 and early 2002, another development scheme was proposed, under which Newark would be allowed to develop some of its watershed property in exchange for the small watershed town of West Milford's right to build an access road through the watershed lands to a proposed golf course, hotel, and conference center.[38] Town officials said they would seek an exemption from a 1988 moratorium on land development and argued that the development would enable them to raise more funds through property taxes.[39] As of June 2002, legislation permitting the sale was adopted by both houses of the state legislature; however, it included a provision that land included in the sale could only be used for water infrastructure and that the moratorium on the sale of watershed lands for development still applied.[40] The West Milford Town Council voted down the golf course proposal in 2002 on a 3–2 vote, but an effort was afoot to put the matter before the voters in a referendum.[41]

The rest of the city's water supply, from the New Jersey Drinking Water Supply Commission (NJDWSC), relies upon the Wanaque River Watershed. The total drainage area of the watershed is 108 square miles, of which the NJDWSC uses only a portion. The NJDWSC gets its water from the 30-billion gallon Wanaque and 7-billion gallon Monksville Reservoirs. In addition, NJDWSC pumps water into the Wanaque Reservoir from the Pompton and Ramapo Rivers, both of which have water quality that is threatened, according to the EPA's IWI. The headwaters of the Wanaque River are in New York State, as a minor tributary to Greenwood Lake, which spans the New Jersey and New York border. The New Jersey part of the watershed lies in West Milford in Passaic County. The 27-mile-long Wanaque River joins up with the Pequannock River in Riverdale Township. Most of the land in the watershed is undeveloped, consisting of vacant lands, reservoirs, parks, and farms.

In late 2002, Newark Mayor Sharpe James put forth yet another proposal to address the watershed. He proposed a "water optimization plan," under which the Newark Watershed and Development Corporation, which oversees watershed land in Morris, Sussex, and Passaic Counties, would reorganize as the Newark Infrastructure Management Corporation (NIMC) to run the watershed and water and sewer utilities. The NIMC would float $90 million in bonds and be responsible for protecting the watershed and running local utilities and then pay millions to Newark through a long-term lease of the watershed.

Recent droughts have put enormous pressure on the state's drinking water systems, including Newark's. During the 1999 drought, the Wanaque Reservoir was low, and the Ramapo could not be pumped because it was too low.[42] By law, the Pompton may not be pumped during summer months, due to flow and water quality impairment problems, and sometimes (during the 1999 drought, for example) these problems meant that the Pompton could not be tapped during other months either.[43]

PROTECTING NEWARK'S DRINKING WATER

The following are approaches to treating Newark's drinking water and information on how residents can help protect their local water.

Treatment Options Available for Contaminants of Greatest Concern

Newark reported in 2000 and in 2001 that it intends to reduce its relatively high disinfection by-product levels by using ozone as a primary disinfectant. The city could also further reduce these contaminants by using activated carbon and/or by installing ultraviolet light as a primary disinfectant. In addition, although Newark claims never to have found viable *Cryptosporidium* in its water, ozone and ultraviolet light would offer a measure of additional assurance that *Crypto* poses no risk, since these disinfection technologies are far more effective than is chlorine at killing these and certain other resistant parasites. Newark must also take steps to optimize corrosion control to improve lead levels.

How Individuals Can Protect Source Water

Citizens can help protect the city's drinking water by working to protect its sources—both by conserving water in their daily lives and by getting involved in community decision making about water resources.

▶ **Contact the Newark Water Department (info below), Newark Mayor Sharpe James, and the Newark City Council.** Ask them to insist on watershed protection and to oppose watershed development schemes that could contaminate the city's tap water. Also urge them to fix the city's lead problem, reduce their disinfection by-products, and fix the reservoir problems found in NJ DEP's June 2001 inspection.

▶ **Get involved in source water assessment and protection** efforts by contacting Karen Feld or Kristin Zams at the Bureau of Safe Drinking Water, New Jersey DEP, 609-292-5550.

▶ **Learn more from these groups:**

- David Pringle, New Jersey Environmental Federation, 609-530-1515, www.cleanwateraction.org/njef/index.htm
- Dena Mottola, NJPIRG 609-394-8155, www.njpirg.org
- New Jersey Sierra Club 609-924-3141, http://njsierra.enviroweb.org
- Skylands CLEAN, 973-616-1006, www.skyclean.org/home.html
- Or contact the Clean Water Network, www.cwn.org

Peer reviewers for the Newark report included David Pringle, Campaign Director, NJ Environmental Federation.

NEWARK

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WATER UTILITY INFORMATION

NOTES

1 Letter from Joseph Liccese, New Jersey Department of Environmental Protection, to Andrew Pappachen, Newark Water Department, June 29, 2001.

2 Environmental Protection Agency, Safe Drinking Water Information System (SDWIS), Newark report, available online at www.epa.gov/safewater/dwinfo/nj.htm, visited March 13, 2002.

3 Note that the contaminant levels are presented as a percentage. Total coliform is regulated as a percentage of positive samples that are present in water. The national health standard of 5 percent means that if more than 5 percent of the utility's total coliform samples test positive, then the national health standard has been violated. To say that a sample tests positive is to say that there are total coliform bacteria present in the sample. Therefore, for compliance purposes, the utilities provide the percentage of total coliform samples that tested positive.

4 The action level standard for lead is different from the standard for most other contaminants. Water utilities are required to take many samples of lead in the tap water at homes they serve, including some "high-risk" homes judged likely to have lead in their plumbing or fixtures. If the amount of lead detected in the samples is more than 15 ppb at the 90th percentile (which means that 90 percent of the samples have 15 ppb or less), then the amount is said to exceed the action level. Under the complex EPA lead rule, a water system that exceeds the action level is not

necessarily in violation. If a system exceeds the action level, additional measures such as chemical treatment to reduce the water's corrosivity (ability to corrode pipes and thus its ability to leach lead from pipes) must be taken. If this chemical treatment does not work, the water system may have to replace lead portions of its distribution system if they are still contributing to the lead problem.

5 City of Newark, Pequannock and Wanaque (NJDWSC) Water Systems, "1999 Annual Water Quality Report" (2000).

6 City of Newark, Pequannock and Wanaque (NJDWSC) Water Systems, "2000 Annual Water Quality Report" (2001).

7 City of Newark, Pequannock and Wanaque (NJDWSC) Water Systems, "2001 Annual Water Quality Report" (2002).

8 Ibid.

9 Ibid.

10 Ibid.

11 Ibid.

12 Some of the haloacetic acids have national health goals of 0 and others have nonzero goals. For the sake of simplicity and understandability, since there is a single haloacetic acid standard, and because it is essentially chemically impossible under normal conditions in tap water to create one regulated haloacetic acid without creating the others at some level, we have listed the national health goal as 0.

13 Data obtained from EPA's Information Collection Rule database at www.epa.gov/enviro/html/icr/utility/report/NJ0714001961022141731.html.

14 Total trihalomethanes (TTHMs) consist of a sum of the levels of four closely related chemicals—chloroform, dibromochloromethane, bromoform, and bromodichloromethane—which occur together at varying ratios when water is chlorinated. The latter two TTHMs have health goals of 0. The EPA promulgated and then withdrew (after a court decision) a 0 health goal for chloroform and has not yet issued a new goal for chloroform. Dibromochloromethane has a health goal of 60 ppb. Since water systems generally report only the combined TTHM level, and since it is essentially chemically impossible to create one trihalomethane in tap water without some level of the others, we list the health goal for TTHMs as 0.

15 TTHM levels were gleaned from Newark's 1999 and 2000 Water Quality Reports and from printouts from NJ DEP's Safe Drinking Water computer records, obtained February 16, 2002.

16 The city's 2001 right-to-know report says the high level was 77 ppb in that year. See City of Newark, Pequannock and Wanaque (NJDWSC) Water Systems, "2001 Annual Water Quality Report," (2002). However, a high TTHM level of 83 was reported in a printout from NJDEP's Safe Drinking Water computer records, obtained by NRDC on February 16, 2002.

17 Ibid.

18 Letter from Barker Hammill, NJDEP, to Anthony DeBarros, October 15, 2001; letter from Barker Hammill, NJ DEP, to Anthony DeBarros, September 27, 2000.

19 See www.newarkwater.com.

20 Unlike virtually every other major U.S. water utilities, as of late 2002, Newark provided no link to its reports to the EPA's drinking water website, nor to the American Water Works Association's website. Not even the city of Newark's website links to it, nor was it readily found through Google, Yahoo, or other search engines.

21 See 40 CFR §141.153(d)(1)(iii).

22 See 40 CFR §141.153(d)(4)(vi).

23 The "major" lead and copper rule monitoring violation was recently reported at http://oaspub.epa.gov/enviro/sdw_report.first_table?report_id=571818&pwsid=NJ0714001&state=NJ&source=Surface%20water%20&population=275221&sys_num=0. When NRDC visited NJ DEP offices earlier in 2002, that violation did not appear to be noted in the state's computer system.

24 See 40 CFR §141.153(f)(1) & (3).

25 See 40 CFR §141.153(d)(2).

26 See 40 CFR §141.153(h)(5).

27 See 40 CFR §141.153(h)(3).

28 See EPA regulations at 40 C.F.R. §141.153(d)(4)(ix), which provide that the right-to-know report must include "the likely source(s) of detected contaminants to the best of the operator's knowledge. Specific information about the contaminants may be available in sanitary surveys and source water assessments and should be used when available to the operator." While the EPA allows reliance upon general lists of potential sources where the water system is not aware of the specific source of pollution or where the water system is aware of the pollution source, the rules require that polluters be identified.

29 EPA Index of Watershed Indicators, www.epa.gov/iwi/hucs/02030103/score.html, last visited March 25, 2002.

30 EPA Index of Watershed Indicators, www.epa.gov/iwi/303d/02030103_303d.html.

31 NJ DEP, www.state.nj.us/dep/watershedmgt/wma3.

32 Matthew Brown, "West Milford Tract to Be Preserved: State Pays $1.43 Million for Rights to 795 Acres," *The Record*, Bergen County, NJ, p. L1, February 15, 2001.

33 Ibid.

34 Matthew Brown, "State May Scuttle Concert Site Deal: Newark Watershed Could Net $8 Million," *The Record,* Bergen County, NJ, p. L1, November 21, 2000.

35 See note 29.

36 Dan Berman, "Campaign 2001L Voters Approve Over $1 B in Conservation Funding," *Greenwire*, November 9, 2001.

37 Matthew Brown, "Political Row Could Snag City Reservoir Deal," *The Record* (Bergen County, NJ), December 16, 2001, p. l01; Editorial, "Saving a Watershed," *The Record*, Bergen County, NJ, December 26, 2001, p. l06.

38 Matthew Brown, "W. Milford Deal May Invite Development," *The Record*, Bergen County, NJ, January 25, 2002, p. l01.

39 Ibid.

40 Personal communication with David Pringle, New Jersey Environmental Federation, July 1, 2002.

41 Ibid.

42 Ibid.

43 Ibid.