Health Consultation

Brooklyn Park Drinking Water

BROOKLYN PARK DUMP

BROOKLYN PARK, HENNEPIN COUNTY, MINNESOTA

EPA FACILITY ID: MND985671874

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Prepared by:

The Minnesota Department of Health
Environmental Health Division

Under Cooperative Agreement with the
Agency for Toxic Substances and Disease Registry
U.S. Department of Health and Human Services

This document was prepared in accordance with approved methodology and procedures existing at the time the health assessment was begun. This document has not been reviewed and cleared by the Agency for Toxic Substances and Disease Registry (ATSDR).

FOREWORD

This document summarizes public health concerns related to an industrial facility in Minnesota. It is based on a formal site evaluation prepared by the Minnesota Department of Health (MDH). For a formal site evaluation, a number of steps are necessary:

- *Evaluating exposure:* MDH scientists begin by reviewing available information about environmental conditions at the site. The first task is to find out how much contamination is present, where it is found on the site, and how people might be exposed to it. Usually, MDH does not collect its own environmental sampling data. Rather, MDH relies on information provided by the Minnesota Pollution Control Agency (MPCA), the US Environmental Protection Agency (EPA), and other government agencies, private businesses, and the general public.

- *Evaluating health effects:* If there is evidence that people are being exposed—or could be exposed—to hazardous substances, MDH scientists will take steps to determine whether that exposure could be harmful to human health. MDH's report focuses on public health— that is, the health impact on the community as a whole. The report is based on existing scientific information.

- *Developing recommendations:* In the evaluation report, MDH outlines its conclusions regarding any potential health threat posed by a site and offers recommendations for reducing or eliminating human exposure to pollutants. The role of MDH is primarily advisory. For that reason, the evaluation report will typically recommend actions to be taken by other agencies—including EPA and MPCA. If, however, an immediate health threat exists, MDH will issue a public health advisory to warn people of the danger and will work to resolve the problem.

- *Soliciting community input*: The evaluation process is interactive. MDH starts by soliciting and evaluating information from various government agencies, the individuals or organizations responsible for the site, and community members living near the site. Any conclusions about the site are shared with the individuals, groups, and organizations that provided the information. Once an evaluation report has been prepared, MDH seeks feedback from the public. *If you have questions or comments about this report, we encourage you to contact us.*

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List of Acronyms

BDCM: bromodichloromethane
BCAA: bromochloroacetic acid
CDBM: chlorodibromomethane
DBAA: dibromoacetic acid
DCAA: dichloroacetic acid
DCB: dichlorobenzene
DCE: dichloroethene
HRL: Health Risk Limit (Minnesota state drinking water standard)
MCL: Maximum Contaminant Level (federal drinking water standard)
MDH: Minnesota Department of Health
MEK: Methyl ethyl ketone
MIBK: Methyl isobutyl ketone
MPCA: Minnesota Pollution Control Agency
PAH: Polynuclear aromatic hydrocarbons
PERC: Perchloroethene (also known as tetrachloroethene)
PCB: Polychlorinated biphenyls
ppb: parts per billion
ppm: parts per million
SDWA: Safe Drinking Water Act
SVOC: Semi-volatile organic compound
TCA: Trichloroethane
TCAA: Trichloroacetic acid
TCE: Trichoroethene
VOC: Volatile organic compound
USEPA: United States Environmental Protection Agency

I. Summary

INTRODUCTION	The Minnesota Department of Health's (MDH) mission is to protect, maintain, and improve the health of all Minnesotans. For communities living near state or federal Superfund sites, MDH's goal is to protect people's health by providing health information the community needs to take actions to protect their health. MDH also evaluates environmental data, and advises MPCA, MDA and local governments on actions that can be taken to protect public health. The main well field for the Brooklyn Park drinking water system is located near, but upgradient, of the former Brooklyn Park Dump site. Several private wells were also formerly present near the site. Some dump-related contaminants are present in the groundwater beneath the dumpsite and residents have raised concerns regarding possible exposure to these contaminants through their drinking water. This document evaluates whether such exposures may have occurred.
OVERVIEW	MDH reached two conclusions in this Health Consultation regarding public and private drinking water wells near the Brooklyn Park Dump site.
CONCLUSION 1	No Brooklyn Park Dump site-related contaminants have been detected in private or public wells.
BASIS FOR CONCLUSION	Review of available site documents and water sampling records indicate that no site-related contaminants have ever been detected in the city wells or nearby public or private drinking water wells.
NEXT STEPS	No further action is required.
CONCLUSION 2	Low levels of some non-site related organic chemicals that have been infrequently detected in some of the Brooklyn Park city wells, treatment plant effluent, and city water distribution system do not pose a health risk for current or past users.
BASIS FOR CONCLUSION	Evaluation of contaminants detected in the city water indicates that no health risk levels were exceeded. The city well most affected was sealed in 2000.
NEXT STEPS	No further action is required.

II. Introduction

The Minnesota Department of Health (MDH) was asked by the Minnesota Pollution Control Agency (MPCA) to review the possible health impacts of exposures to contaminants at the Brooklyn Park Dump site (hereafter referred to as the "site", Figure 1) in response to citizen health concerns. The site was placed on the state Superfund list in 1989 after black tar-like material that surfaced in the eastern portion of Central Park was found to be hazardous. In addition to the eastern portion of the park (Area 1, Figure 2), waste from the former dump is located under the City of Brooklyn Park's (hereafter the "City") Maintenance Facility (Area 2) and other private businesses (Area 3) located east of Noble Avenue. The black tar-like material was found to be very acidic and contained high levels of polychlorinated biphenyls (PCBs). Other contaminants of concern at the site include dioxins, chlorinated solvents, polynuclear aromatic hydrocarbons (PAHs), and lead.

The site was last reviewed by MDH in 1994 (MDH, 1994a), after two EPA response actions in the early 1990s removed approximately 2,900 tons of tar-like material and contaminated soil from Central Park. Over the years, soil and waste were removed from Area 2 incidental to construction of various parking lots and buildings and the removal of underground storage tanks. Additional response actions occurred in 2005-2006 to cover waste in Central Park and in 2010 to remove approximately 12,000 tons of soil and waste from a portion of Area 3 that was purchased by the city, which was then backfilled with sand and covered with clean soil. In 2011, approximately 14,000 tons of soil and waste was removed from a privately owned parcel in Area 3 (the L.J. Fischer property); the excavated area was backfilled and covered with clean soil. The portions of the site owned by the city (Areas 1 and 2 and the small portion of Area 3 the city purchased) were subsequently taken off of the state Superfund list. Some contamination remains on adjacent privately owned land. Groundwater sampling throughout the site area detected low levels of site-related contaminants, most of which did not exceed health risk levels, but there were no detections of PCBs or dioxins.

While direct contact with contaminated surface soils in Central Park is likely to have been the main route of potential public exposure to site-related contaminants, a number of residents have questioned whether there may have been any exposure to contaminants through their drinking water. MDH is currently evaluating past and current exposures to soil, water, and air at and near the site and will release a separate Public Health Assessment document with those findings. This document focuses solely on the question of drinking water.

III. Background and Site History

The Brooklyn Park Dump operated from 1954 to 1966 and covered approximately 21 acres of former agricultural fields and wetlands in Brooklyn Park in the area south of 85th Avenue North and east of Regent Avenue (Figure 1) (CRA, 2005). At that time, Brooklyn Park was far more rural than today and there were only scattered homes, farms, and businesses near the dump. There are no records of the volume and types of materials placed in the dump but it accepted residential, commercial and industrial wastes. Residents of Brooklyn Park also dropped off their

refuse and contents of burn barrels at the dump. Fires were common in the dump, both intentional burning of wastes and inadvertent fires.

In 1971, Noble Avenue was extended from 83rd to 85th Avenue through the western edge of the dump. Material that was excavated for the road construction was piled up to create a hill just beyond the western edge of the former dump. This waste was thought to be typical refuse, such as tires, paper, trees, cans and bottles; however the area the material was removed from was adjacent to areas later found to contain hazardous waste. In 1985, the city finalized purchase of the northeastern 10 acres of Central Park, adjacent to Noble Avenue. The newly created hill became a sledding hill, and walking trails and playground equipment were added to the park. The portion of the dump located west of Noble, within Central Park, is referred to as Area 1 (Figure 2).

After the dump was closed, part of the land east of Noble Avenue, now referred to as Area 2, was purchased by the city for their city garage and maintenance buildings. The remaining land east of Noble Avenue, referred to as Area 3, was purchased and occupied by small businesses.

In the late 1980s, in response to citizen complaints regarding a black tar-like substance seeping up through the soil in the eastern portion of Central Park, environmental investigations of the site began. High levels of polychlorinated biphenyls (PCBs), dioxins, chlorinated solvents, petroleum products, and heavy metals were detected in the tar-like material, which was also found to be very acidic (pH = 1). Lower contaminant levels were detected in the soil and trace levels of some site-related contaminants were detected in the groundwater, but not in nearby drinking water wells (MPCA, 1995; MDH, 1994, 1999; MNDWIS, 2012). The area was fenced in June of 1989; in December 1989 the site was added to the State of Minnesota's Permanent List of Priorities, or State Superfund List.

In 1987, as part of the parking lot construction at the city garage (Area 2), the city removed approximately 12,230 cubic yards of waste and soil (STS, 1990). In 1990 and 1992, the U.S. Environmental Protection Agency (USEPA) excavated approximately 2900 cubic yards of the contaminated soil (USEPA, 1994). Subsequent sampling by USEPA and MPCA detected high levels of PCBs in soils outside of the excavated areas (MPCA, 1995). Smaller excavation activities have occurred over the years as the city constructed new buildings and/or parking lots in Area 1 and 2. Soils from these activities were either disposed in off-site landfills or buried on-site with a thick soil cover (Braun, 1991; STS, 2000; CRA, 2006).

Additional environmental investigations, soil excavation and capping activities were also undertaken on the former Metro Building System property (4409 8th Avenue; Liesch, 1995, 1997, 2009; Barr, 2009a, 2009b, 2011; CRA, 2011) and an environmental assessment was completed at the Ideal Paving property (4129 85th Avenue; Braun, 1992) in Area 3. The details of these investigations and soil removal actions will be evaluated in a separate Public Health Assessment document being prepared by MDH.

In 2003, the City of Brooklyn Park completed additional site investigations, including groundwater sampling, delineation of the waste boundaries, delineation and characterization of

the waste oil sludge, and methane monitoring (CRA, 2005). In 2004 – 2006, the city completed capping of the sledding hill and dump areas within the eastern portion of the park (CRA, 2007).

In August 2007, the MPCA determined that the actions taken at Area 1 were protective of public health and the environment and removed that portion of the site from the State Superfund List. In November 2011, a similar determination was made for Area 2 and one property within Area 3, which were also delisted. The remainder of Area 3 remains on the State Superfund List.

IV. Geology and Hydrogeology

The site is located above an east-west trending buried valley that was eroded down through the bedrock. This valley is filled with deposits of glacial sand, sand & gravel, and loamy sand. Soil borings drilled at the site encountered interbedded sand and gravel layers with occasional localized areas of peat; discontinuous clay layers were encountered between 40-90 feet below ground level (CRA, 2005).

Groundwater is present at approximately15-20 feet below ground level. Water levels measured in monitoring wells at the site indicate that shallow groundwater in the area of the site generally flows from the southwest to the northeast (MPCA, 1995; CRA, 2005), while regional groundwater, particularly in bedrock aquifers, flows generally from the west-northwest to the east-southeast (Barr, 2003; CRA, 2005). Water levels measured within the glacial deposits beneath the site indicate no significant downward component to the groundwater flow (CRA, 2005).

Several early site documents referred to drain tiles having been used at the site to lower the water table; potentially re-directing groundwater from the site to an intermittent stream / drainage channel that ultimately discharges to Shingle Creek (MDH, 1994b; MPCA, 1995). Review of historic aerial photographs and light detection and ranging (LIDAR) remote imagery did not indicate the presence or construction of a drain tile system, nor does the city have any record of drain tiles having been installed in Areas 1 or 2. Finally, no drain tiles have ever been encountered during any of the drilling, trenching, excavation, or construction activities at the site. A former drainage ditch once bounded the western limit and portions of the northwest and north edges of the dumpsite, but this ditch did not drain to Shingle Creek. Historic aerial photos indicate the portion of this ditch within the Central Park property was filled sometime between 1967 and 1971. Based on this information, there does not appear to have been any link between the site and Shingle Creek.

V. On-Site Groundwater Monitoring

Twenty-three monitoring wells were installed at the site between 1988 and 2003 (Figure 2) and have been tested, at various times, for volatile organic chemicals (VOCs), semi-volatile organic chemicals (SVOCs), polychlorinated biphenyls (PCBs), polynuclear aromatic hydrocarbons (PAHs), pesticides, dioxin, and metals. The sampling results are shown in Table 1. It should be

noted that this table shows only those compounds that have been detected at least once in a monitoring well and does not reflect the entire list of chemicals analyzed.

Low levels of fifteen VOCs, one SVOC, nine PAHs, and six heavy metals were detected. Of these, only four VOCs [benzene, tetrachloroethene (or perchloroethene, PERC), trichloroethene (TCE), and vinyl chloride], two PAHs [benzo(a)anthracene and benzo(b, j, k)fluoranthene] and four metals [arsenic, cadmium, lead, and manganese] exceeded the Minnesota Health Risk Limits (HRLs) for drinking water (See "Discussion" section). PCBs, pesticides, and dioxin were not detected in any of the monitoring wells.

Of the contaminants detected, only vinyl chloride, the two PAHs, and one metal (manganese) exceeded the HRLs by any significant amount. Except for manganese, the areas of contaminated groundwater appear to be localized near the southeast corner (VOCs in well MW-13) and the north-central portion of Area 3 (PAHs in wells M-2 and M-3). Manganese was detected at concentrations 10 to 100 times greater than its HRL and well above the natural range in Minnesota groundwater. Elevated manganese is often found at unlined landfills and dumps because the water that leaches through the waste becomes acidic and allows mineralized manganese to dissolve.

Three temporary monitoring wells (MW-101, 102 and 103) were installed in 1991 as part of an underground storage tank removal and environmental investigation at the city maintenance facility (Area 2). MDH was unable to locate any sample results for these wells, but a report by the city's consultant states: "Soil and groundwater samples collected during the investigation did not indicate the presence of significant contamination from the fuel storage area." The MPCA closed the file for the tank site December 30, 1994.

Following removal of Areas1 and 2 from the state superfund list, all of the monitoring wells at the site were sealed in accordance with the Minnesota state well code.

Off-Site Groundwater Monitoring

During the construction of a parking lot in Area 2, approximately 5,000 cubic yards of soil and waste was excavated and placed on a portion of Brookdale Park, located approximately one-half mile south of Area 2 (Figure 1). To determine if the soil or waste had impacted groundwater, four monitoring wells were installed (CRA, 2004). The wells were sampled for VOCs, metals, and general chemistry parameters (Table 1). Low levels of four VOCs (cis-1,2-dichloroethene, PERC, 1,1,1-trichlorethane, and TCE) were detected in two of the wells; none exceeded their HRLs. Manganese concentrations in all four wells exceeded the HRL. In one well (MW-4), an estimated concentration of thallium (which was detected below the laboratory reporting limit) exceeded the HRL, but was not detected in a duplicate sample from that well.

VI. Drinking Water Sampling

Brooklyn Park currently has eighteen water supply wells that provide drinking water to nearly all residential and commercial properties in the city (Figure 3); four additional wells (city wells 4, 5, 6 and 9) were sealed between 1993 and 2002. Ten of the existing wells are located in a main

well field located northwest of the site (city wells 10, 13, 14, and 16 – 22). The wells in the main well field are completed in the quaternary sands and gravels filling the bedrock valley (described in section IV) or the underlying bedrock (Franconia-Ironton-Galesville formation), at depths of 190 feet or more below the ground surface. The area of the aquifers from which these wells draw water (their "capture zone") includes the western end of the site (Figure 3; Barr, 2003). Before water from the main well field enters the city water distribution system, it passes through a treatment plant, where the mineral content is reduced and disinfection chemicals are added to prevent bacteria.

MDH has reviewed all available city water sampling data for the Brooklyn Park municipal water supply wells, treatment plant effluent, and water distribution system (Table 2) and found the following:

- In accordance with the federal Safe Drinking Water Act (SDWA), the city water is routinely tested for bacteria, metals, and nitrate and less frequently for VOCs, SVOCs, and pesticides. Since 1963, ten VOCs have been detected in six of the city wells (wells 7, 8, 9, 10, 11, and 15; well 9 has since been sealed). Well 10 is the only one of these located in the main well field near the site and had only one trace detection of cis-1,2-dichloroethene (0.49 parts per billion, or ppb) in 1985. This is far below both the federal Maximum Contaminant Level (MCL; see "Discussion") for cis-1,2-dichloroethene of 70 ppb and the state Health Risk Limit (HRL) of 50 ppb.

- The majority of VOCs detected were in the sealed well 9, located on the west edge of the city several miles upgradient of the site.

- One VOC, xylene (0.2 ppb) was detected in the main well field treatment effluent in 1999 (but never in any of the main well field wells). This concentration is well below both the state HRL and federal MCL. The treatment plant effluent also frequently contains small amounts of chloroform, bromoform, bromodichloromethane (BDCM), and chlorodibromomethane (CDBM), which are the by-products of the drinking water disinfection process, not groundwater contaminants. Although BDCM occasionally slightly exceeds its HRL of 6 ppb, the combined concentrations of disinfection by-products do not exceed the federal MCL of 80 ppb, which is the applicable regulatory standard for public drinking water systems.

- Trace levels of phenols (SVOCs) were detected in five of the city wells, but at concentrations far below the HRL.

- Five pesticides have been detected in seven of the city wells, none of which are located in the main well field. Two pesticides, dalapon and DCPA di-acid degradate, have been infrequently detected at low levels in the main well field treatment plant effluent. None of the pesticides detected in the wells or treatment plant effluent exceeded the MCLs.

- Sampling of the city water distribution system since 1963 has detected only four VOCs other than disinfection by-products (TCE, 1,1,2-trichlorotrifluoroethane [also called Freon 113], benzene, and xylenes). None exceeded either HRLs or MCLs.

- In 1989, the city's consultant sampled city wells 2, 3, 10, 13, and 14 for PCBs. No PCBs were detected (STS, 1989).

- Metals, nitrate, radionuclides, and general chemistry measurements were within normal ranges for Minnesota groundwater; only manganese exceeded the HRL (there is no MCL for this metal). Manganese would be removed by the treatment plant; even though it is not analyzed for in the effluent, if it were present it would cause unpleasant odors and staining at concentrations below levels of health concern, triggering a response by the city. Some slight exceedences of federal drinking water standards were detected for copper and lead within the distribution system, but these detections are related to metal plumbing materials, not groundwater contamination (see Table 2 for more details).

It should be noted that the main well field treatment plant became the primary sample location for the main well field after it was constructed in 1993. The SDWA requires drinking water systems be sampled at the point of entry of the water into the distribution system. This is why, since the early 1990s, the individual wells in the main well field (10, 11, 13, 14, and 16 – 22) have not been sampled as frequently or for all of the chemicals listed above.

Between 1988 and 1996, MDH and MPCA sampled three residential, eight business, two golf course, and three city park wells (including the well at Central Park) for dump-related contaminants (Figure 4; Table 3; MDH, 1999). Well logs are available for eleven of these wells; all but one (Norwood Park) are completed in the Quaternary sand and gravel aquifer and most are more than 105 feet deep. Samples collected included VOCs, PCBs, metals, and general water quality parameters such as chloride, nitrate and nitrite, ammonia, sulfate, pH, and specific conductivity. PCBs were not detected in any of the wells tested and all of the general chemistry parameters were within normal background levels for Minnesota.

Only one business well had low level detections of three VOCs (chloroform, BDCM, and CDBM) that did not exceed the HRLs. These VOCs are not site-related contaminants and are typical byproducts of well disinfection; it is possible this well had recently been treated for bacteria. Two wells downgradient of the site had elevated manganese at concentrations above the HRL. These elevated manganese levels may be associated with the elevated levels observed at the site, which are likely the result of the increased acidity typically found in groundwater beneath unlined dumps and landfills. Three of the wells initially had elevated sulfate and specific conductivity relative to the other Brooklyn Park wells sampled, but subsequent sampling did not confirm these results. None of the three wells were located in or downgradient of the dump area and the initial elevated levels may simply have been the result of normal variability in the groundwater.

VII. Discussion

When evaluating drinking water health risks, MDH refers to both state and federal drinking water standards and guidelines. The state HRLs are health-based drinking water criteria that are applicable for private water supply wells (i.e. those wells that typically are not used by the general public). The federal MCLs are drinking water criteria that are applicable for municipal

and smaller community water supply wells, as well as non-community public wells (such as businesses, schools, parks, etc.). While MCLs are derived from health risk assessments, they also take into account achievability for municipal water supply systems. As a result, sometimes there are differences between the HRL and MCL for a specific chemical; state law specifies that an HRL cannot be higher than an MCL, but it may be lower. The US EPA also provides secondary drinking water standards for some chemicals (primarily metals and other inorganic compounds), based on taste and odor thresholds. Exceeding such secondary standards does not necessarily constitute a health risk.

Comparing the available private and community drinking water data to the applicable state and federal standards, MDH has concluded that the drinking water in Brooklyn Park is not, and has never been, an exposure pathway for contaminants from the Brooklyn Park Dump site. No evidence of site-related contamination was detected in any of the nearby city or private wells. The lack of mobility of the contaminants almost certainly accounts for their absence in the drinking water in this area (see below).

Indeed, despite the presence of high levels of PCBs, PAHs, SVOCs, heavy metals, and other contaminants in the black tar-like material and wastes encountered at the Brooklyn Park Dump, only relatively low levels of site-related contaminants were detected in monitoring well samples from the site itself. This is likely due to the fact that most of the contaminants present in the waste material have very low mobility in the environment. These chemicals tend to adsorb onto soils, particularly those with high organic carbon content, like the wetland soils and peats that are present beneath the Brooklyn Park Dump.

VOCs exceeding HRLs and MCLs are present in well MW-13, located at the southeast corner of the site. It is possible that VOCs in the groundwater are migrating away from the site in this area. However, this area is serviced by city water and there are no records of private drinking water wells being in use in this area, so there is no drinking water pathway for residents southeast of the site to be exposed.

Prior to 2000, low levels of organic chemicals (VOCs, one SVOC, and pesticides) were detected in several city wells. None of these contaminants exceeded either the MCLs or HRLs. All but one of the wells with VOC detections were located far from the site. Based on the types of contaminants detected and the groundwater flow direction, the contaminants in the affected wells were from another source, not the site. Brooklyn Park was primarily an agricultural area until the late 1960s, which may account for the presence of trace levels of pesticides in the groundwater. The majority of VOCs detected were in city well 9, located on the west edge of Brooklyn Park. This well was sealed in 2000. The source of the VOCs is not known, but the chlorinated organics found in this well (TCE, PERC, 1,1,1-TCA and 1,1,2-TCA) are frequently found at trace levels in urban groundwater as these solvents were used by a variety of small commercial and light industrial businesses.

Despite the presence of organic contaminants in some of the city wells, sampling of the city water treatment effluent and distribution system only infrequently detected trace levels of VOCs, other than disinfection by-products. None of these compounds exceed the federal MCLs for total disinfection by-products, which are the applicable regulatory standards for public drinking water.

One of the disinfection by-products, bromodichloromethane (BDCM), has slightly exceeded the state HRL on a fairly regular basis. The HRL is based on a level at which the calculated cancer risk for a population exposed for a lifetime is unlikely to be greater than one additional case in 100,000 people. Because the BDCM concentrations detected are only slightly above the HRL, the cancer risk for the observed concentrations is also approximately one additional case in 100,000. Well disinfection is a necessary and required procedure to protect public health from infectious agents.

Manganese in several city wells exceeded the HRL and iron exceeded the federal secondary standard, but these minerals are removed from the city water at the main well field treatment plant. The levels detected were within the normal range of groundwater in Minnesota. As noted above, the drinking water standard for iron is not health-based, but a secondary standard based on taste and odor.

VIII. Conclusions

- No Brooklyn Park Dump site-related contaminants have been detected in private or city drinking water wells.

- Low levels of some organic chemicals that have been infrequently detected in some of the Brooklyn Park city wells, treatment plant effluent, and city water distribution system do not pose a health risk for current or past users. None of these contaminants have exceeded any state or federal drinking water standards or criteria.

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Minnesota Department of Health

CERTIFICATION

This Brooklyn Park Drinking Water Health Consultation was prepared by the Minnesota Department of Health (MDH) with support from the Agency for Toxic Substances and Disease Registry (ATSDR). It is in accordance with approved methodology and procedures existing at the time the health assessment was begun. This document has not been reviewed and cleared by ATSDR. Editorial review was completed by additional programs of MDH.

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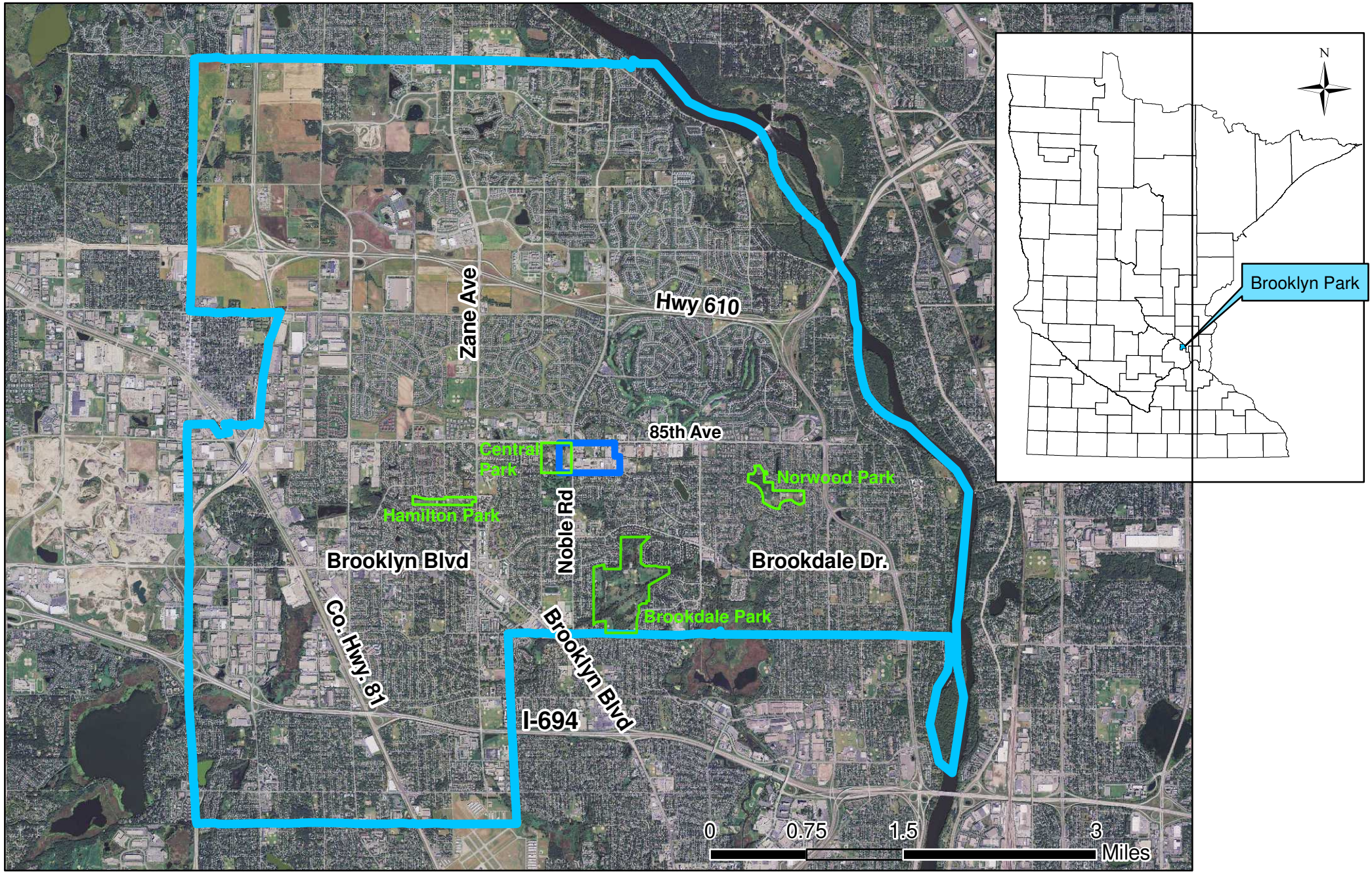


MDH, 12/14/2012

Figure 1: Site Location Map

LEGEND

City of Brooklyn Park

Brooklyn Park Dump Site

City parks

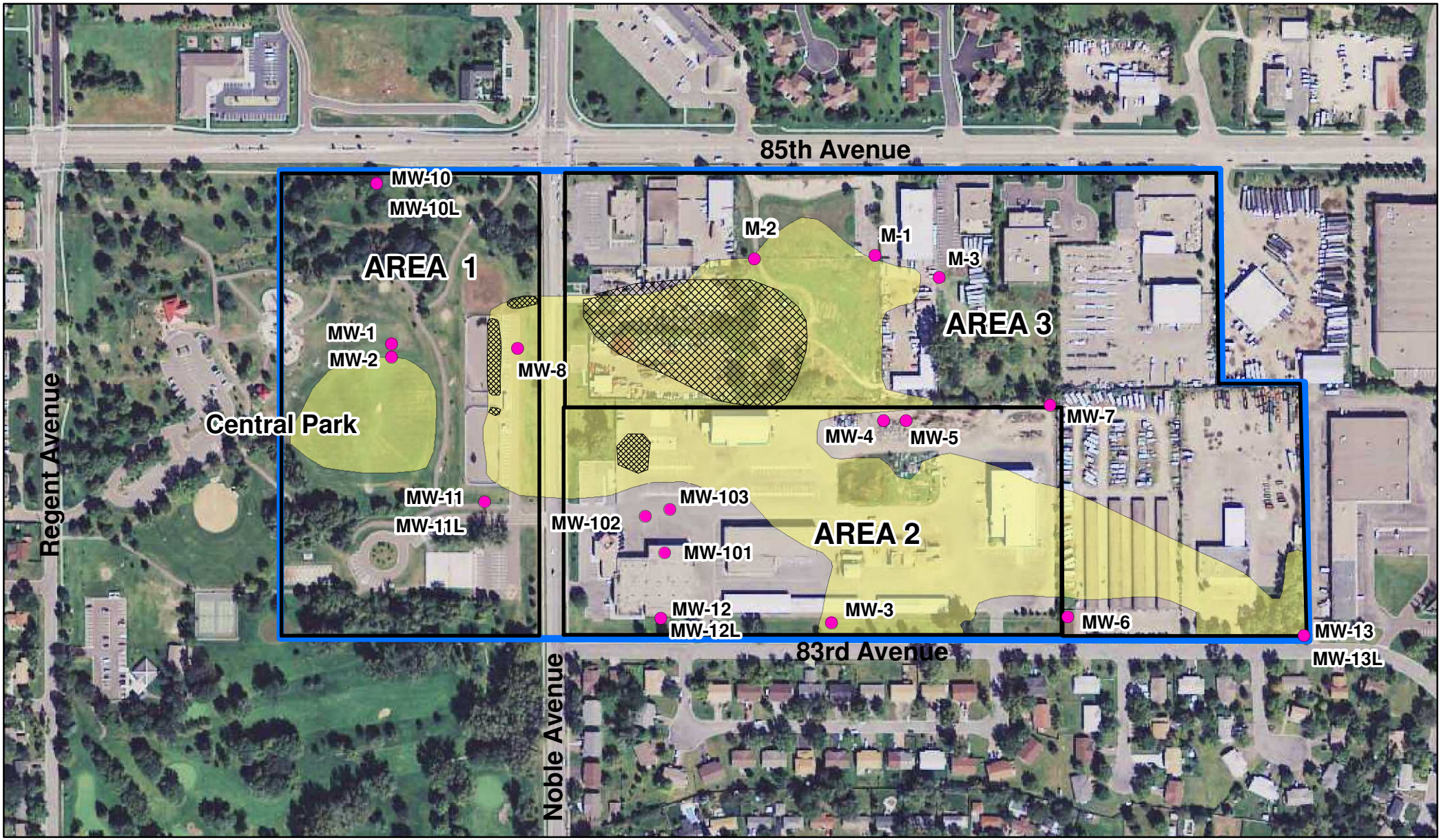


Figure 2: Brooklyn Park Dump Site and Associated Features

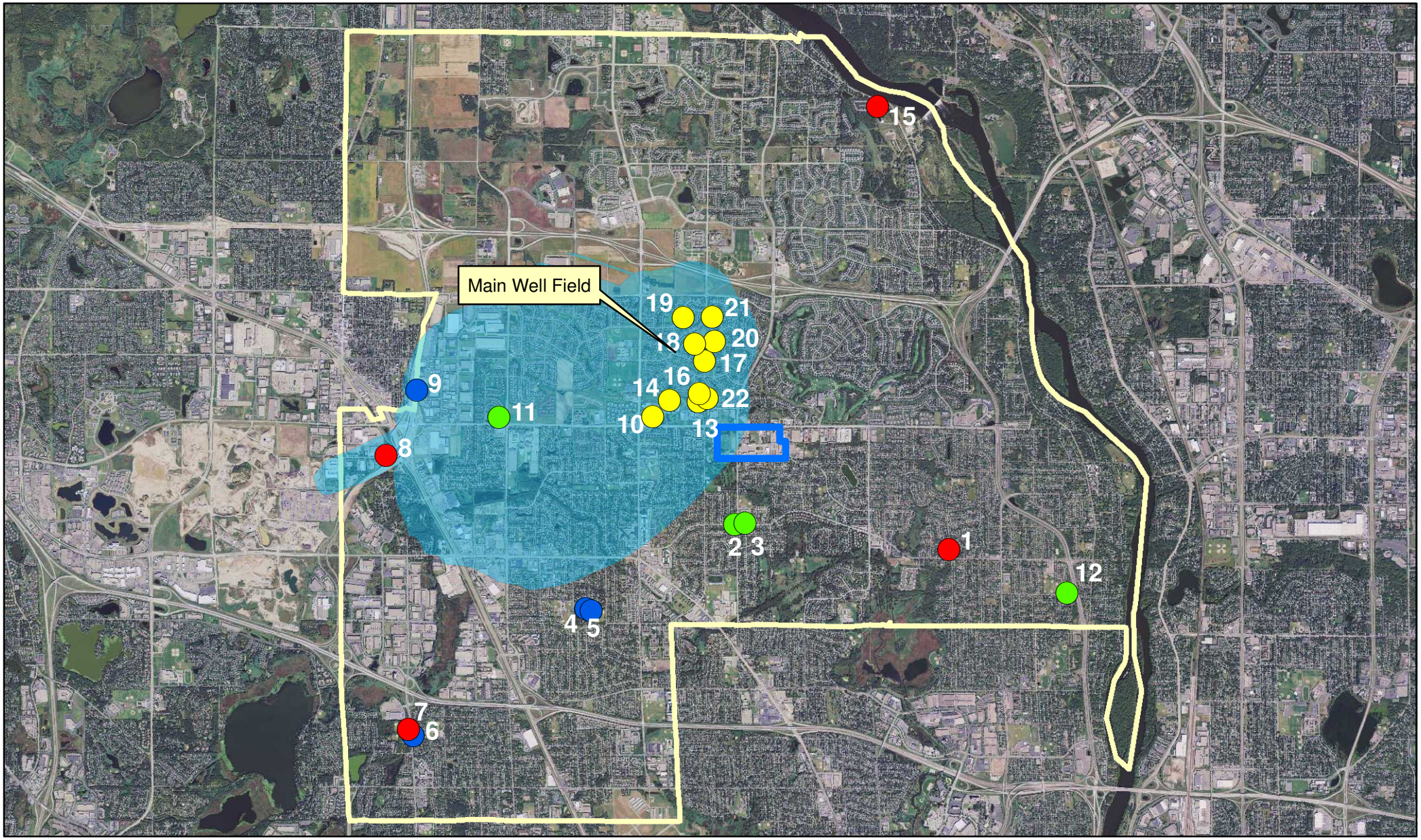
LEGEND

- Brooklyn Park Dump site boundary
- Dump footprint
- Areas where black tar-like material was encountered
- Monitoring well

N

0 0.05 0.1 0.2 Miles

MDH, 12/11/2012



MDH, 11/15/2012

Figure 3: Location of Brooklyn Park City Wells

N

LEGEND

- City of Brooklyn Park
- Brooklyn Park Dump Site Boundaries
- Main wellfield capture zone
- Primary well
- Seasonal backup well
- Emergency well
- Sealed well

0 0.75 1.5 3 Miles

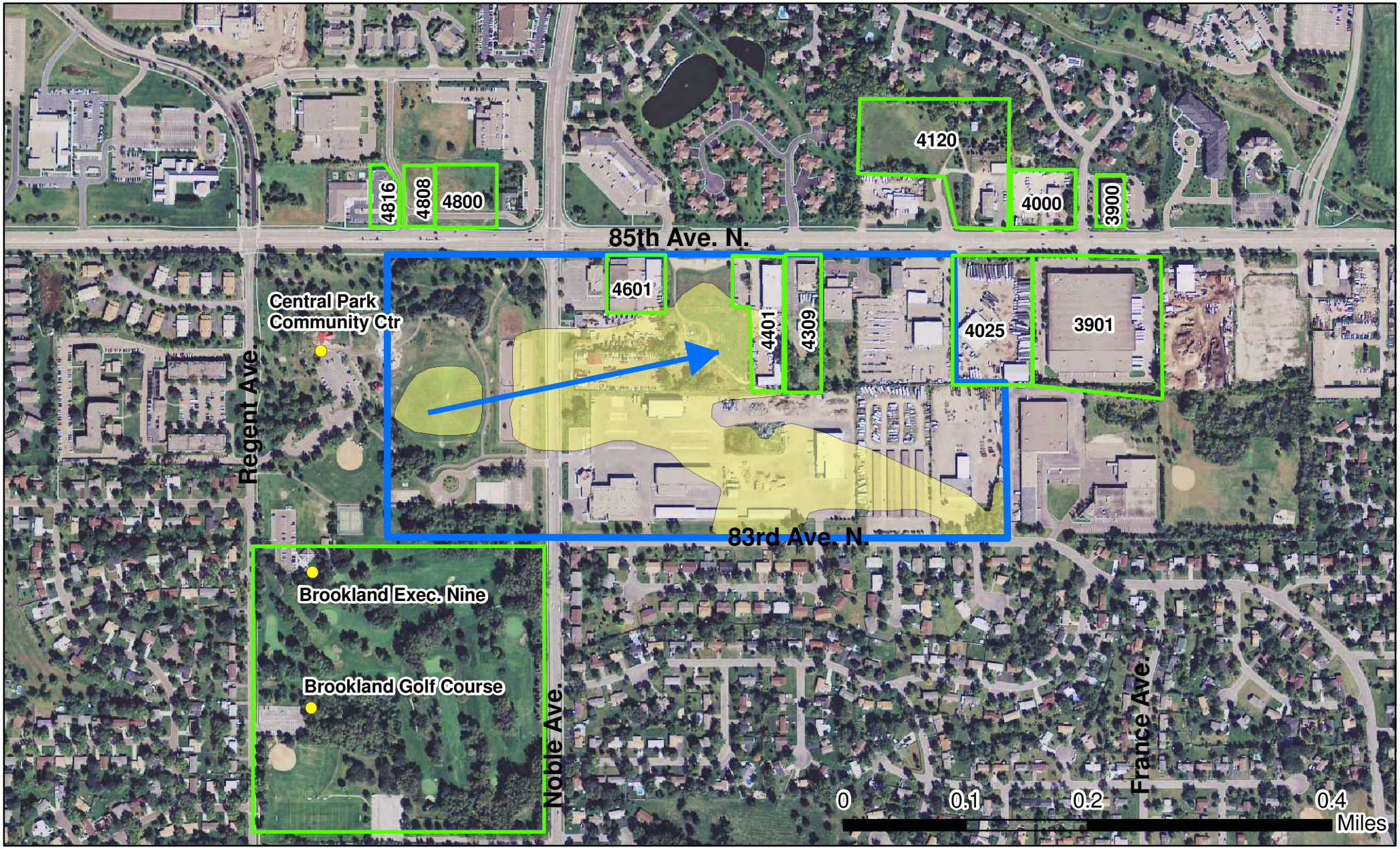


Figure 4: Location of Residential, Business and Park Well Samples

LEGEND

- Brooklyn Park Dump Site Boundary
- Brooklyn Park Dump footprint
- Property where well sample was collected
- General groundwater flow direction

N

NOTE: Norwood and Hamilton Parks shown on Fig. 1

MDH, 12/11/2012

Table 1: Monitoring Well Sample Data - Detected Chemicals

		VOCs											
Drinking Wtr Criteria		Benzene	Chloroform	1,3-DCB	1,4-DCB	1,1-DCE	cis-1,2-DCE	trans-1,2 DCE	Methylene chloride	MEK	MIBK	PERC	Toluene
HRL (ppb)		2	30	NE	10	200	50	40	NE	4,000	300	5	200
MCL (ppb)		5	NE	NE	75	7	70	100	NE	NE	NE	5	1,000
Well	**Date**												
MW-1	8/18/1988	<1	<1	<1	<1	<1	<1	<1	**2.5**[a]	NA	NA	<1	<1
	6/30/1989	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	2/14/1990	<0.34	<0.08	<0.19	<0.11	<0.1	<0.14	<0.18	**0.6**[a]	NA	NA	<0.11	<0.2
	7/18/1990	<0.34	<0.08	<0.19	<0.11	<0.1	<0.14	<0.18	<0.53	NA	NA	<0.11	<0.2
	10/18/1993[b]	<10	NA	NA	NA	<10	<10	<10	<10	NA	NA	<10	**9**
	6/27/1994	<1	<1.5	<1.5	<0.2	<1	<0.2	<0.2	<5	<5	<5	<1	<1
	3/8/2000	<0.2	<0.1	NL	NL	NL	NL	NL	NL	NL	NL	<0.2	<0.2
	1/14/2003	<1	<1	<1	<1	<1	<0.5	<0.5	<1	<10	<10	<1	<1
MW-2	8/18/1988	<1	<1	<1	<1	<1	<1	<1	**2.9**[a]	NA	NA	<1	<1
	6/28/1989	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	7/18/1990	<0.34	<0.08	<0.19	<0.11	<0.1	<0.14	<0.18	<0.53	NA	NA	<0.11	<0.2
	1/14/2003	<1	<1	<1	<1	<1	<0.5	<0.5	<1	<10	<10	<1	<1
MW-3	8/18/1988	<1	<1	<1	<1	<1	<1	<1	<1	NA	NA	<1	<1
	6/30/1989	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	7/18/1990	<0.34	<0.08	<0.19	<0.11	<0.1	<0.14	<0.18	<0.53	NA	NA	**1.1**	<0.2
	3/8/2000	<0.2	<0.1	**0.3**	<0.2	<0.5	<0.2	<0.1	<0.5	<10	<5	**0.7**	<0.2
	1/14/2003	<1	<1	<1	<1	<1	<0.5	<0.5	<1	<10	<10	**3.3**	<1
MW-4	8/18/1988	<1	<1	<1	<1	<1	<1	<1	<1	NA	NA	<1	<1
	6/30/1989	<1	<1	<1	<1	<1	<0.5	NA	<1	NA	NA	NA	NA
	2/14/1990	<0.34	<0.08	<0.19	<0.11	<0.1	<0.14	<0.18	<0.53	NA	NA	<0.11	<0.2
	7/18/1990	<0.34	<0.08	<0.19	<0.11	<0.1	<0.14	<0.18	**1.1**[a]	NA	NA	<0.11	<0.2
	1/14/2003	<1	<1	<1	<1	<1	<0.5	<0.5	<1	<10	<10	<1	<1
	6/27/1994	<1	<1.5	<1.5	<0.2	<1	<0.2	<0.2	<5	<5	<5	<1	<1

[a] Compound also detected in a field, trip, or method blank - suspected to be a laboratory contaminant rather than an actual groundwater contaminant

[b] MW-1 had 23 compounds tentatively ID'd as: "aliphatic coumpound" (up to 2,800 ppb); "aliphatic hydrocarbon" (up to 5 ppb); and "unknown" (up to 770 ppb)

[See "Notes" at end of table]

Table 1: Monitoring Well Sample Data - Detected Chemicals

		VOCs					SVOCs	PAHs				
Drinking Wtr Criteria		1,2,4-TCB	1,1,1-TCA	TCE	Vinyl chloride	Xylenes	bis(2-EH) phthalate	Benzo[a] anthracene	Benzo[b] anthrenene	Benzo[b,j,k] fluoranthene	Benzo[g,h,i] perylene	Benzo[a] pyrene
HRL (ppb)		4	9,000	5	0.2	300	NE	0.6[c]	0.6[c]	0.6[c]	NE	0.06
MCL (ppb)		70	200	5	2	10,000	6	2[c]	2[c]	2[c]	NE	0.2
Well	**Date**											
MW-1	8/18/1988	NA	<1	<1	<1.8	<1	NA	NA	NA	NA	NA	NA
	6/30/1989	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	2/14/1990	<0.17	<0.32	<0.18	<0.27	<0.47	NA	NA	NA	NA	NA	NA
	7/18/1990	<0.17	<0.32	<0.18	<0.27	<0.47	NA	NA	NA	NA	NA	NA
	10/18/1993	NA	<10	<10	<10	<10	**6**	<10	NA	<10	<10	<10
	6/27/1994	<1	<1	<0.5	<1	<1	NA	<10	NA	<10	<10	<10
	3/8/2000	NL	<0.2	<0.1	<0.5	<0.2	NA	<10	NA	<10	<10	<10
	1/14/2003	<1	<1	<1	<1	<1	<10	<10	<10	<10	<10	<10
MW-2	8/18/1988	NA	<1	<1	<1.8	<1	NA	NA	NA	NA	NA	NA
	6/28/1989	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	7/18/1990	<0.17	<0.32	<0.18	<0.27	<0.47	NA	NA	NA	NA	NA	NA
	1/14/2003	<1	<1	<1	<1	<1	<10	<10	<10	<10	<10	<10
MW-3	8/18/1988	NA	<1	<1	<1.8	<1	NA	NA	NA	NA	NA	NA
	6/30/1989	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	7/18/1990	<0.17	<0.32	**0.24**	<0.27	<0.47	NA	NA	NA	NA	NA	NA
	3/8/2000	<0.5	<1	**0.7**	<0.5	<0.2	NA	<10	NA	<10	<10	<10
	1/14/2003	<1	<1	<1	<1	<1	<10	<10	<10	<10	<10	<10
MW-4	8/18/1988	NA	<1	<1	<1.8	<1	NA	NA	NA	NA	NA	NA
	6/30/1989	<1	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	2/14/1990	<0.17	<0.32	<0.18	<0.27	<0.47	NA	NA	NA	NA	NA	NA
	7/18/1990	<0.17	<0.32	<0.18	<0.27	<0.47	NA	NA	NA	NA	NA	NA
	1/14/2003	<1	<1	<1	<1	<1	<10	<10	<10	<10	<10	<10
	6/27/1994	<1	<1	<0.5	<1	<1	NA	<10	NA	<10	<10	<10

[c] These drinking water criteria are based on toxic equivalency with benzo(a)pyrene

[See "Notes" at end of table]

Table 1: Monitoring Well Sample Data - Detected Chemicals

		PAHs								Metals		
Drinking Wtr Criteria		Benzo[e] pyrene	Dibenzo (a,h) anthracene	Chrysene	Fluor-anthene	Indeno [1,2,3-c,d] pyrene	Phen-anthrene	Pyrene	Total cPAHs	As	Cd	Cr
	HRL (ppb)	NE	0.6[c]	6[c]	300	0.6[c]	NE	200	0.06	10	4	100
	MCL (ppb)	NE	2[c]	20[c]	NE	2[c]	NE	NE	0.2	10	5	100
Well	**Date**											
MW-1	8/18/1988	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	6/30/1989	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	2/14/1990	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	7/18/1990	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	10/18/1993	NA	<10	<10	<10	<10	<10	<10	<10	<2.1	<1.3	<2.1
	6/27/1994	<10	<10	<10	<10	<10	<10	<10	<10	<2	<0.2	**0.8**
	3/8/2000	<10	<10	<10	<10	<10	<10	<10	<10	NA	NA	NA
	1/14/2003	NA	<10	<10	<10	<10	<10	<10	<10	<10	<5	<10
MW-2	8/18/1988	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	6/28/1989	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	7/18/1990	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	1/14/2003	NA	<10	<10	<10	<10	<10	<10	<10	<10	<5	<10
MW-3	8/18/1988	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	6/30/1989	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	7/18/1990	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	3/8/2000	<10	<10	<10	<10	<10	<10	<10	<10	NA	NA	NA
	1/14/2003	NA	<10	<10	<10	<10	<10	<10	<10	<10	<5	<10
MW-4	8/18/1988	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	6/30/1989	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	2/14/1990	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	7/18/1990	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	1/14/2003	NA	<10	<10	<10	<10	<10	<10	<10	<10	<5	<10
	6/27/1994	<10	<10	<10	<10	<10	<10	<10	<10	<10	<0.2	**1**

[c] These drinking water criteria are based on toxic equivalency with benzo(a)pyrene

[See "Notes" at end of table]

Table 1: Monitoring Well Sample Data - Detected Chemicals

		Metals		
Drinking Wtr Criteria		Pb	Mn	Ag
	HRL (ppb)	15	100	30
	MCL (ppb)	15[d]	NE	NE
Well	**Date**			
MW-1	8/18/1988	NA	NA	NA
	6/30/1989	NA	NA	NA
	2/14/1990	NA	NA	NA
	7/18/1990	NA	NA	NA
	10/18/1993	<2.9	**1,330**	<2.6
	6/27/1994	<2	**890**	NA
	3/8/2000	NA	NA	NA
	1/14/2003	<3	**2,400**	<10
MW-2	8/18/1988	NA	NA	NA
	6/28/1989	NA	NA	NA
	7/18/1990	NA	NA	NA
	1/14/2003	<3	**73**	<10
MW-3	8/18/1988	NA	NA	NA
	6/30/1989	NA	NA	NA
	7/18/1990	NA	NA	NA
	3/8/2000	NA	NA	NA
	1/14/2003	<3	**2,000**	<10
MW-4	8/18/1988	NA	NA	NA
	6/30/1989	NA	NA	NA
	2/14/1990	NA	NA	NA
	7/18/1990	NA	NA	NA
	1/14/2003	<3	**2,100**	<10
	6/27/1994	<2	**2,300**	NA

[d] This drinking water criterion is a federal "Action Level", not an MCL

[See "Notes" at end of table]

Table 1: Monitoring Well Sample Data - Detected Chemicals

		VOCs											
Drinking Wtr Criteria		Benzene	Chloroform	1,3-DCB	1,4-DCB	1,1-DCE	cis-1,2-DCE	trans-1,2 DCE	Methylene chloride	MEK	MIBK	PERC	Toluene
	HRL (ppb)	2	30	NE	10	200	50	40	NE	4,000	300	5	200
	MCL (ppb)	5	NE	NE	75	7	70	100	NE	NE	NE	5	1,000
Well	**Date**												
MW-5	8/18/1988	<1	<1	<1	<1	<1	<1	<1	<1	NA	NA	<1	<1
	6/30/1989	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	2/14/1990	<0.34	<0.08	<0.19	<0.11	<0.1	<0.14	<0.18	<0.53	NA	NA	<0.11	<0.2
	7/18/1990	<0.34	<0.08	<0.19	<0.11	<0.1	<0.14	<0.18	<0.53	NA	NA	<0.11	<0.2
	5/9/1995	<0.3	<0.2	<0.5	<0.6	<0.2	<0.2	<0.6	<5	<5	<1	<0.4	<0.2
	11/12/1996	<0.3	<0.3	<0.2	<0.2	<0.2	<0.3	<0.3	<5	<5	<5	<0.4	<0.3
	12/6/1996	<0.3	<0.3	<0.2	<0.2	<0.2	<0.3	<0.3	<5	<5	<5	<0.4	<0.3
	3/8/2000	<0.2	<0.1	<0.2	<0.2	<0.5	<0.2	<0.1	<0.5	<10	<5	<0.2	<0.2
	1/15/2003	<1	<1	<1	<1	<1	<0.5	<0.5	<1	<10	<10	<1	<1
MW-6	10/18/1993	<10	NA	NA	NA	<10	<10	<10	<10	NA	NA	<10	<10
	6/27/1994	<1	<1.5	<1.5	<0.2	<1	**0.5**	<0.2	<5	<5	<5	<1	<1
	3/8/2000	<0.2	<0.1	<0.2	<0.2	<0.5	**0.2**	<0.1	<0.5	<10	<5	<0.2	<0.2
	1/15/2003	<1	<1	<1	<1	<1	<0.5	<0.5	<1	<10	<10	<1	<1
MW-7	10/18/1993	<10	NA	NA	NA	<10	<10	<10	<10	NA	NA	<10	<10
	6/27/1994	<1	<1.5	<1.5	<0.2	<1	<0.2	<0.2	<5	<5	<5	<1	<1
	3/8/2000	<0.2	<0.1	<0.2	<0.2	<0.5	<0.2	<0.1	<0.5	<10	<5	<0.2	<0.2
	1/15/2003	<1	<1	<1	<1	<1	<0.5	<0.5	<1	<10	<10	<1	<1
MW-8	10/18/1993	<10	NA	NA	NA	<10	<10	<10	<10	NA	NA	<10	<10
	10/18/1993D	<10	NA	NA	NA	<10	<10	<10	<10	NA	NA	<10	<10
	6/27/1994	<1	<1.5	<1.5	<0.2	<1	<0.2	<0.2	<5	<5	<5	<1	<1
	6/27/1994D	<1	<1.5	<1.5	<0.2	<1	<0.2	<0.2	<5	<5	<5	<1	<1
	3/8/2000	<0.2	<0.1	**0.8**	**0.4**	<0.5	<0.2	<0.1	<0.5	<10	<5	<0.2	<0.2
	1/14/2003	<1	<1	**0.44 J**	<1	<1	<0.5	<0.5	<1	<10	<10	<1	<1
MW-10	1/16/2003	<1	<1	<1	<1	<1	<0.5	<0.5	<1	<10	<10	<1	<1

[See "Notes" at end of table]

Table 1: Monitoring Well Sample Data - Detected Chemicals

		VOCs					SVOCs	PAHs				
Drinking Wtr Criteria		1,2,4-TCB	1,1,1-TCA	TCE	Vinyl chloride	Xylenes	bis(2-EH) phthalate	Benzo[a] anthracene	Benzo[b] anthrenene	Benzo[b,j,k] fluoranthene	Benzo[g,h,i] perylene	Benzo[a] pyrene
HRL (ppb)		4	9,000	5	0.2	300	NE	0.6[c]	0.6[c]	0.6[c]	NE	0.06
MCL (ppb)		70	200	5	2	10,000	6	2[c]	2[c]	2[c]	NE	0.2
Well	**Date**											
MW-5	8/18/1988	NA	<1	<1	<1.8	<1	NA	NA	NA	NA	NA	NA
	6/30/1989	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	2/14/1990	<0.17	<0.32	<0.18	<0.27	<0.47	NA	NA	NA	NA	NA	NA
	7/18/1990	<0.17	<0.32	<0.18	<0.27	<0.47	NA	NA	NA	NA	NA	NA
	5/9/1995	<1	<0.2	<0.4	<1	<0.9	NA	NA	NA	NA	NA	NA
	11/7/1996	<0.5	<0.25	<0.3	<1	<1.2	NA	**0.03**	<0.018	<0.017	**0.14**	**0.05**
	12/6/1996	<0.5	<0.25	<0.3	<1	<1.2	NA	<0.013	<0.018	<0.017	<0.074	<0.023
	3/8/2000	<0.5	<0.2	<0.1	<0.5	<0.2	NA	<10	NA	<10	<10	<10
	1/15/2003	<1	<1	<1	<1	<1	<10	<10	<10	<10	<10	<10
MW-6	10/18/1993	NA	<10	<10	<10	<10	<10	<10	NA	<10	<10	<10
	6/27/1994	<1	<1	<0.5	<1	<1	NA	<10	NA	<10	<10	<10
	3/8/2000	<0.5	<0.2	**0.2**	<0.5	<0.2	NA	<10	NA	<10	<10	<10
	1/15/2003	<1	<1	<1	<1	<1	<10	<10	<10	<10	<10	<10
MW-7	10/18/1993	NA	<10	<10	<10	<10	<10	<10	NA	<10	<10	<10
	6/27/1994	<1	<1	<0.5	<1	<1	NA	<10	NA	<10	<10	<10
	3/8/2000	<0.5	<0.2	<0.1	<0.5	<0.2	NA	<10	NA	<10	<10	<10
	1/15/2003	<1	<1	<1	<1	<1	<10	<10	<10	<10	<10	<10
MW-8	10/18/1993	NA	<10	<10	<10	<10	**3**	<10	NA	<10	<10	<10
	10/18/1993D	NA	<10	<10	<10	<10	<10	<10	NA	<10	<10	<10
	6/27/1994	<1	<1	<0.5	<1	<1	NA	<10	NA	<10	<10	<10
	6/27/1994D	<1	<1	<0.5	<1	<1	NA	<10	NA	<10	<10	<10
	3/8/2000	<0.5	<0.2	<0.1	<0.5	<0.2	NA	<10	NA	<10	<10	<10
	1/14/2003	**0.7 J**	<1	<1	<1	<1	<10	<10	<10	<10	<10	<10
MW-10	1/16/2003	<1	<1	<1	<1	<1	<10	<10	NA	<10	<10	<10

[c] These drinking water criteria are based on toxic equivalency with benzo(a)pyrene

[See "Notes" at end of table]

Table 1: Monitoring Well Sample Data - Detected Chemicals

		PAHs								Metals		
Drinking Wtr Criteria		Benzo[e] pyrene	Dibenzo (a,h) anthracene	Chrysene	Fluor-anthene	Indeno [1,2,3-c,d] pyrene	Phen-anthrene	Pyrene	Total cPAHs	As	Cd	Cr
	HRL (ppb)	NE	0.6[c]	6[c]	300	0.6[c]	NE	200	0.06	10	4	100
	MCL (ppb)	NE	2[c]	20[c]	NE	2[c]	NE	NE	0.2	10	5	100
Well	**Date**											
MW-5	8/18/1988	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	6/30/1989	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	2/14/1990	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	7/18/1990	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	5/9/1995	NA	NA	NA	NA	NA	NA	NA	NA	<10	**6**	<25
	11/7/1996	NA	<0.03	<0.15	<0.21	<0.043	<0.64	<0.27	**0.08**	<20	<10	<50
	12/6/1996	NA	<0.03	<0.15	<0.21	<0.043	<0.64	<0.27	BDL	<20	<10	<50
	3/8/2000	<10	<10	<10	<10	<10	<10	<10	<10	NA	NA	NA
	1/15/2003	NA	<10	<10	<10	<10	<10	<10	<10	<10	<5	<10
MW-6	10/18/1993	NA	<10	<10	<10	<10	<10	<10	<10	**11.1 J**	<1.3	<2.1
	6/27/1994	<10	<10	<10	<10	<10	<10	<10	<10	<2	<0.2	**1**
	3/8/2000	<10	<10	<10	<10	<10	<10	<10	<10	NA	NA	NA
	1/15/2003	NA	<10	<10	<10	<10	<10	<10	<10	<10	<5	<10
MW-7	10/18/1993	NA	<10	<10	<10	<10	<10	<10	<10	**8.5 J**	<1.3	<2.1
	6/27/1994	<10	<10	<10	<10	<10	<10	<10	<10	<2	<0.2	**1.1**
	3/8/2000	<10	<10	<10	<10	<10	<10	<10	<10	NA	NA	NA
	1/15/2003	NA	<10	<10	<10	<10	<10	<10	<10	<10	<5	<10
MW-8	10/18/1993	NA	<10	<10	<10	<10	<10	<10	<10	**15.7**	<1.3	<2.1
	10/18/1993D	NA	<10	<10	<10	<10	<10	<10	<10	**18.7**	<1.3	<2.1
	6/27/1994	<10	<10	<10	<10	<10	<10	<10	<10	<2	<0.2	**1**
	6/27/1994D	<10	<10	<10	<10	<10	<10	<10	<10	<2	<0.2	**1.1**
	3/8/2000	<10	<10	<10	<10	<10	<10	<10	<10	NA	NA	NA
	1/14/2003	NA	<10	<10	<10	<10	<10	<10	<10	**3.1 J**	<5	<10
MW-10	1/16/2003	NA	<10	<10	<10	<10	<10	<10	<10	<10	<5	<10

[c] These drinking water criteria are based on toxic equivalency with benzo(a)pyrene

[See "Notes" at end of table]

Table 1: Monitoring Well Sample Data - Detected Chemicals

		Metals		
Drinking Wtr Criteria		Pb	Mn	Ag
	HRL (ppb)	15	100	30
	MCL (ppb)	15[d]	NE	NE
Well	**Date**			
MW-5	8/18/1988	NA	NA	NA
	6/30/1989	NA	NA	NA
	2/14/1990	NA	NA	NA
	7/18/1990	NA	NA	NA
	5/9/1995	<10	NA	<25
	11/7/1996	<5	NA	<10
	12/6/1996	<5	NA	<10
	3/8/2000	NA	NA	NA
	1/15/2003	<3	**1,900**	<10
MW-6	10/18/1993	<2.9	**10,900**	<2.6
	6/27/1994	<2	**8,100**	NA
	3/8/2000	NA	NA	NA
	1/15/2003	<3	**6,500**	<10
MW-7	10/18/1993	<2.9	**4,810**	<2.6
	6/27/1994	<2	**5,400**	NA
	3/8/2000	NA	NA	NA
	1/15/2003	<3	**2,900**	<10
MW-8	10/18/1993	<2.9	**7,170**	<2.6
	10/18/1993D	<2.9	**7,290**	<2.6
	6/27/1994	<2	**9,800**	NA
	6/27/1994D	<2	**8,500**	NA
	3/8/2000	NA	NA	NA
	1/14/2003	**1.6 J**	**12,500**	<10
MW-10	1/16/2003	<3	**3,800**	<10

[d] This drinking water criterion is a federal "Action Level", not an MCL

[See "Notes" at end of table]

Table 1: Monitoring Well Sample Data - Detected Chemicals

		VOCs											
Drinking Wtr Criteria		Benzene	Chloroform	1,3-DCB	1,4-DCB	1,1-DCE	cis-1,2-DCE	trans-1,2 DCE	Methylene chloride	MEK	MIBK	PERC	Toluene
	HRL (ppb)	2	30	NE	10	200	50	40	NE	4,000	300	5	200
	MCL (ppb)	5	NE	NE	75	7	70	100	NE	NE	NE	5	1,000
Well	**Date**												
MW-10L	1/16/2003	<1	<1	<1	<1	<1	<0.5	<0.5	<1	<10	<10	<1	<1
MW-11	1/16/2003	<1	<1	<1	<1	<1	<0.5	<0.5	<1	<10	<10	<1	<1
MW-11L	1/16/2003	<1	<1	<1	<1	<1	<0.5	<0.5	<1	<10	<10	<1	<1
MW-12	1/16/2003	<1	<1	<1	<1	<1	<0.5	<0.5	<1	<10	<10	<1	<1
MW-12L	1/16/2003	<1	<1	<1	<1	<1	<0.5	<0.5	<1	**2 J**	**0.58 J**	<1	**0.41 J**
MW-13	1/16/2003	**3**	<1	<1	<1	**0.43 J**	**9.9**	**1.2**	<1	<10	**0.5 J**	**11**	<1
	4/1/2003	**1.8**	<1	<1	<1	**0.53 J**	**12**	**1.5**	<1	<10	<10	**9.2**	<1
	4/1/2003D	**1.9**	<1	<1	<1	**0.58 J**	**13**	**1.6**	<1	<10	<10	**9.9**	<1
MW-13L	1/16/2003	**0.49 J**	<1	<1	<1	<1	**0.38 J**	<0.5	<1	<10	<10	<1	<1
	4/1/2003	**0.75 J**	<1	<1	<1	<1	**0.94**	<0.5	<1	<10	<10	<1	<1
M-1	5/9/1995	<0.3	<0.2	<0.5	<0.6	<0.2	<0.2	<0.6	<5	<5	<1	<0.4	<0.2
	11/7/1996	<0.3	<0.3	<0.2	<0.2	<0.2	<0.3	<0.3	<5	<5	<5	<0.4	<0.3
	12/6/1996	<0.3	<0.3	<0.2	<0.2	<0.2	<0.3	<0.3	<5	<5	<5	<0.4	<0.3
	3/8/2000	<0.2	<0.1	<0.2	<0.2	<0.5	**0.4**	<0.1	<0.5	<10	<5	<0.2	<0.2
	1/15/2003	<1	<1	<1	<1	<1	**0.84**	<0.5	<1	<10	<10	<1	<1
M-2	5/9/1995	<0.3	<0.2	<0.5	<0.6	<0.2	<0.2	<0.6	<5	<5	<1	<0.4	<0.2
	3/8/2000	<0.2	**0.6**	<0.2	<0.2	<0.5	<0.2	<0.1	<0.5	<10	<5	**0.2**	<0.2
	3/8/2000D	<0.2	**0.7**	<0.2	<0.2	<0.5	<0.2	<0.1	<0.5	<10	<5	**0.2**	<0.2
	1/15/2003	<1	<1	<1	<1	<1	<0.5	<0.5	<1	<10	<10	<1	<1
	1/15/2003D	<1	<1	<1	<1	<1	<0.5	<0.5	<1	<10	<10	<1	<1
M-3	11/7/1996	<0.3	<0.3	<0.2	<0.2	<0.2	**0.73**	<0.3	<5	<5	<5	<0.4	<0.3
	12/6/1996	<0.3	<0.3	<0.2	<0.2	<0.2	**0.039**	<0.3	<5	<5	<5	<0.4	<0.3
	3/8/2000	<0.2	<0.1	<0.2	<0.2	<0.5	<0.2	<0.1	<0.5	<10	<5	**0.2**	<0.2
	1/15/2003	<1	<1	<1	<1	<1	<0.5	<0.5	<1	<10	<10	<1	<1

[See "Notes" at end of table]

Table 1: Monitoring Well Sample Data - Detected Chemicals

		VOCs					SVOCs	PAHs				
Drinking Wtr Criteria		1,2,4-TCB	1,1,1-TCA	TCE	Vinyl chloride	Xylenes	bis(2-EH) phthalate	Benzo[a] anthracene	Benzo[b] anthrenene	Benzo[b,j,k] fluoranthene	Benzo[g,h,i] perylene	Benzo[a] pyrene
HRL (ppb)		4	9,000	5	0.2	300	NE	0.6[c]	0.6[c]	0.6[c]	NE	0.06[c]
MCL (ppb)		70	200	5	2	10,000	6	2[c]	2[c]	2[c]	NE	0.2[c]
Well	**Date**											
MW-10L	1/16/2003	<1	<1	<1	<1	<1	<10	<10	NA	<10	<10	<10
MW-11	1/16/2003	<1	<1	<1	<1	<1	<10	<10	NA	<10	<10	<10
MW-11L	1/16/2003	<1	<1	<1	<1	<1	<10	<10	NA	<10	<10	<10
MW-12	1/16/2003	<1	<1	<1	<1	<1	<10	<10	NA	<10	<10	<10
MW-12L	1/16/2003	<1	<1	<1	<1	**0.54 J**	<44	<10	NA	<10	<10	<10
MW-13	1/16/2003	<1	<1	**4.5**	**3.7**	<1	<10	<10	NA	<10	<10	<10
	4/1/2003	<1	<1	**5.3**	**3.2**	<1	NA	NA	NA	NA	NA	NA
	4/1/2003D	<1	<1	**5.8**	**3.4**	<1	NA	NA	NA	NA	NA	NA
MW-13L	1/16/2003	<1	<1	<1	<1	<1	<10	<10	NA	<10	<10	<10
	4/1/2003	<1	<1	<1	<1	<1	NA	NA	NA	NA	NA	NA
M-1	5/9/1995	<1	<0.2	<0.4	<1	<0.9	NA	NA	NA	NA	NA	NA
	11/7/1996	<0.5	<0.25	<0.3	<1	<1.2	NA	<0.013	<0.018	**0.05**	<0.074	<0.023
	12/6/1996	<0.5	<0.25	<0.3	<1	<1.2	NA	<0.013	**0.051**	**0.055**	<0.074	<0.023
	3/8/2000	<0.5	<0.2	**0.2**	<0.5	<0.2	NA	<10	NA	<10	<10	<10
	1/15/2003	<1	<1	**0.52 J**	<1	<1	<10	<10	NA	<10	<10	<10
M-2	5/9/1995	<1	<0.2	<0.4	<1	<0.9	NA	NA	NA	NA	NA	NA
	3/8/2000	<0.5	<0.2	<0.1	<0.5	<0.2	NA	**14**	NA	**26**	**10**	<10
	3/8/2000D	<0.5	<0.2	<0.1	<0.5	<0.2	NA	<10	NA	**13**	<10	<10
	1/15/2003	<1	<1	<1	<1	<1	<10	<10	NA	<10	<10	<10
	1/15/2003D	<1	<1	<1	<1	<1	<10	<10	NA	<10	<10	<10
M-3	11/7/1996	<0.5	<0.25	<0.3	<1	<1.2	NA	**0.73**	<0.018	**0.08**	**0.26**	**0.12**
	12/6/1996	<0.5	<0.25	<0.3	<1	<1.2	NA	**0.039**	<0.018	**0.038**	<0.074	**0.069**
	3/8/2000	<0.5	<0.2	<0.1	<0.5	<0.2	NA	**11**	NA	**19**	<10	<10
	1/15/2003	<1	<1	<1	<1	<1	<10	<10	NA	<10	<10	<10

[c] These drinking water criteria are based on toxic equivalency with benzo(a)pyrene

[See "Notes" at end of table]

Table 1: Monitoring Well Sample Data - Detected Chemicals

		PAHs								Metals		
Drinking Wtr Criteria		Benzo[e] pyrene	Dibenzo (a,h) anthracene	Chrysene	Fluor-anthene	Indeno [1,2,3-c,d] pyrene	Phen-anthrene	Pyrene	Total cPAHs	As	Cd	Cr
	HRL (ppb)	NE	6[c]	6[c]	300	NE	NE	200	0.06	10	4	100
	MCL (ppb)	NE	20[c]	20[c]	NE	NE	NE	NE	0.2	10	5	100
Well	**Date**											
MW-10L	1/16/2003	NA	<10	<10	<10	<10	<10	<10	<10	<10	<5	<10
MW-11	1/16/2003	NA	<10	<10	<10	<10	<10	<10	<10	**3.6 J**	**0.3 J**	**7 J**
MW-11L	1/16/2003	NA	<10	<10	<10	<10	<10	<10	<10	<10	<5	<10
MW-12	1/16/2003	NA	<10	<10	<10	<10	<10	<10	<10	**4 J**	<5	**2 J**
MW-12L	1/16/2003	NA	<10	<10	<10	<10	<10	<10	<10	**4.1 J**	<5	**10**
MW-13	1/16/2003	NA	<10	<10	<10	<10	<10	<10	<10	**4 J**	**0.3 J**	**19**
	4/1/2003	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	4/1/2003D	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
MW-13L	1/16/2003	NA	<10	<10	<10	<10	<10	<10	<10	**3.9 J**	<5	<10
	4/1/2003	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
M-1	5/9/1995	NA	NA	NA	NA	NA	NA	NA	NA	<10	**8**	<25
	11/7/1996	NA	<0.03	<0.15	<0.21	<0.043	<0.64	<0.27	BDL	<20	<10	**62**
	12/6/1996	NA	<0.03	<0.15	**0.27**	<0.043	<0.64	<0.27	**0.051**	<20	<10	<50
	3/8/2000	<10	<10	<10	<10	<10	<10	**10**	<10	NA	NA	NA
	1/15/2003	NA	<10	<10	<10	<10	<10	<10	<10	<10	<5	<10
M-2	5/9/1995	NA	NA	NA	NA	NA	NA	NA	NA	<10	**6**	**44**
	3/8/2000	**15**	<10	**12**	**24**	**PP (<10)**	**14**	**25**	**4**	NA	NA	NA
	3/8/2000D	**PP (<10)**	<10	<10	**PP (<10)**	<10	<10	**12**	**1.3**	NA	NA	NA
	1/15/2003	NA	<10	<10	<10	<10	<10	<10	<10	**5.5 J**	<5	<10
	1/15/2003D	NA	<10	<10	<10	<10	<10	<10	<10	**6.2 J**	<5	<10
M-3	11/7/1996	NA	**0.078**	<0.15	<0.21	**0.078**	<0.64	<0.27	**1.006**	<20	<10	<50
	12/6/1996	NA	<0.03	<0.15	**0.49**	<0.043	<0.64	<0.27	**0.108**	<20	<10	<50
	3/8/2000	<10	<10	**PP (<10)**	**21**	<10	**PP (<10)**	**17**	**3**	NA	NA	NA
	1/15/2003	NA	<10	<10	<10	<10	<10	<10	<10	<10	<5	<10

[c] These drinking water criteria are based on toxic equivalency with benzo(a)pyrene

[See "Notes" at end of table]

Table 1: Monitoring Well Sample Data - Detected Chemicals

		Metals		
Drinking Wtr Criteria		Pb	Mn	Ag
	HRL (ppb)	15	100	30
	MCL (ppb)	15[d]	NE	NE
Well	**Date**			
MW-10L	1/16/2003	<3	**3,100**	<10
MW-11	1/16/2003	**2.9 J**	**13,400**	<10
MW-11L	1/16/2003	<3	**8,200**	<10
MW-12	1/16/2003	<3	**11,300**	<10
MW-12L	1/16/2003	<3	**1,300**	<10
MW-13	1/16/2003	**3.7 J**	**6,700**	<10
	4/1/2003	NA	NA	NA
	4/1/2003D	NA	NA	NA
MW-13L	1/16/2003	<3	**3,700**	<10
	4/1/2003	NA	NA	NA
M-1	5/9/1995	**23**	NA	<25
	11/7/1996	<5	NA	**51**
	12/6/1996	<5	NA	<10
	3/8/2000	NA	NA	NA
	1/15/2003	<3	**6,100**	<10
M-2	5/9/1995	<10	NA	<25
	3/8/2000	NA	NA	NA
	3/8/2000D	NA	NA	NA
	1/15/2003	<3	**2,900**	<10
	1/15/2003D	<3	**2,900**	<10
M-3	11/7/1996	<5	NA	**48**
	12/6/1996	<5	NA	<10
	3/8/2000	NA	NA	NA
	1/15/2003	<3	**1,300**	<10

[d] This drinking water criterion is a federal "Action Level", not an MCL

[See "Notes" at end of table]

Table 1: Monitoring Well Sample Data - Detected Chemicals

Brookdale Park Monitoring Wells

		VOCs											
Drinking Wtr Criteria		Benzene	Chloroform	1,3-DCB	1,4-DCB	1,1-DCE	cis-1,2-DCE	trans-1,2 DCE	Methylene chloride	MEK	MIBK	PERC	Toluene
	HRL (ppb)	2	30	NE	10	200	50	40	NE	4,000	300	5	200
	MCL (ppb)	5	NE	NE	75	7	70	100	NE	NE	NE	5	1,000
Well	**Date**												
MW-1	12/19/2003	<1	<1	<1	<1	<1	<0.5	<0.5	<1	NA	NA	<1	<1
MW-2	12/19/2003	<1	<1	<1	<1	<1	**0.45 J**	<0.5	<1	NA	NA	**2.7**	<1
MW-3	12/19/2003	<1	<1	<1	<1	<1	**1.4**	<0.5	<1	NA	NA	**1.4**	<1
MW-4	12/19/2003	<1	<1	<1	<1	<1	**0.5**	<0.5	<1	NA	NA	<1	<1
	12/19/2003D	<1	<1	<1	<1	<1	**0.5**	<0.5	<1	NA	NA	<1	<1

		VOCs					SVOCs	PAHs				
Drinking Wtr Criteria		1,2,4-TCB	1,1,1-TCA	TCE	Vinyl chloride	Xylenes	Bis(2-EH) phthalate	Benzo[a] anthracene	Benzo[b,j,k] fluoranthene	Benzo[g,h,i] perylene	Benzo[e] pyrene	Chrysene
	HRL (ppb)	4	9,000	5	0.2	300	NE	0.6[c]	0.6[c]	NE	NE	6[c]
	MCL (ppb)	70	200	5	2	10,000	6	2[c]	2[c]	NE	NE	20[c]
Well	**Date**											
MW-1	12/19/2003	<1	<1	<1	<1	<1	NA	NA	NA	NA	NA	NA
MW-2	12/19/2003	<1	**1.2**	<1	<1	<1	NA	NA	NA	NA	NA	NA
MW-3	12/19/2003	<1	**1.3**	**0.61 J**	<1	<1	NA	NA	NA	NA	NA	NA
MW-4	12/19/2003	<1	<1	<1	<1	<1	NA	NA	NA	NA	NA	NA
	12/19/2003D	<1	<1	<1	<1	<1	NA	NA	NA	NA	NA	NA

[c] These drinking water criteria are based on toxic equivalency with benzo(a)pyrene

[See "Notes" at end of table]

Table 1: Monitoring Well Sample Data - Detected Chemicals

Brookdale Park Monitoring Wells (continued)

		PAHs					Metals						
Drinking Wtr Criteria		Fluor-anthene	Indeno [1,2,3-c,d] pyrene	Phen-anthrene	Pyrene	Total cPAHs	As	Cd	Cr	Pb	Mn	Ag	Th
	HRL (ppb)	300	NE	NE	200	0.06	10	4	100	15	100	30	0.6
	MCL (ppb)	NE	NE	NE	NE	0.2	10	5	100	15[d]	NE	NE	2
Well	**Date**												
MW-1	12/19/2003	NA	NA	NA	NA	NA	**5.7 J**	<5	<10	**3.2**	**3,100**	<10	<10
MW-2	12/19/2003	NA	NA	NA	NA	NA	**5.2 J**	<5	<10	**2.3**	**2,500**	<10	<10
MW-3	12/19/2003	NA	NA	NA	NA	NA	**6.7 J**	<5	<10	**0.98**	**1,900**	<10	<10
MW-4	12/19/2003	NA	NA	NA	NA	NA	<10	<5	<10	**1.4**	**2,100**	<10	**8.4 J**
	12/19/2003D	NA	NA	NA	NA	NA	<10	<5	<10	**1.5**	**2,200**	<10	<10

[d] This drinking water criterion is a federal "Action Level", not an MCL

[See "Notes" at end of table]

Table 1: Monitoring Well Sample Data - Detected Chemicals

NOTES:	**CHEMICAL ABBREVIATIONS:**
This table shows only those compounds detected at least once in a site monitoring well	Bis(2-EH)phthalate = bis(2-ethylhexyl)phthalate
Detected chemicals are shown in "bold" typeface	DCB = dichlorobenzene
concentration exceeds state or federal drinking water criteria	DCE = dichloroehtene
ppb = parts per billion	MEK = methyl ethyl ketone
< = "less than", indicates compound not detected at or above the reporting limit	MIBK = methyl isobutyl ketone
J = estimated value; compound detected at a concentration below the reporting limit	PERC = tetrachloroethene (or perchlorethene)
BDL = below detection limit	TCB = trichlorobenzene
ND = not detected (detection limit not provided)	TCA = trichloroethane
NE = none established	TCE = trichloroethene
NA = not analyzed	As = arsenic
NL = results not located (file copy of report not complete)	Cd = cadmium
PP = "peak present", compound detected below reporting limit, but not quantified	Cr = chromium
DW = Drinking Water	Pb = lead
A "D" after the sample date indicates the sample is a duplicate	Mn = manganese
	Ag = silver
	Th = thallium

DATA SOURCES: CRA (2004, 2005); STS (1988); Serco (1990a, 1990b); Liesch (1995, 1997); MPCA files - reviewed 11/9/12

Table 2: City Water Sample Data - Detected Chemicals

		VOCs								Metals		
Drinking Wtr Criteria		Ethyl-benzene	cis-1,2-DCE	MIBK	PERC	1,1,1-TCA	1,1,2-TCA	TCE	Xylenes	Mn	As	Pb
	HRL (ppb)	50	50	300	5	9,000	3	5	300	100	10	15
	MCL (ppb)	700	70	NE	5	200	5	5	10,000	NE	10	15[a]
Location	Sample Date											
Well #1	10/5/1961	NA	NA	NA	NA	NA	NA	NA	NA	<50	NA	NA
	June 1968	NA	NA	NA	NA	NA	NA	NA	NA	**180**	NA	NA
	1/22/1969	NA	NA	NA	NA	NA	NA	NA	NA	<20	NA	NA
	8/7/1969	NA	NA	NA	NA	NA	NA	NA	NA	**40**	NA	NA
	10/13/1970	NA	NA	NA	NA	NA	NA	NA	NA	**40**	NA	<10
	12/10/1973	NA	NA	NA	NA	NA	NA	NA	NA	**20**	NA	NA
	3/9/1976	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	2/7/1984	<0.5	<0.2	<1	<0.2	<0.2	<0.5	<0.2	<0.5	NA	NA	NA
	5/18/1995	<0.2	<0.2	<5	<0.2	<0.2	<0.2	<0.1	<0.2	NA	**1.1**	NA
	8/10/1998	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	9/29/1998	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	12/21/1998	NA	NA	NA	NA	NA	NA	NA	NA	NA	**1.2**	NA
	5/6/1999	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	6/22/1999	NA	NA	NA	NA	NA	NA	NA	NA	NA	<1.0	NA
	7/9/2003	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	11/5/2003	<0.2	<0.2	<5	<0.2	<0.2	<0.2	<0.1	<0.2	NA	NA	NA
	11/20/2003	NA	NA	NA	NA	NA	NA	NA	NA	NA	**1.76**	NA
Well #2	6/20/1968	NA	NA	NA	NA	NA	NA	NA	NA	**20**	NA	NA
	January 1969	NA	NA	NA	NA	NA	NA	NA	NA	**180**	NA	NA
	8/7/1969	NA	NA	NA	NA	NA	NA	NA	NA	<20	NA	NA
	10/13/1970	NA	NA	NA	NA	NA	NA	NA	NA	**30**	NA	NA
	12/10/1973	NA	NA	NA	NA	NA	NA	NA	NA	**27**	NA	**11**
	1/28/1974	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	11/16/1977	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

[a] This is a federal action level, not an MCL

[See "Notes" at end of table]

Table 2: City Water Sample Data - Detected Chemicals

		VOC: Disinfection By-products				SVOCs	PCBs	Pesticides				
Drinking Wtr Criteria		Chloroform	BDCM	CDBM	Bromoform	Phenols		Dalapon	DCPA di-acid degr.	4-nitro phenol	3,5-DCB acid	5-HDC
	HRL (ppb)	30	6	NE	40	4,000	0.04	NE	NE	NE	NE	NE
	MCL (ppb)	NE[b]	NE[b]	NE[b]	NE[b]	NE	0.5	200	70[c]	NE	NE	NE
Location	Sample Date											
Well #1	10/5/1961	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	June 1968	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	1/22/1969	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	8/7/1969	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	10/13/1970	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	12/10/1973	NA	NA	NA	NA	<2	NA	NA	NA	NA	NA	NA
	3/9/1976	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	2/7/1984	<0.2	<0.5	<0.5	<0.5	NA	NA	NA	NA	NA	NA	NA
	2/8/1984	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	5/18/1995	<0.1	<0.2	<0.2	<0.2	NA	NA	NA	NA	NA	NA	NA
	8/10/1998	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	9/29/1998	NA	NA	NA	NA	NA	NA	<0.5	<0.5	<0.5	<0.5	<1
	12/21/1998	NA	NA	NA	NA	NA	NA	<0.5	<0.5	<0.5	<0.5	<1
	5/6/1999	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	6/22/1999	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	7/9/2003	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	11/5/2003	<0.1	<0.2	<0.2	<0.2	NA	NA	NA	NA	NA	NA	NA
	11/20/2003	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Well #2	6/20/1968	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	January 1969	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	8/7/1969	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	10/13/1970	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	12/10/1973	NA	NA	NA	NA	<2	NA	NA	NA	NA	NA	NA
	1/28/1974	NA	NA	NA	NA	<2	NA	NA	NA	NA	NA	NA
	11/16/1977	NA	NA	NA	NA	**6.7**	NA	NA	NA	NA	NA	NA

[b] The federal MCL for these disinfection by-products is 80 ppb for total trihalomethanes (THMs); chloroform, bromoform, CDBM and BDCM are all THMs

[c] This is a federal "Health Risk Limit", a non-regulatory comparison value

[See "Notes" at end of table]

Table 2: City Water Sample Data - Detected Chemicals

		VOCs								Metals		
Drinking Wtr Criteria		Ethyl-benzene	cis-1,2-DCE	MIBK	PERC	1,1,1-TCA	1,1,2-TCA	TCE	Xylenes	Mn	As	Pb
	HRL (ppb)	50	50	300	5	9,000	3	5	300	100	10	15
	MCL (ppb)	700	70	NE	5	200	5	5	10,000	NE	10	15[a]
Location	Sample Date											
Well #2 (continued)	3/29/1979	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	5/8/1980	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	8/4/1981	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	2/7/1984	<0.5	<0.2	<1	<0.2	<0.2	<0.5	<0.2	<0.5	NA	NA	NA
	7/6/1989	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	7/11/1989	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	5/18/1995	<0.2	<0.2	<5	<0.2	<0.2	<0.2	<0.1	<0.2	NA	<1	NA
	8/10/1998	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	9/29/1998	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	12/21/1998	NA	NA	NA	NA	NA	NA	NA	NA	NA	<1	NA
	5/6/1999	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	6/22/1999	NA	NA	NA	NA	NA	NA	NA	NA	NA	<1.0	NA
	5/23/2002	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	7/24/2002	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	11/6/2002	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	7/9/2003	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	9/18/2003	<0.2	<0.2	<5	<0.2	<0.2	<0.2	<0.1	<0.2	NA	<1	NA
	4/26/2007	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	6/19/2007	<0.2	<0.2	<5	<0.2	<0.2	<0.2	<0.1	<0.2	NA	<1	NA
	5/5/2010	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	5/21/2010	NA	NA	NA	NA	NA	NA	NA	NA	NA	<1	NA

[a] This is a federal action level, not an MCL

[See "Notes" at end of table]

Table 2: City Water Sample Data - Detected Chemicals

		VOC: Disinfection By-products				SVOCs	PCBs	Pesticides				
Drinking Wtr Criteria		Chloroform	BDCM	CDBM	Bromoform	Phenols		Dalapon	DCPA di-acid degr.	4-nitro phenol	3,5-DCB acid	5-HDC
	HRL (ppb)	30	6	NE	40	4,000	0.04	NE	NE	NE	NE	NE
	MCL (ppb)	NE[b]	NE[b]	NE[b]	NE[b]	NE	0.5	200	70[c]	NE	NE	NE
Location	Sample Date											
Well #2 (continued)	3/29/1979	NA	NA	NA	NA	<2	NA	NA	NA	NA	NA	NA
	5/8/1980	NA	NA	NA	NA	<2	NA	NA	NA	NA	NA	NA
	8/4/1981	NA	NA	NA	NA	<2	NA	NA	NA	NA	NA	NA
	2/7/1984	<0.2	<0.5	<0.5	<0.5	NA	NA	NA	NA	NA	NA	NA
	7/6/1989	NA	NA	NA	NA	NA	<1	NA	NA	NA	NA	NA
	7/11/1989	NA	NA	NA	NA	NA	<1	NA	NA	NA	NA	NA
	5/18/1995	<0.1	<0.2	<0.5	<0.5	NA	NA	NA	NA	NA	NA	NA
	8/10/1998	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	9/29/1998	NA	NA	NA	NA	NA	NA	<0.5	<0.5	<0.5	<0.5	<1
	12/21/1998	NA	NA	NA	NA	NA	NA	<0.5	<0.5	<0.5	<0.5	<1
	5/6/1999	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	6/22/1999	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	5/23/2002	NA	NA	NA	NA	NA	NA	<1	NA	NA	NA	NA
	7/24/2002	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	11/6/2002	NA	NA	NA	NA	NA	NA	<1	NA	NA	NA	NA
	7/9/2003	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	9/18/2003	<0.1	<0.2	<0.5	<0.5	NA	NA	NA	NA	NA	NA	NA
	4/26/2007	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	6/19/2007	<0.1	<0.2	<0.5	<0.5	NA	NA	NA	NA	NA	NA	NA
	5/5/2010	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	5/21/2010	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

[b] The federal MCL for these disinfection by-products is 80 ppb for total trihalomethanes (THMs); chloroform, bromoform, CDBM and BDCM are all THMs

[c] This is a federal "Health Risk Limit", a non-regulatory comparison value

[See "Notes" at end of table]

Table 2: City Water Sample Data - Detected Chemicals

		VOCs								Metals		
Drinking Wtr Criteria		Ethyl-benzene	cis-1,2-DCE	MIBK	PERC	1,1,1-TCA	1,1,2-TCA	TCE	Xylenes	Mn	As	Pb
	HRL (ppb)	50	50	300	5	9,000	3	5	300	100	10	15
	MCL (ppb)	700	70	NE	5	200	5	5	10,000	NE	10	15[a]
Location	Sample Date											
Well #3	12/10/1973	NA	NA	NA	NA	NA	NA	NA	NA	**370**	NA	<10
	1/28/1974	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	2/7/1984	<0.5	<0.2	<1	<0.2	<0.2	<0.5	<0.2	<0.5	NA	NA	NA
	2/8/1984	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	7/6/1989	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	7/11/1989	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	5/18/1995	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	8/16/1995	<0.2	<0.2	<5	<0.2	<0.2	<0.2	<0.1	<0.2	NA	<1	NA
	8/10/1998	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	9/29/1998	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	12/21/1998	NA	NA	NA	NA	NA	NA	NA	NA	NA	<1	NA
	5/6/1999	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	6/22/1999	NA	NA	NA	NA	NA	NA	NA	NA	NA	<1.0	NA
	7/9/2003	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	9/18/2003	<0.2	<0.2	<5	<0.2	<0.2	<0.2	<0.1	<0.2	NA	<1	NA
	4/26/2007	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	6/19/2007	<0.2	<0.2	<5	<0.2	<0.2	<0.2	<0.1	<0.2	NA	<1	NA
	5/5/2010	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	5/21/2010	NA	NA	NA	NA	NA	NA	NA	NA	NA	<1	NA
Well #4	6/20/1968	NA	NA	NA	NA	NA	NA	NA	NA	**20**	NA	NA
	June 1968	NA	NA	NA	NA	NA	NA	NA	NA	**20**	NA	NA
	8/7/1969	NA	NA	NA	NA	NA	NA	NA	NA	<20	NA	NA
	10/13/1970	NA	NA	NA	NA	NA	NA	NA	NA	**20**	NA	NA

[a] This is a federal action level, not an MCL

[See "Notes" at end of table]

Table 2: City Water Sample Data - Detected Chemicals

		VOC: Disinfection By-products				SVOCs	PCBs	Pesticides				
Drinking Wtr Criteria		Chloroform	BDCM	CDBM	Bromoform	Phenols		Dalapon	DCPA di-acid degr.	4-nitro phenol	3,5-DCB acid	5-HDC
	HRL (ppb)	30	6	NE	40	4,000	0.04	NE	NE	NE	NE	NE
	MCL (ppb)	NE[b]	NE[b]	NE[b]	NE[b]	NE	0.5	200	70[c]	NE	NE	NE
Location	Sample Date											
Well #3	12/10/1973	NA	NA	NA	NA	<2	NA	NA	NA	NA	NA	NA
	1/28/1974	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	2/7/1984	<0.2	<0.5	<0.5	<0.5	NA	NA	NA	NA	NA	NA	NA
	2/8/1984	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	7/6/1989	NA	NA	NA	NA	NA	<1	NA	NA	NA	NA	NA
	7/11/1989	NA	NA	NA	NA	NA	<1	NA	NA	NA	NA	NA
	5/18/1995	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	8/16/1995	<0.1	<0.2	<0.2	<0.2	NA	NA	NA	NA	NA	NA	NA
	8/10/1998	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	9/29/1998	NA	NA	NA	NA	NA	NA	<0.5	<0.5	<0.5	<0.5	<1
	12/21/1998	NA	NA	NA	NA	NA	NA	<0.5	<0.5	<0.5	<0.5	<1
	5/6/1999	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	6/22/1999	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	7/9/2003	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	9/18/2003	<0.1	<0.2	<0.2	<0.2	NA	NA	NA	NA	NA	NA	NA
	4/26/2007	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	6/19/2007	<0.1	<0.2	<0.2	<0.2	NA	NA	NA	NA	NA	NA	NA
	5/5/2010	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	5/21/2010	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Well #4	6/20/1968	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	June 1968	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	8/7/1969	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	10/13/1970	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

[b] The federal MCL for these disinfection by-products is 80 ppb for total trihalomethanes (THMs); chloroform, bromoform, CDBM and BDCM are all THMs

[c] This is a federal "Health Risk Limit", a non-regulatory comparison value

[See "Notes" at end of table]

Table 2: City Water Sample Data - Detected Chemicals

		VOCs								Metals		
Drinking Wtr Criteria		Ethyl-benzene	cis-1,2-DCE	MIBK	PERC	1,1,1-TCA	1,1,2-TCA	TCE	Xylenes	Mn	As	Pb
	HRL (ppb)	50	50	300	5	9,000	3	5	300	100	10	15
	MCL (ppb)	700	70	NE	5	200	5	5	10,000	NE	10	15[a]
Location	Sample Date											
Well #4	12/10/1973	NA	NA	NA	NA	NA	NA	NA	NA	<10	NA	<10
(continued)	6/13/1985	<0.5	<0.2	<1	<2	<0.2	<0.2	<0.2	<0.5	NA	NA	NA
	5/18/1995	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	8/16/1995	<0.2	<0.2	<5	<0.2	<0.2	<0.2	<0.1	<0.2	NA	NA	NA
[sealed -2002]	8/29/1995	NA	NA	NA	NA	NA	NA	NA	NA	NA	<1	NA
Well #5	10/13/1970	NA	NA	NA	NA	NA	NA	NA	NA	**320**	NA	NA
	12/10/1973	NA	NA	NA	NA	NA	NA	NA	NA	**240**	NA	<10
	1/28/1974	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	3/9/1976	NA	NA	NA	NA	NA	NA	NA	NA	**960**	NA	NA
	11/16/1977	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	3/29/1979	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	5/8/1980	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	8/4/1981	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	6/13/1985	<0.5	<0.2	<1	<2	<0.2	<0.2	<0.2	<0.5	NA	NA	NA
	8/29/1995	NA	NA	NA	NA	NA	NA	NA	NA	NA	**1.4**	NA
	5/18/1995	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
[sealed - 2001]	8/16/1995	<0.2	<0.2	<5	<0.2	<0.2	<0.2	<0.1	<0.2	NA	NA	NA
Well #6	6/20/1968	NA	NA	NA	NA	NA	NA	NA	NA	**30**	NA	NA
	8/7/1969	NA	NA	NA	NA	NA	NA	NA	NA	<20	NA	NA
	10/13/1970	NA	NA	NA	NA	NA	NA	NA	NA	**120**	NA	NA
	12/10/1973	NA	NA	NA	NA	NA	NA	NA	NA	**26**	NA	<10
[sealed - 1993]	2/7/1984	<0.5	<0.2	<1	<0.2	<0.2	<0.5	<0.2	<0.5	NA	NA	NA

[a] This is a federal action level, not an MCL

[See "Notes" at end of table]

Table 2: City Water Sample Data - Detected Chemicals

		VOC: Disinfection By-products				SVOCs	PCBs	Pesticides				
Drinking Wtr Criteria		Chloroform	BDCM	CDBM	Bromoform	Phenols		Dalapon	DCPA di-acid degr.	4-nitro phenol	3,5-DCB acid	5-HDC
	HRL (ppb)	30	6	NE	40	4,000	0.04	NE	NE	NE	NE	NE
	MCL (ppb)	NE[b]	NE[b]	NE[b]	NE[b]	NE	0.5	200	70[c]	NE	NE	NE
Location	Sample Date											
Well #4	12/10/1973	NA	NA	NA	NA	**47**	NA	NA	NA	NA	NA	NA
(continued)	6/13/1985	<0.2	<0.5	<0.5	<0.5	NA	NA	NA	NA	NA	NA	NA
	5/18/1995	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	8/16/1995	<0.1	<0.2	<0.2	<0.2	NA	NA	NA	NA	NA	NA	NA
[sealed -2002]	8/29/1995	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Well #5	10/13/1970	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	12/10/1973	NA	NA	NA	NA	<2	NA	NA	NA	NA	NA	NA
	1/28/1974	NA	NA	NA	NA	<2	NA	NA	NA	NA	NA	NA
	3/9/1976	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	11/16/1977	NA	NA	NA	NA	**6.3**	NA	NA	NA	NA	NA	NA
	3/29/1979	NA	NA	NA	NA	<2	NA	NA	NA	NA	NA	NA
	5/8/1980	NA	NA	NA	NA	<2	NA	NA	NA	NA	NA	NA
	8/4/1981	NA	NA	NA	NA	**4**	NA	NA	NA	NA	NA	NA
	6/13/1985	<0.2	<0.5	<0.5	<0.5	NA	NA	NA	NA	NA	NA	NA
	8/29/1995	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	5/18/1995	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
[sealed - 2001]	8/16/1995	<0.1	<0.2	<0.2	<0.2	NA	NA	NA	NA	NA	NA	NA
Well #6	6/20/1968	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	8/7/1969	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	10/13/1970	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	12/10/1973	NA	NA	NA	NA	<2	NA	NA	NA	NA	NA	NA
[sealed - 1993]	2/7/1984	<0.2	<0.5	<0.5	<0.5	NA	NA	NA	NA	NA	NA	NA

[b] The federal MCL for these disinfection by-products is 80 ppb for total trihalomethanes (THMs); chloroform, bromoform, CDBM and BDCM are all THMs

[c] This is a federal "Health Risk Limit", a non-regulatory comparison value

[See "Notes" at end of table]

Table 2: City Water Sample Data - Detected Chemicals

		VOCs								Metals		
Drinking Wtr Criteria		Ethyl-benzene	cis-1,2-DCE	MIBK	PERC	1,1,1-TCA	1,1,2-TCA	TCE	Xylenes	Mn	As	Pb
	HRL (ppb)	50	50	300	5	9,000	3	5	300	100	10	15
	MCL (ppb)	700	70	NE	5	200	5	5	10,000	NE	10	15[a]
Location	Sample Date											
Well #7	12/10/1973	NA	NA	NA	NA	NA	NA	NA	NA	**260**	NA	<10
	5/8/1980	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	8/4/1981	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	<10
	5/18/1995	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	8/16/1995	**0.2**	<0.2	**5.8**	<0.2	<0.2	<0.2	<0.1	**1.3**	NA	NA	NA
	8/29/1995	NA	NA	NA	NA	NA	NA	NA	NA	NA	**2.5**	NA
	11/1/1995	<0.2	<0.2	<5	<0.2	<0.2	<0.2	<0.1	<0.2	NA	NA	NA
	6/18/1996	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	7/24/1996	<0.2	<0.2	<5	<0.2	<0.2	<0.2	<0.1	<0.2	NA	NA	NA
	8/10/1998	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	9/29/1998	<0.2	<0.2	<5	<0.2	<0.2	<0.2	<0.1	<0.2	NA	NA	NA
	12/21/1998	<0.2	<0.2	<5	<0.2	<0.2	<0.2	<0.1	<0.2	NA	1.5	NA
	5/6/1999	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	6/23/1999	NA	NA	NA	NA	NA	NA	NA	NA	NA	**1.6**	NA
Well #8	3/9/1976	NA	NA	NA	NA	NA	NA	NA	NA	**160**	NA	NA
	3/30/1979	NA	NA	NA	NA	NA	NA	NA	NA	**160**	<50	<50
	5/8/1980	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	5/28/1987	<0.2	<0.2	<5	<0.2	<0.2	<0.2	**0.2**	<0.2	NA	NA	NA
	2/18/1993	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	5/17/1993	<0.2	<0.2	<5	<0.2	<0.2	<0.2	<0.1	<0.2	NA	NA	NA
	8/11/1993	<0.2	<0.2	<5	<0.2	<0.2	<0.2	<0.1	<0.2	NA	NA	NA
	11/22/1993	NA	NA	NA	NA	NA	NA	NA	NA	NA	<1	NA
	12/9/1993	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

[a] This is a federal action level, not an MCL

[See "Notes" at end of table]

Table 2: City Water Sample Data - Detected Chemicals

		VOC: Disinfection By-products				SVOCs	PCBs	Pesticides				
Drinking Wtr Criteria		Chloroform	BDCM	CDBM	Bromoform	Phenols		Dalapon	DCPA di-acid degr.	4-nitro phenol	3,5-DCB acid	5-HDC
	HRL (ppb)	30	6	NE	40	4,000	0.04	NE	NE	NE	NE	NE
	MCL (ppb)	NE[b]	NE[b]	NE[b]	NE[b]	NE	0.5	200	70[c]	NE	NE	NE
Location	Sample Date											
Well #7	12/10/1973	NA	NA	NA	NA	**6**	NA	NA	NA	NA	NA	NA
	5/8/1980	NA	NA	NA	NA	<2	NA	NA	NA	NA	NA	NA
	8/4/1981	NA	NA	NA	NA	<2	NA	NA	NA	NA	NA	NA
	5/18/1995	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	8/16/1995	<0.1	<0.2	<0.2	<0.2	NA	NA	NA	NA	NA	NA	NA
	8/29/1995	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	11/1/1995	<0.1	<0.2	<0.2	<0.2	NA	NA	NA	NA	NA	NA	NA
	6/18/1996	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	7/24/1996	<0.1	<0.2	<0.2	<0.2	NA	NA	NA	NA	NA	NA	NA
	8/10/1998	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	9/29/1998	<0.1	<0.2	<0.2	<0.2	NA	NA	<0.5	<0.5	<0.5	<0.5	<1
	12/21/1998	<0.1	<0.2	<0.2	<0.2	NA	NA	<0.5	<0.5	<0.5	<0.5	<1
	5/6/1999	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	6/23/1999	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Well #8	3/9/1976	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	3/30/1979	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	5/8/1980	NA	NA	NA	NA	<2	NA	NA	NA	NA	NA	NA
	5/28/1987	<0.1	<0.2	<0.2	<0.2	NA	NA	NA	NA	NA	NA	NA
	2/18/1993	NA	NA	NA	NA	NA	NA	**8.26**	**0.12**	**0.4**	**0.11**	<1
	5/17/1993	<0.1	<0.2	<0.2	<0.2	NA	NA	<0.5	**0.15**	<0.5	<0.5	<1
	8/11/1993	<0.1	<0.2	<0.2	<0.2	NA	NA	<0.5	**0.48**	**0.21**	<0.5	**0.04**
	11/22/1993	NA	NA	NA	NA	NA	NA	<0.5	**0.1**	<0.5	<0.5	<1
	12/9/1993	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

[b] The federal MCL for these disinfection by-products is 80 ppb for total trihalomethanes (THMs); chloroform, bromoform, CDBM and BDCM are all THMs

[c] This is a federal "Health Risk Limit", a non-regulatory comparison value

[See "Notes" at end of table]

Table 2: City Water Sample Data - Detected Chemicals

		VOCs								Metals		
Drinking Wtr Criteria		Ethyl-benzene	cis-1,2-DCE	MIBK	PERC	1,1,1-TCA	1,1,2-TCA	TCE	Xylenes	Mn	As	Pb
	HRL (ppb)	50	50	300	5	9,000	3	5	300	100	10	15
	MCL (ppb)	700	70	NE	5	200	5	5	10,000	NE	10	15[a]
Location	Sample Date											
Well #8 (continued)	5/26/1994	<0.2	<0.2	<5	<0.2	<0.2	<0.2	<0.1	<0.2	NA	NA	NA
	10/4/1994	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	5/18/1995	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	8/16/1995	<0.2	<0.2	<5	<0.2	<0.2	<0.2	<0.1	<0.2	NA	NA	NA
	8/10/1998	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	9/29/1998	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	12/21/1998	<0.2	<0.2	<5	<0.2	<0.2	<0.2	<0.1	<0.2	NA	<1	NA
	5/6/1999	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	6/23/1999	<0.2	<0.2	<5	<0.2	<0.2	<0.2	<0.1	<0.2	NA	<1	NA
	12/30/1999	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Well #9	3/30/1979	NA	NA	NA	NA	NA	NA	NA	NA	**540**	<50	<50
	5/8/1980	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	6/13/1985	<0.5	<0.2	<1	<2	<0.2	<0.2	**0.25**	<0.5	NA	NA	NA
	10/2/1985	<0.5	<0.2	<1	<2	<0.2	**0.53**	**0.38**	<0.5	NA	NA	NA
	9/18/1986	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	5/28/1987	<0.5	<0.2	<1	<2	<0.2	<0.2	**1.1**	<0.5	NA	NA	NA
	3/12/1993	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	5/17/1993	<0.2	<0.2	<5	<0.2	**0.5**	<0.2	**1.2**	<0.2	NA	NA	NA
	8/11/1993	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	9/13/1993	<0.2	<0.2	<5	<0.2	**0.3**	<0.2	**1.3**	<0.2	NA	NA	NA
	11/22/1993	NA	NA	NA	NA	NA	NA	NA	NA	NA	<1	NA
	12/13/1993	<0.2	<0.2	<5	<0.2	<0.2	<0.2	**1.1**	<0.2	NA	NA	NA
	3/14/1994	<0.2	<0.2	<5	<0.2	**0.4**	<0.2	**1.4**	<0.2	NA	NA	NA
	5/26/1994	<0.2	<0.2	<5	<0.2	**0.3**	<0.2	**1.4**	<0.2	NA	NA	NA

[a] This is a federal action level, not an MCL

[See "Notes" at end of table]

Table 2: City Water Sample Data - Detected Chemicals

		VOC: Disinfection By-products				SVOCs	PCBs	Pesticides				
Drinking Wtr Criteria		Chloroform	BDCM	CDBM	Bromoform	Phenols		Dalapon	DCPA di-acid degr.	4-nitro phenol	3,5-DCB acid	5-HDC
	HRL (ppb)	30	6	NE	40	4,000	0.04	NE	NE	NE	NE	NE
	MCL (ppb)	NE[b]	NE[b]	NE[b]	NE[b]	NE	0.5	200	70[c]	NE	NE	NE
Location	Sample Date											
Well #8 (continued)	5/26/1994	<0.1	<0.2	<5	<0.2	NA	NA	NA	NA	NA	NA	NA
	10/4/1994	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	5/18/1995	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	8/16/1995	<0.1	<0.2	<0.2	<0.2	NA	NA	NA	NA	NA	NA	NA
	8/10/1998	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	9/29/1998	NA	NA	NA	NA	NA	NA	<0.5	<0.5	<0.5	<0.5	<1
	12/21/1998	<0.1	<0.2	<0.2	<0.2	NA	NA	<0.5	<0.5	<0.5	<0.5	<1
	5/6/1999	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	6/23/1999	<0.1	<0.2	<0.2	<0.2	NA	NA	<0.5	<0.5	<0.5	<0.5	<1
	12/30/1999	NA	NA	NA	NA	NA	NA	<0.5	<0.5	<0.5	<0.5	<1
Well #9	3/30/1979	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	5/8/1980	NA	NA	NA	NA	<2	NA	NA	NA	NA	NA	NA
	6/13/1985	<0.2	<0.5	<0.5	<0.5	NA	NA	NA	NA	NA	NA	NA
	10/2/1985	<0.2	<0.5	<0.5	<0.5	NA	NA	NA	NA	NA	NA	NA
	9/18/1986	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	5/28/1987	<0.2	<0.5	<0.5	<0.5	NA	NA	NA	NA	NA	NA	NA
	3/12/1993	NA	NA	NA	NA	NA	NA	<1.3	**1.08**	<0.13	<0.06	<0.04
	5/17/1993	<0.1	<0.2	<0.2	<0.2	NA	NA	<1.3	**1.17**	**0.18**	<0.06	<0.04
	8/11/1993	NA	NA	NA	NA	NA	NA	<1.3	**1.03**	<0.13	**0.08**	<0.04
	9/13/1993	<0.1	<0.2	<0.2	<0.2	NA	NA	NA	NA	NA	NA	NA
	11/22/1993	NA	NA	NA	NA	NA	NA	<1.3	**0.92**	<0.13	<0.06	<0.04
	12/13/1993	<0.1	<0.2	<0.2	<0.2	NA	NA	NA	NA	NA	NA	NA
	3/14/1994	<0.1	<0.2	<0.2	<0.2	NA	NA	NA	NA	NA	NA	NA
	5/26/1994	<0.1	<0.2	<0.2	<0.2	NA	NA	NA	NA	NA	NA	NA

[b] The federal MCL for these disinfection by-products is 80 ppb for total trihalomethanes (THMs); chloroform, bromoform, CDBM and BDCM are all THMs

[c] This is a federal "Health Risk Limit", a non-regulatory comparison value

[See "Notes" at end of table]

Table 2: City Water Sample Data - Detected Chemicals

		VOCs								Metals		
Drinking Wtr Criteria		Ethyl-benzene	cis-1,2-DCE	MIBK	PERC	1,1,1-TCA	1,1,2-TCA	TCE	Xylenes	Mn	As	Pb
	HRL (ppb)	50	50	300	5	9,000	3	5	300	100	10	15
	MCL (ppb)	700	70	NE	5	200	5	5	10,000	NE	10	15[a]
Location	Sample Date											
Well #9	8/22/1994	<0.2	<0.2	<5	<0.2	**0.4**	<0.2	**1.7**	<0.2	NA	NA	NA
(continued)	10/4/1994	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	11/21/1994	<0.2	<0.2	<5	<0.2	<0.2	<0.2	**0.9**	<0.2	NA	NA	NA
	2/27/1995	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	5/18/1995	<0.2	<0.2	<5	<0.2	<0.2	<0.2	**1.2**	<0.2	NA	NA	NA
	8/16/1995	<0.2	<0.2	<5	<0.2	**1**	<0.2	**1.6**	<0.2	NA	NA	NA
	11/1/1995	<0.2	<0.2	<5	<0.2	<0.2	<0.2	**1**	<0.2	NA	NA	NA
	6/18/1996	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	7/25/1996	<0.2	<0.2	<5	<0.2	<0.2	<0.2	**1.1**	<0.2	NA	NA	NA
	6/25/1997	<0.2	<0.2	<5	**1.5**	<0.2	<0.2	**2.7**	<0.2	NA	NA	NA
[sealed - 2000]	8/26/1997	<0.2	**0.5**	<5	<0.2	<0.2	<0.2	**3.1**	<0.2	NA	NA	NA
Well #10	8/4/1981	<2.2	<0.4	NA	NA	NA	NA	NA	NA	**990**	<5	<10
	6/13/1985	<0.5	<0.2	<1	<2	<0.2	<0.2	<0.2	<0.5	NA	NA	NA
	10/2/1985	<0.5	**0.49**	<1	<2	<0.2	<0.2	<0.2	<0.5	NA	NA	NA
	7/6/1989	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	7/11/1989	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	8/30/1990	<0.2	<0.2	<5	<0.2	<0.2	<0.2	<0.1	<0.2	NA	NA	NA
Well #11	8/4/1981	NA	NA	NA	NA	NA	NA	NA	NA	**180**	<5	**35**
	6/13/1985	<0.5	<0.2	<1	<2	**PP (<0.2)**	<0.2	<0.2	<0.5	NA	NA	NA
	10/2/1985	<0.5	<0.2	<1	<2	<0.2	<0.2	<0.2	<0.5	NA	NA	NA
	5/28/1987	<0.5	<0.2	<1	<2	<0.2	<0.2	<0.2	<0.5	NA	NA	NA
	2/18/1993	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	5/17/1993	<0.2	<0.2	<5	<0.2	<0.2	<0.2	<0.1	<0.2	NA	NA	NA

[a] This is a federal action level, not an MCL

[See "Notes" at end of table]

Table 2: City Water Sample Data - Detected Chemicals

		VOC: Disinfection By-products				SVOCs	PCBs	Pesticides				
Drinking Wtr Criteria		Chloroform	BDCM	CDBM	Bromoform	Phenols		Dalapon	DCPA di-acid degr.	4-nitro phenol	3,5-DCB acid	5-HDC
	HRL (ppb)	30	6	NE	40	4,000	0.04	NE	NE	NE	NE	NE
	MCL (ppb)	NE[b]	NE[b]	NE[b]	NE[b]	NE	0.5	200	70[c]	NE	NE	NE
Location	Sample Date											
Well #9	8/22/1994	<0.1	<0.2	<0.2	<0.2	NA	NA	NA	NA	NA	NA	NA
(continued)	10/4/1994	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	11/21/1994	<0.1	<0.2	<0.2	<0.2	NA	NA	NA	NA	NA	NA	NA
	2/27/1995	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	5/18/1995	<0.1	<0.2	<0.2	<0.2	NA	NA	NA	NA	NA	NA	NA
	8/16/1995	<0.1	<0.2	<0.2	<0.2	NA	NA	NA	NA	NA	NA	NA
	11/1/1995	<0.1	<0.2	<0.2	<0.2	NA	NA	NA	NA	NA	NA	NA
	6/18/1996	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	7/25/1996	<0.1	<0.2	<0.2	<0.2	NA	NA	NA	NA	NA	NA	NA
	6/25/1997	<0.1	<0.2	<0.2	<0.2	NA	NA	NA	NA	NA	NA	NA
[sealed - 2000]	8/26/1997	<0.1	<0.2	<0.2	<0.2	NA	NA	NA	NA	NA	NA	NA
Well #10	8/4/1981	NA	NA	NA	NA	<2	NA	NA	NA	NA	NA	NA
	6/13/1985	<0.2	<0.5	<1	<2	NA	NA	NA	NA	NA	NA	NA
	10/2/1985	<0.2	<0.5	<1	<2	NA	NA	NA	NA	NA	NA	NA
	7/6/1989	NA	NA	NA	NA	NA	<1	NA	NA	NA	NA	NA
	7/11/1989	NA	NA	NA	NA	NA	<1	NA	NA	NA	NA	NA
	8/30/1990	<0.1	<0.2	<0.2	<0.2	NA	NA	NA	NA	NA	NA	NA
Well #11	8/4/1981	NA	NA	NA	NA	**9.9**	NA	NA	NA	NA	NA	NA
	6/13/1985	<0.2	<0.5	<0.5	<0.5	NA	NA	NA	NA	NA	NA	NA
	10/2/1985	<0.2	<0.5	<0.5	<0.5	NA	NA	NA	NA	NA	NA	NA
	5/28/1987	<0.2	<0.5	<0.5	<0.5	NA	NA	NA	NA	NA	NA	NA
	2/18/1993	NA	NA	NA	NA	NA	NA	<1.3	<0.02	<0.13	<0.06	**0.04**
	5/17/1993	<0.1	<0.2	<0.2	<0.2	NA	NA	<1.3	<0.02	<0.13	<0.06	<0.04

[b] The federal MCL for these disinfection by-products is 80 ppb for total trihalomethanes (THMs); chloroform, bromoform, CDBM and BDCM are all THMs

[c] This is a federal "Health Risk Limit", a non-regulatory comparison value

[See "Notes" at end of table]

Table 2: City Water Sample Data - Detected Chemicals

		VOCs								Metals		
Drinking Wtr Criteria		Ethyl-benzene	cis-1,2-DCE	MIBK	PERC	1,1,1-TCA	1,1,2-TCA	TCE	Xylenes	Mn	As	Pb
	HRL (ppb)	50	50	300	5	9,000	3	5	300	100	10	15
	MCL (ppb)	700	70	NE	5	200	5	5	10,000	NE	10	15[a]
Location	Sample Date											
Well #11 (continued)	8/11/1993	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	11/22/1993	NA	NA	NA	NA	NA	NA	NA	NA	NA	<1	NA
	12/9/1993	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	5/26/1994	<0.2	<0.2	<5	<0.2	<0.2	<0.2	<0.1	<0.2	NA	NA	NA
	10/4/1994	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	5/18/1995	<0.2	<0.2	<5	<0.2	<0.2	<0.2	<0.1	<0.2	NA	NA	NA
	8/10/1998	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	12/21/1998	<0.2	<0.2	<5	<0.2	<0.2	<0.2	<0.1	<0.2	NA	<1	NA
	5/6/1999	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	6/23/1999	<0.2	<0.2	<5	<0.2	<0.2	<0.2	<0.1	<0.2	NA	<1	NA
	12/30/1999	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	7/11/2001	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	7/24/2001	<0.2	<0.2	<5	<0.2	<0.2	<0.2	<0.1	<0.2	NA	<1	NA
	9/5/2001	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	12/5/2001	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	4/22/2004	<0.2	<0.2	<5	<0.2	<0.2	<0.2	<0.1	<0.2	NA	<1	NA
	8/10/2004	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	8/17/2004	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	3/22/2007	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	4/26/2007	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	6/19/2007	<0.2	<0.2	<5	<0.2	<0.2	<0.2	<0.1	<0.2	NA	NA	NA
	5/5/2010	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	5/21/2010	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	7/8/2010	<0.2	<0.2	<5	<0.2	<0.2	<0.2	<0.1	<0.2	NA	NA	NA

[a] This is a federal action level, not an MCL

[See "Notes" at end of table]

Table 2: City Water Sample Data - Detected Chemicals

		VOC: Disinfection By-products				SVOCs	PCBs	Pesticides				
Drinking Wtr Criteria		Chloroform	BDCM	CDBM	Bromoform	Phenols		Dalapon	DCPA di-acid degr.	4-nitro phenol	3,5-DCB acid	5-HDC
	HRL (ppb)	30	6	NE	40	4,000	0.04	NE	NE	NE	NE	NE
	MCL (ppb)	NE[b]	NE[b]	NE[b]	NE[b]	NE	0.5	200	70[c]	NE	NE	NE
Location	Sample Date											
Well #11 (continued)	8/11/1993	NA	NA	NA	NA	NA	NA	<1.3	<0.02	<0.13	<0.06	**0.2**
	11/22/1993	NA	NA	NA	NA	NA	NA	<1.3	<0.02	<0.13	<0.06	<0.04
	12/9/1993	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	5/26/1994	<0.1	<0.2	<0.2	<0.2	NA	NA	NA	NA	NA	NA	NA
	10/4/1994	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	5/18/1995	<0.1	<0.2	<0.2	<0.2	NA	NA	NA	NA	NA	NA	NA
	8/10/1998	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	12/21/1998	<0.1	<0.2	<0.2	<0.2	NA	NA	<1.3	<0.02	<0.13	<0.06	<0.04
	5/6/1999	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	6/23/1999	<0.1	<0.2	<0.2	<0.2	NA	NA	<1.3	<0.02	<0.13	<0.06	<0.04
	12/30/1999	NA	NA	NA	NA	NA	NA	<1.3	<0.02	<0.13	<0.06	<0.04
	7/11/2001	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	7/24/2001	<0.1	<0.2	<0.2	<0.2	NA	NA	NA	NA	NA	NA	NA
	9/5/2001	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	12/5/2001	NA	NA	NA	NA	NA	NA	<1.3	<0.02	<0.13	<0.06	<0.04
	4/22/2004	<0.1	<0.2	<0.2	<0.2	NA	NA	<1.3	<0.02	<0.13	<0.06	<0.04
	8/10/2004	NA	NA	NA	NA	NA	NA	<1.3	<0.02	<0.13	<0.06	<0.04
	8/17/2004	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	3/22/2007	NA	NA	NA	NA	NA	NA	<1.3	<0.02	<0.13	<0.06	<0.04
	4/26/2007	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	6/19/2007	<0.1	<0.2	<0.2	<0.2	NA	NA	<1.3	<0.02	<0.13	<0.06	<0.04
	5/5/2010	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	5/21/2010	NA	NA	NA	NA	NA	NA	<1.3	<0.02	<0.13	<0.06	<0.04
	7/8/2010	**0.47**	**0.56**	**0.56**	**0.56**	NA	NA	<1.3	<0.02	<0.13	<0.06	<0.04

[b] The federal MCL for these disinfection by-products is 80 ppb for total trihalomethanes (THMs); chloroform, bromoform, CDBM and BDCM are all THMs

[c] This is a federal "Health Risk Limit", a non-regulatory comparison value

[See "Notes" at end of table]

Table 2: City Water Sample Data - Detected Chemicals

		VOCs								Metals		
Drinking Wtr Criteria		Ethyl-benzene	cis-1,2-DCE	MIBK	PERC	1,1,1-TCA	1,1,2-TCA	TCE	Xylenes	Mn	As	Pb
	HRL (ppb)	50	50	300	5	9,000	3	5	300	100	10	15
	MCL (ppb)	700	70	NE	5	200	5	5	10,000	NE	10	15[a]
Location	Sample Date											
Well #11 (continued)	5/9/2012	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	7/11/2012	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	8/21/2012	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Well #12	6/13/1985	<0.5	<0.2	<1	<2	<0.2	<0.2	<0.2	<0.5	**380**	<5	<5
	9/18/1986	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	5/18/1995	<0.2	<0.2	<5	<0.2	<0.2	<0.2	<0.1	<0.2	NA	<1	NA
	8/10/1998	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	9/29/1998	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	12/21/1998	NA	NA	NA	NA	NA	NA	NA	NA	NA	<1	NA
	4/22/2004	<0.2	<0.2	<5	<0.2	<0.2	<0.2	<0.1	<0.2	NA	<1	NA
	4/26/2007	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	6/19/2007	<0.2	<0.2	<5	<0.2	<0.2	<0.2	<0.1	<0.2	NA	NA	NA
Well #13	7/6/1989	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	5/5/2005	<0.2	<0.2	<5	<0.2	<0.2	<0.2	<0.1	<0.2	NA	NA	NA
Well #14	7/6/1989	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Well #15	5/18/1995	<0.2	<0.2	<5	<0.2	<0.2	<0.2	**1.2**	<0.2	NA	NA	NA
	8/16/1995	<0.2	<0.2	<5	<0.2	<0.2	<0.2	<0.1	<0.2	NA	NA	NA
	11/1/1995	<0.2	<0.2	<5	<0.2	<0.2	<0.2	<0.1	<0.2	NA	NA	NA
	6/18/1996	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	7/24/1996	<0.2	<0.2	<5	<0.2	<0.2	<0.2	<0.1	<0.2	NA	NA	NA
	6/25/1997	<0.2	<0.2	<5	<0.2	<0.2	<0.2	<0.1	<0.2	NA	NA	NA
	9/29/1998	<0.2	<0.2	<5	<0.2	<0.2	<0.2	<0.1	<0.2	NA	NA	NA
	12/21/1998	<0.2	<0.2	<5	<0.2	<0.2	<0.2	<0.1	<0.2	NA	<1	NA
	4/22/2004	<0.2	<0.2	<5	<0.2	<0.2	<0.2	<0.1	<0.2	NA	<1	NA
Well #16	5/5/2005	<0.2	<0.2	<5	<0.2	<0.2	<0.2	<0.1	<0.2	NA	NA	NA

a This is a federal action level, not an MCL

[See "Notes" at end of table]

Table 2: City Water Sample Data - Detected Chemicals

		VOC: Disinfection By-products				SVOCs	PCBs	Pesticides				
Drinking Wtr Criteria		Chloroform	BDCM	CDBM	Bromoform	Phenols		Dalapon	DCPA di-acid degr.	4-nitro phenol	3,5-DCB acid	5-HDC
	HRL (ppb)	30	6	NE	40	4,000	0.04	NE	NE	NE	NE	NE
	MCL (ppb)	NE[b]	NE[b]	NE[b]	NE[b]	NE	0.5	200	70[c]	NE	NE	NE
Location	Sample Date											
Well #11 (continued)	5/9/2012	NA	NA	NA	NA	NA	NA	<1.3	<0.02	<0.13	<0.06	<0.04
	7/11/2012	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	8/21/2012	NA	NA	NA	NA	NA	NA	<1.3	<0.02	<0.13	<0.06	<0.04
Well #12	6/13/1985	<0.2	<0.5	<0.5	<0.5	NA	NA	NA	NA	NA	NA	NA
	9/18/1986	NA	NA	NA	NA	NA	NA	<1.3	<0.02	<0.13	<0.06	<0.04
	5/18/1995	<0.1	<0.2	<0.2	<0.2	NA	NA	NA	NA	NA	NA	NA
	8/10/1998	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	9/29/1998	NA	NA	NA	NA	NA	NA	<1.3	<0.02	<0.13	<0.06	<0.04
	12/21/1998	NA	NA	NA	NA	NA	NA	<1.3	<0.02	<0.13	<0.06	<0.04
	4/22/2004	<0.1	<0.2	<0.2	<0.2	NA	NA	<1.3	<0.02	<0.13	<0.06	<0.04
	4/26/2007	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	6/19/2007	<0.1	<0.2	<0.2	<0.2	NA	NA	NA	NA	NA	NA	NA
Well #13	7/6/1989	NA	NA	NA	NA	NA	<1	NA	NA	NA	NA	NA
	5/5/2005	<0.1	<0.2	<0.2	<0.2	NA	NA	NA	NA	NA	NA	NA
Well #14	7/6/1989	NA	NA	NA	NA	NA	<1	NA	NA	NA	NA	NA
Well #15	5/18/1995	<0.1	<0.2	<0.2	<0.2	NA	NA	NA	NA	NA	NA	NA
	8/16/1995	<0.1	<0.2	<0.2	<0.2	NA	NA	NA	NA	NA	NA	NA
	11/1/1995	<0.1	<0.2	<0.2	<0.2	NA	NA	NA	NA	NA	NA	NA
	6/18/1996	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	7/24/1996	<0.1	<0.2	<0.2	<0.2	NA	NA	NA	NA	NA	NA	NA
	6/25/1997	<0.1	<0.2	<0.2	<0.2	NA	NA	NA	NA	NA	NA	NA
	9/29/1998	<0.1	<0.2	<0.2	<0.2	NA	NA	<1.3	<0.02	<0.13	<0.06	<0.04
	12/21/1998	<0.1	<0.2	<0.2	<0.2	NA	NA	<1.3	<0.02	<0.13	<0.06	<0.04
	4/22/2004	<0.1	<0.2	<0.2	<0.2	NA	NA	<1.3	<0.02	<0.13	<0.06	<0.04
Well #16	5/5/2005	<0.1	<0.2	<0.2	<0.2	NA	NA	NA	NA	NA	NA	NA

[b] The federal MCL for these disinfection by-products is 80 ppb for total trihalomethanes (THMs); chloroform, bromoform, CDBM and BDCM are all THMs

[c] This is a federal "Health Risk Limit", a non-regulatory comparison value

[See "Notes" at end of table]

Table 2: City Water Sample Data - Detected Chemicals

		VOCs								Metals		
Drinking Wtr Criteria		Ethyl-benzene	cis-1,2-DCE	MIBK	PERC	1,1,1-TCA	1,1,2-TCA	TCE	Xylenes	Mn	As	Pb
	HRL (ppb)	50	50	300	5	9,000	3	5	300	100	10	15
	MCL (ppb)	700	70	NE	5	200	5	5	10,000	NE	10	15[a]
Location	Sample Date											
Well #17	10/4/1994	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Well #18	10/4/1994	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Well #19	10/4/1994	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Well #20	4/20/2005	<0.5	<0.2	<5	<0.2	<0.2	<0.2	<0.1	<0.2	NA	NA	NA
Well #21	4/20/2005	<0.5	<0.2	<5	<0.2	<0.2	<0.2	<0.1	<0.2	NA	NA	NA
Well #22	7/23/2001	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	5/5/2005	<0.5	<0.2	<5	<0.2	<0.2	<0.2	<0.1	<0.2	NA	NA	NA
Treatment Plant	2/18/1993	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	5/17/1993	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	8/11/1993	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	11/22/1993	<0.2	<0.2	<5	<0.2	<0.2	<0.2	<0.1	<0.2	NA	<1	NA
	5/26/1994	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	5/18/1995	<0.2	<0.2	<5	<0.2	<0.2	<0.2	<0.1	<0.2	NA	NA	NA
	2/6/1996	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	4/19/1996	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	3/29/1999	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	6/23/1999	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	5/23/2002	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	11/6/2002	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	9/18/2003	NA	NA	NA	NA	NA	NA	NA	NA	NA	<1.0	NA
	10/30/2003	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	3/22/2007	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	6/19/2007	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	5/21/2010	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	8/21/2012	NA	NA	NA	NA	NA	NA	NA	NA	NA	<1	NA

a This is a federal action level, not an MCL

[See "Notes" at end of table]

Table 2: City Water Sample Data - Detected Chemicals

		VOC: Disinfection By-products				SVOCs	PCBs	Pesticides[d]				
Drinking Wtr Criteria		Chloroform	BDCM	CDBM	Bromoform	Phenols		Dalapon	DCPA di-acid degr.	4-nitro phenol	3,5-DCB acid	5-HDC
	HRL (ppb)	30	6	NE	40	4,000	0.04	NE	NE	NE	NE	NE
	MCL (ppb)	NE[b]	NE[b]	NE[b]	NE[b]	NE	0.5	200	70[c]	NE	NE	NE
Location	Sample Date											
Well #17	10/4/1994	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Well #18	10/4/1994	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Well #19	10/4/1994	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Well #20	4/20/2005	<0.1	<0.2	<0.5	<0.5	NA	NA	NA	NA	NA	NA	NA
Well #21	4/20/2005	<0.1	<0.2	<0.5	<0.5	NA	NA	NA	NA	NA	NA	NA
Well #22	7/23/2001	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	5/5/2005	<0.1	<0.2	<0.5	<0.5	NA	NA	NA	NA	NA	NA	NA
Treatment Plant	2/18/1993	NA	NA	NA	NA	NA	NA	**1.66**	**0.95**	<0.13	<0.06	<0.04
	5/17/1993	NA	NA	NA	NA	NA	NA	<1.3	**2.03**	<0.13	<0.06	<0.04
	8/11/1993	NA	NA	NA	NA	NA	NA	<1.3	**1.37**	<0.13	<0.06	<0.04
	11/22/1993	NA	NA	NA	NA	NA	NA	<1.3	**0.94**	<0.13	<0.06	<0.04
	5/26/1994	**2.4**	**4**	**4.3**	**1.2**	NA	NA	NA	NA	NA	NA	NA
	5/18/1995	**1.2**	**1.4**	**1.4**	<0.5	NA	NA	NA	NA	NA	NA	NA
	2/6/1996	**1.4**	**1.9**	**2.3**	**1.1**	NA	NA	<0.5	<0.5	<0.5	<0.5	<1
	4/19/1996	NA	NA	NA	NA	NA	NA	<0.5	<0.5	<0.5	<0.5	<1
	3/29/1999	**0.5**	**0.4**	<0.5	<0.5	NA	NA	<0.5	<0.5	<0.5	<0.5	<1
	6/23/1999	NA	NA	NA	NA	NA	NA	<0.5	<0.5	<0.5	<0.5	<1
	5/23/2002	NA	NA	NA	NA	NA	NA	NA	**1.37**	NA	NA	NA
	11/6/2002	NA	NA	NA	NA	NA	NA	NA	<1	NA	NA	NA
	9/18/2003	**1.9**	**3**	**2.4**	**0.8**	NA	NA	<0.5	NA	<0.5	<0.5	<1
	10/30/2003	NA	NA	NA	NA	NA	NA	<0.5	NA	<0.5	<0.5	<1
	3/22/2007	**3**	**4.4**	**3.7**	**1**	NA	NA	<0.5	NA	NA	NA	NA
	6/19/2007	NA	NA	NA	NA	NA	NA	<0.5	NA	NA	NA	NA
	5/21/2010	**2.5**	**2.7**	**NA**	**0.8**	NA	NA	**0.6**	ND	NA	NA	NA
	8/21/2012	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

[b] The federal MCL for disinfection by-products, is for total trihalomethanes (THMs) of 80 ppb; chloroform, bromoform, CDBM and BDCM are all THMs

[c] This is a federal "Health Risk Limit", a non-regulatory comparison value

[d] Also tested for pesticides in 2009 (not those listed above) - none detected

Table 2: City Water Sample Data - Detected Chemicals

		VOCs				SVOCs	PCBs	Pesticides	Metals		
Drinking Wtr Criteria		Benzene	TCE	Freon 113	Xylenes	Phenols			Mn	As	Pb
	HRL (ppb)	2	5	200,000	300	4,000	0.04	varies	100	10	15
	MCL (ppb)	5	5	NE	10,000	NE	0.5	varies	NE	10	15[a]
Location	**Sample Date**										
Distribution System	11/16/1977	NA	NA	NA	NA	NA	NA	NA	NA	<50	<50
	8/4/1981	NA	NA	NA	NA	NA	NA	NA	NA	<5	<10
	11/8/1982	NA	<0.2	<0.5	NA	NA	NA	NA	NA	NA	NA
	6/13/1985	NA	<0.2	<0.5	NA	NA	NA	NA	NA	<5	<5
	9/18/1986	NA	NA	NA	NA	NA	NA	NA	NA	<5	<5
	11/25/1986	NA	**1.1**	**22**	NA	NA	NA	NA	NA	NA	NA
	5/26/1994	<0.2	<0.1	<0.2	<0.2	NA	NA	NA	NA	NA	NA
	5/18/1995	<0.2	<0.1	<0.2	<0.2	NA	NA	NA	NA	NA	NA
	2/6/1996	<0.2	<0.1	<0.2	<0.2	NA	NA	NA	NA	NA	NA
	6/25/1997	<0.2	<0.1	<0.2	<0.2	NA	NA	NA	NA	NA	NA
	1/15/1998	**0.3**	<0.1	<0.2	<0.2	NA	NA	NA	NA	NA	NA
	11/5/1998	<0.2	<0.1	<0.2	<0.2	NA	NA	NA	NA	NA	NA
	1/29/1999	<0.2	<0.1	<0.2	<0.2	NA	NA	NA	NA	NA	NA
	1/21/2000	<0.2	<0.1	<0.2	<0.2	NA	NA	NA	NA	NA	NA
	1/25/2001	<0.2	<0.1	<0.2	**0.2**	NA	NA	NA	NA	NA	NA
	4/11/2002	<0.2	<0.1	<0.2	<0.2	NA	NA	NA	NA	NA	NA
	1/21/2003	<0.2	<0.1	<0.2	<0.2	NA	NA	NA	NA	NA	NA
	4/16/2003	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	7/9/2003	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	11/20/2003	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	7/27/2005	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	7/25/2006	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	10/30/2007	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	7/28/2008	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	9/29/2009	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	8/11/2010	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

a This is a federal action level, not an MCL

[See "Notes" at end of table]

Table 2: City Water Sample Data - Detected Chemicals

		VOC: Disinfection By-products							
Drinking Wtr Criteria		DCAA	DBAA	TCAA	BCAA	Chloro-form	BDCM	CDBM	Bromoform
	HRL (ppb)	NE	NE	NE	NE	30	6	NE	40
	MCL (ppb)	NE[e]	NE[e]	NE[e]	NE[e]	NE[b]	NE[b]	NE[b]	NE[b]
Location	Sample Date								
Distribution System	11/16/1977	NA	NA	NA	NA	NA	NA	NA	NA
	8/4/1981	NA	NA	NA	NA	NA	NA	NA	NA
	11/8/1982	NA	NA	NA	NA	**8.9**	**13**	**12**	**3.9**
	6/13/1985	NA	NA	NA	NA	**23**	**11**	**5.9**	**1.3**
	9/18/1986	NA	NA	NA	NA	NA	NA	NA	NA
	11/25/1986	NA	NA	NA	NA	**1.3**	**4.7**	**7.7**	**16**
	5/26/1994	NA	NA	NA	NA	**3.8**	<0.5	**6.2**	**2**
	5/18/1995	NA	NA	NA	NA	**1.6**	**1.7**	**1.8**	**0.7**
	2/6/1996	NA	NA	NA	NA	**1.6**	**1.8**	**1.9**	**0.7**
	6/25/1997	NA	NA	NA	NA	**2.8**	**3.4**	**4.8**	**2.4**
	1/15/1998	NA	NA	NA	NA	**5.4**	**5.9**	**7.3**	**2.2**
	11/5/1998	NA	NA	NA	NA	**3.3**	**5.9**	**5.6**	**1.4**
	1/29/1999	NA	NA	NA	NA	**3.5**	**6.1**	**7.4**	**2.1**
	1/21/2000	NA	NA	NA	NA	**11**	**10**	**8**	**1.4**
	1/25/2001	NA	NA	NA	NA	**4.1**	**5.8**	**5.4**	**1.2**
	4/11/2002	NA	NA	NA	NA	**1.7**	**2.4**	**2.4**	**0.8**
	1/21/2003	**1.6**	**1.9**	**1.1**	**2.4**	**4.1**	**4.3**	**2.8**	**0.9**
	4/16/2003	<1.5	**2.2**	**1**	**2.5**	**3.3**	**5.4**	**5.7**	**1.7**
	7/9/2003	**2.7**	**2**	**1.7**	**2.4**	**9.2**	**8.7**	**4.8**	**0.9**
	11/20/2003	**2.9**	**2.5**	**1.8**	NA	**9.8**	**3.6**	**3.8**	**0.9**
	7/27/2005	<1.5	**1.8**	**0.6**	**1.5**	**2.9**	**4.4**	**6.6**	**4.6**
	7/25/2006	<1.5	**1.1**	**1**	NA	**4.4**	**6.4**	**6.8**	**2.8**
	10/30/2007	**1.8**	**1.2**	**1.9**	NA	**13**	**13**	**8.8**	**2.1**
	7/28/2008	**2.5**	**1.3**	**1.5**	NA	**10**	**11**	**7.1**	**1.9**
	9/29/2009	**2.4**	**1.6**	**1.9**	NA	**12**	**8.6**	**7**	**1.7**
	7/12/2010	**2.2**	**1.7**	**1.8**	NA	**12**	**11**	**8.2**	**2.1**

[b] The federal MCL for these disinfection by-products is 80 ppb for total trihalomethanes (THMs); chloroform, bromoform, CDBM and BDCM are all THMs

[e] The federal MCL for these disinfection by-products, is 60 ppb for total haloacetic acids (HAAs); DCAA, DBAA, TCAA and BCAA are all HAAs

Table 2: City Water Sample Data - Detected Chemicals

		VOCs				SVOCs	PCBs	Pesticides	Metals		
Drinking Wtr Criteria		Benzene	TCE	Freon 113	Xylenes	Phenols			Mn	As	Pb
	HRL (ppb)	2	5	200,000	300	4,000	0.04	varies	100	10	15
	MCL (ppb)	5	5	NE	10,000	NE	0.5	varies	NE	10	15[a]
Location	Sample Date										
Distribution System (continued)	8/31/2011	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	1/23/2012	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	4/18/2012	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	7/18/2012	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

a This is a federal action level, not an MCL

		VOC: Disinfection By-products							
Drinking Wtr Criteria		DCAA	DBAA	TCAA	BCAA	Chloro-form	BDCM	CDBM	Bromoform
	HRL (ppb)	NE	NE	NE	NE	30	6	NE	40
	MCL (ppb)	NE[e]	NE[e]	NE[e]	NE[e]	NE[b]	NE[b]	NE[b]	NE[b]
Location	Sample Date								
Distribution System (continued)	8/31/2011	**2.9**	**1.7**	**2.2**	NA	**17**	**14**	**8.9**	**2.1**
	1/23/2012	**2.5 - 4.6**	**1.9 - 2.6**	**1.7 - 2.3**	NA	**7.9 - 14**	**7.9 - 9.8**	**6.7 - 7.6**	**1.6 - 1.9**
	4/18/2012	**2.8 - 4.8**	**2.1 - 2.6**	**1.6 - 2.1**	NA	**6.0 - 20.0**	**6.6 - 9**	**4.7 - 6.6**	**1.6 - 12.6**
	7/18/2012	**3.3 - 5.5**	**2.4 - 2.5**	**2.2 - 2.6**	NA	**6.7 - 15.0**	**6.2 - 7.2**	**5.3 - 6.1**	**1.0 - 1.2**

[b] The federal MCL for these disinfection by-products is 80 ppb for total trihalomethanes (THMs); chloroform, bromoform, CDBM and BDCM are all THMs

[e] The federal MCL for these disinfection by-products, is 60 ppb for total haloacetic acids (HAAs); DCAA, DBAA, TCAA and BCAA are all HAAs

Distribution system also sampled for:

Bacteria (40-50 samples per quarter); detected in 2000, 2001, 2009, 2012 at single sample locations - re-sampled 2-7 days later and not detected

Nitrate (1963, 1970, 1984; city wells all sampled annually) - not detected (<2 mg/L)

Fluoride (1992 - 2012) - all below federal guidelines (<4 mg/L)

Radionuclides (1993, 1996, 1999, 2002) - all below federal guidelines (<5 picocuries per liter, or piC/L radium and <15 piC/L gross alpha)

Copper (1992-1995, 1998, 2001, 2004, 2007, 2010 - multiple times and locations per year) - only five minor exceedences (1,330 - 1,800 ppb) of federal standard (1,300 ppb)

Lead (1992-1995, 1998, 2001, 2004, 2007, 2010 - multiple times and locations per year) - only one minor exceedence (19 ppb) of federal standard (15 ppb)

Table 2: City Water Sample Data - Detected Chemicals

NOTES:

This table shows only those compounds that have been detected at least once in the city water (wells, treatment plant, or distribution system)
Values shown in "bold" text indicate detections
concentration exceeds a state or federal drinking water criteria
ppb = parts per billion
< = "less than", indicates compound not detected at or above reporting limit
ND = not detected (detection limit not provided)
NA = not analyzed
NE = no drinking water criteria established
PP = "peak present", compound detected below reporting limit, but not quantified (reporting limit shown in parantheses)

CHEMICAL ABBREVIATIONS:

DCE = dichloroethene
3,5-DCB acid = 3,5-dichlorobenzoic acid
5-HDC = 5-hydroxydicamba
MIBK = methyl isobutyl ketone
PERC = tetrachloroethene (or perchlorethene)
TCA = trichloroethane
TCE = trichloroethene
Freon 113 = 1,1,2-trichlorotrifluoroethane
BDCM = bromodichloromethane
CDBM = chlorodibromomethane
DCAA = dichloroacetic acid
DBAA = dibromoacetic acid
TCAA = trichloroacetic acid
BCAA = bromochloroacetic acid
As = arsenic
Pb = lead
Mn = manganese

SOURCES: MNDWIS (2012) and MDH microfiche records of city water samples (as accessed 10/25/2012)

Table 3: Residential, Business, and Park Drinking Water Wells

Address[a]	Unique Well No.	6/15-20/1988		6/15/1989			8/4/1989		6/27/1990	8/30/1990	
		VOCs	Gen'l Chem	VOCs	Pesticides	Gen'l Chem	VOCs	Gen'l Chem	VOCs	VOCs	Gen'l Chem
4816 85th Ave N	180928	ND	Elevated?	NS	NS	NS	NS	NS	NS	NS	NS
4808 85th Ave N	203014	ND	Normal	NS	NS	NS	NS	NS	NS	NS	NS
4800 85th Ave N	W20038	NS	NS	NS	NS	NS	ND	Elevated	NS	NS	NS
4601 85th Ave[b]	203020	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
4401 85th Ave N[b]	?	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
4309 85th Ave[b]	?	ND	NA	NS	NS	NS	NS	NS	NS	NS	NS
4120 85th Ave N[b]	203012	ND	Normal	NS	NS	NS	NS	NS	ND	NS	NS
4000 85th Ave N[b]	207176	NS	NS	NS	NS	NS	NS	NS	ND	NS	NS
3901 85th Ave N[b]	169545	ND	Normal	NS	NS	NS	NS	NS	NS	ND	Normal
3900 85th Ave N (?)[b]	?	NS	NS	NS	NS	NS	NS	NS	ND	NS	NS
4025 85th Ave N[b]	166058	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
Central Park	203015	ND	Elevated?	ND	ND	Normal	NS	NS	NS	NS	NS
Brookland Exec. Nine	203019	ND	Normal	NS	NS	NS	NS	NS	NS	ND	Normal
Brookland Golf Course	W20037	ND	Elevated?	NS	NS	NS	NS	NS	NS	NS	NS
Hamilton Park	203016	ND	Normal	NS	NS	NS	NS	NS	NS	NS	NS
Norwood Park	203024	ND	Normal	NS	NS	NS	NS	NS	NS	NS	NS

NOTES:

All results in parts per billion (ppb)

[a] property locations shown on figures 1 and 3

[b] well is located on or downgradient of Brooklyn Park Dump

PCB samples speciated for aroclors 1242, 1254, 1260

General chemistry samples included: total iron, chloride, conductivity, nitrate+nitrite, ammonia as N, total sulfate, pH

Pesticide samples tested for: alachlor, atrazine, butylate, chlorpyrifos, cyanazine, dicamba, diallate, EPTC, fonofos, linuron, MCPA, methyl parathion, metolachlor, metribuzin, phorate, propachlor, simazine, 2,4-D, silvex, 2,4,5-T, picloram, and trifluralin

ND = not detected

NS = well not sampled

NA = result not available

Table 3: Residential, Business, and Park Drinking Water Wells

Address	Unique Well No.	12/12/1990			6/27/1994				5/29/1996	
		VOCs	metals	Gen'l Chem	VOCs	PAHs	PCBs	Metals	VOCs	Gen'l Chem
4816 85th Ave N	180928	ND	Normal	Normal	NS	NS	NS	NS	NS	NS
4808 85th Ave N	203014	NS	NS	NS	NS	NS	NS	NS	ND	Normal
4800 85th Ave N	W20038	ND	ND	Normal	NS	NS	NS	NS	NS	NS
4601 85th Ave[b]	203020	NS	NS	NS	ND	ND	ND	Mn = 1,100 Cr = 0.6	NS	NS
4401 85th Ave N[b]	?	NS	NS	NS	ND	ND	ND	Mn = 2,100 Cr = 0.6	NS	NS
4309 85th Ave[b]	?	NS	NS	NS	NS	NS	NS	NS	NS	NS
4120 85th Ave N[b]	203012	NS	NS	NS	NS	NS	NS	NS	NS	NS
4000 85th Ave N[b]	207176	NS	NS	NS	NS	NS	NS	NS	NS	NS
3901 85th Ave N[b]	169545	NS	NS	NS	NS	NS	NS	NS	ND	Normal
3900 85th Ave N (?)[b]	?	NS	NS	NS	NS	NS	NS	NS	NS	NS
4025 85th Ave N[b]	166058	NS	NS	NS	BDCM = 3.8 CDBM = 3.5 chloroform = 2.7	ND	ND	Mn = 13 Cr = 0.5	NS	NS
Central Park	203015	NS	NS	NS	NS	NS	NS	NS	NS	NS
Brookland Exec. Nine	203019	NS	NS	NS	NS	NS	NS	NS	ND	Normal
Brookland Golf Course	W20037	NS	NS	NS	NS	NS	NS	NS	NS	NS
Hamilton Park	203016	NS	NS	NS	NS	NS	NS	NS	NS	NS
Norwood Park	203024	NS	NS	NS	NS	NS	NS	NS	ND	Normal

NOTES:

All results in parts per billion (ppb)

[a] property locations shown on figures 1 and 3

[b] well is located on or downgradient of Brooklyn Park Dump

ND = not detected

NS = well not sampled

NA = result not available

HRL = state Health Risk Limit for drinking water

BDCM = bromodichloromethane (HRL = 6 ppb)

CDBM = chlorodibromomethane (no HRL established)

Chloroform (HRL = 30 ppb)

Mn = manganese (HRL = 100 ppb)

Cr = Chromium (HRL = 100 ppb)

Federal MCL for total trihalomethane disinfection by-products (ie. chloroform, BDCM, CDBM) = 80 ppb

General chemistry samples included: total iron, chloride, conductivity, nitrate+nitrite, ammonia as N, total sulfate, pH