

**REGIONAL GROUND-WATER STUDY
TOWN OF BLOOMING GROVE
BLOOMING GROVE, NEW YORK**

Prepared for

Orange County Water Authority

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Groundwater Inventory Map ("GIM")

**REGIONAL GROUND-WATER STUDY
TOWN OF BLOOMING GROVE
ORANGE COUNTY, NEW YORK**

**Water District No. 4
(Tappan Homes)**

INTRODUCTION

The Town of Blooming Grove water supply system consists of six municipal water districts and various other private water suppliers. The Village of Washingtonville, which is located within Blooming Grove, has its own municipal water supply district.

EXISTING WATER SUPPLY SYSTEMS

**Water District No. 1
(Whorley Heights)**

Well Supply in Service

Blooming Grove Water District No. 1 (Whorley Heights) currently operates four bedrock wells, designated Wells 1A, 5A, 7, and 8. The locations of these wells are shown on (Groundwater Inventory Map ["GIM"], Wells BG-4 through BG-7). Available well data are presented in Table 1, and present yield capacities are presented in Table 2A (Hannon, 1993).

**Water District No. 2
(Oxford Heights)**

Well Supply in Service

Water District No. 2 currently operates three deep bedrock wells: Wells 1, 3, and 4. The well locations are shown on GIM, (Wells BG-8, BG-9, and BG-10). Available well data are presented in Table 1, and well yield capacities are presented in Table 2B (Hannon, 1993).

**Water District No. 3
(Tomahawk Lake)**

Well Supply in Service

Water District No. 3 currently operates one bedrock well, designated Well 1 (GIM, Well BG-11), which is located near Tomahawk Lake on Shore Drive, and which was drilled in 1979. Available well data are presented in Table 1, and its well yield capacity is presented in Table 2C.

Well Supply Not in Service

Well 2 (GIM, Well BG-12), a deep bedrock well drilled in 1989, is currently on standby. Available well data are presented in Table 1, and its well yield capacity is presented in Table 2C (Hannon, 1993).

Well Supply in Service

Water District No. 4 currently operates one bedrock well, designated Well 6, on a regular basis. The well location is shown on (GIM, Well BG-14). Available well data are presented in Table 1, and the well yield capacity is presented in Table 2D.

Well Supply Not in Service

Two bedrock wells, Wells 1 (GIM, Well BG-13) and 3 (GIM, Well BG-33), are currently on standby for District No. 4. A third well, Well 7 (GIM, Well BG-15), is also on standby for emergency use. Available well data are presented in Table 1, and well yield capacities are presented in Table 2D (Hannon, 1993).

**Water District No. 5
(Mountain View Estates)**

Well Supply in Service

Water District No. 5 currently regularly operates two wells. The first well, designated Well 3 (GIM, Well BG-16), is screened in the sand and gravel aquifer near Moodna Creek. Well 4 (GIM, Well BG-17), is a bedrock well. Available well data are presented in Table 1, and well yield capacities are presented in Table 2E (Hannon, 1993).

Water District No. 6 (Merriewold)

Well Supply in Service

Blooming Grove Water District No. 6 currently operates one bedrock well, designated Well 3 (GIM, Well BG-3) as its main producer. Well 2, discussed below, is currently not in continuous service but is maintained as a standby well. Available well data are presented in Table 1, and well yield capacity data are presented in Table 2F.

Well Supply Not in Service

Well 2 (GIM, Well BG-2), which is a bedrock well drilled in 1967, lost most of its yield after the Town took over the Whorley System, renamed it Water District No. 1, and increased the system's capacity by the installation of new wells. Because of this loss of most of its yield, Well 2 is maintained as a standby well for District No. 6, but is not regularly pumped. Well 1 (GIM, Well BG-1) is inactive because of interference effects caused by Well 3. Available well data are presented in Table 1, and well yield capacities are presented in Table 2F (Hannon, 1993).

**Mountain Lodge Park
(Private)**

Well Supply in Service

Mountain Lodge Park currently operates one bedrock well, designated Well 2 (GIM, Well BG-19), during summers only. Year-round residents get water from private residential wells. Available well data are presented in Table 1, and well yield information is presented in Table 2G.

Well Supply Not in Service

Well 1, which is a bedrock well, has been out of service since June 1990. Its location is shown on (GIM, Well BG-18), and available well data are presented in Table 1, and yield information is presented in Table 2G (Orange County Health Department, 1993).

**Orange And Rockland
(Private)**

Well Supply in Service

Orange and Rockland currently operates one well, designated Well 1 (GIM, Well BG-20), for lawn maintenance and fire protection. A second well, designated Well 4 (GIM, Well BG-21), is used for potable water. Available well data are presented in Table 1, and yield data are presented in Table 2H (Parisen, 1993).

**Orchard Lake Park
(Private)**

Well Supply in Service

Orchard Lake Park currently operates two bedrock wells, designated Well 2 (GIM, Well BG-23) and Well 4 (GIM, Well BG-24), as year-round supply. A third bedrock well, designated Well 1 (GIM, Well BG-22), is used for additional supply in the summer.

Available well data are presented in Table 1, and yield information is presented in Table 2I (Orange County Health Department, 1993).

Lake Anne Water Corporation (Private)

Well Supply in Service

The Lake Anne Water Corporation operates one deep artesian well, designated Well 3 (GIM, Well BG-27) as its primary source. Two additional wells, designated Well 1 (GIM, Well BG-25) and Well 2 (GIM, Well BG-26), are used as auxiliary sources. Available well data are presented in Table 1, and yield information in Table 2J (Orange County Health Department, 1993).

Village Of Washingtonville

Well Supply in Service

The Village of Washingtonville currently operates one well, a sand and gravel well designated Well 3. Its location is shown on (GIM, Well BG-32) and available well data are presented in Table 1. Well yield capacities are presented in Table 2K.

Well Supply Not in Service

Two sand and gravel wells, designated Well 1 (GIM, Well BG-30) and Well 2 (GIM, Well BG-31), were taken out of service last summer when the water in them dropped to levels too low to pump. Available well data are presented in Table 1, and well yield capacities are presented in Table 2K (Jeffries, 1993).

Borden Creamery

Well Supply Not in Service

One well in the Town of Blooming Grove located near the intersection of Tuthill Road and State Route 94 is reputed to have had a large yield capacity. Nothing else is known about the well at this time (Fares, 1994).

Kenney Well

Well Supply Not in Service

One well in the Village of Washingtonville located on Cardinal Drive is reputed to have had a yield capacity of 600 gpm. Nothing else is known about the well at this time (Fares, 1994).

PROPOSED COMMUNITY WATER-SUPPLY SYSTEMS

In 1988, three bedrock wells, designated TW-1 (GIM, Well BG-28), TW-2 (GIM, Well BG-29), and TW-3 (GIM, Well BG-34) were installed for the then-proposed Oxford Manor development. The three wells were tested in 1988 and were found to yield 40 gpm, 110 gpm, and 80 gpm, respectively. TW-1 was found to interfere with a nearby residential well. In addition, it was found that when wells TW-2 and TW-3 are pumped simultaneously, there is a 20 percent reduction in yields, resulting in a combined yield of 152 gpm. Plans for the development are apparently abandoned, and there is no information on the current condition of the wells (LBG, 1988).

WATER SUPPLY DEMAND

There are no proposed new water supply demands on the existing Town Water Districts (Districts No. 1 through No. 6). When the Town takes over a private supply, they rename it as a new water district. Any further growth or new developments would also result in new water districts.

Water District No. 1

Water District No. 1 currently meets its estimated average daily demand of 0.102 million gallons per day (mgd) and its maximum daily demand of 0.115 mgd with the existing wells in service. The current maximum yield capacity and average yield capacity are approximately 0.275 mgd and 0.255 mgd, respectively. Available water demand and well yield data are summarized on Table 3 (Hannon, 1993).

Water District No. 2

Water District No. 2 currently meets its estimated average daily demand of 0.010 mgd and its maximum daily demand of 0.012 mgd with the existing wells in service. The maximum yield capacity is 0.043 mgd and the average yield capacity is 0.043 mgd. There are no proposed additional water supply demands for this district. Available water demand and well yield data are summarized in Table 3 (Hannon, 1993).

Water District No. 3

As of September 15, 1993, there was no accurate measurement of the average or maximum daily

consumption of water in Water District No. 3. However, the maximum yield capacity of the well in service is 0.017 mgd, and the average yield capacity is 0.017 mgd and we can assume that these numbers approximate the maximum and average daily consumption. There are no proposed new water supply demands for this district. Available water demand and well yield data are presented in Table 3 (Hannon, 1993).

Water District No. 4

Water District No. 4 is currently meeting its average daily water demand of 0.037 mgd using the existing wells in service. The maximum daily demand is 0.043 mgd. The maximum yield capacity and the average yield capacity are 0.079 mgd and 0.066 mgd, respectively. There are no proposed additional water supply demands for this district. Available water demand and well yield data are presented in Table 3 (Hannon, 1993).

Water District No. 5

Water District No. 5 is currently meeting the average daily water demand of 0.019 mgd with the wells in service. The maximum daily demand is 0.023 mgd. The maximum yield capacity is 0.068 mgd, and the average yield capacity is 0.058 mgd. There are no proposed additional water supply demands for this district. Available water demand and well yield data are summarized in Table 3 (Hannon, 1993).

Water District No. 6

Water District No. 6 currently meets the average daily water demand of 0.110 mgd with the existing wells in service. There is currently no information available on the maximum daily demand, but we have assumed that the maximum yield capacity of 0.230 mgd approximates the maximum daily demand. The maximum yield capacity of the wells is 0.230 mgd, and the average yield capacity of the wells is 0.230 mgd. There are no proposed additional water supply demands for this district. Available water demand and well yield data are summarized in Table 3 (Hannon, 1993).

Village of Washingtonville

The Village of Washingtonville currently meets the average daily water demand of 0.325 mgd with the existing well in service. The maximum daily demand

is 0.404 mgd. The maximum yield capacity is 1.008 mgd, and the average yield capacity is 0.475 mgd. There are no proposed new water sources for the Village. Data are summarized in Table 3 (Hannon, 1993).

Projected Water Demands

Table 4A summarizes the projected water demands for the Town of Blooming Grove. The current and proposed (private system) wells have a maximum yield capacity of 1.312 mgd. The projected water demand for the Town of Blooming Grove (including the Village of Washingtonville) in 2020 is 0.626 mgd. Therefore, the Town of Blooming Grove will likely have a surplus water supply of 0.686 mgd in 2020.

Table 4B summarizes the projected water demands for the Village of Washingtonville. The current well supply has a maximum yield capacity of about 1.00 mgd. The projected water demand for the Village in the year 2020 is about 0.500 mgd. Therefore, the Village will likely have a surplus water supply of about 0.500 mgd in 2020.

INVENTORY OF GROUND-WATER CONTAMINATION PROBLEMS

Existing Ground-Water Contamination Problems

Malcolm Pirnie reviewed existing known ground-water contamination sites, including New York State Department of Environmental Conservation (NYSDEC) inactive hazardous waste sites, remediation projects (NYSDEC Spill Response), solid waste sites, and RCRA sites for the Town of Blooming Grove. The information was provided by Lawler, Matusky and Skelly Engineers (LMS, 1993) and gathered from a Freedom of Information Law (FOIL) request from the NYSDEC. No active spills were reported for the Town of Blooming Grove. The FOIL response provided by the NYSDEC inventoried the following site: Lake Anne Waste Disposal Corp., Lake Anne Country Club, 38 Clove Road, Monroe, NY. The facility is listed as a sanitary landfill, but the NYSDEC has no additional information at this time.

Potential Ground-Water Contamination Sites

Information about potential ground-water contamination sites was obtained from:

- ! FOIL request to NYSDEC (LMS, 1993); and

- ! Land use data from the Orange County, New York Real Property Tax Assessment data base (Space Track, 1993).

That information indicates that there are numerous potential ground-water contamination sites in the Town of Blooming Grove. The FOIL response provided the names of Petroleum Bulk Storage Tank facilities, Region II RCRA Notifiers, Hazardous Waste Remediation Registered Sites and Potential Spill Sites, and Solid Waste Facilities. There were 18 Petroleum Bulk Storage Sites; these are listed in Table 5. Additional potential ground-water contamination sites are listed below. Each property in Orange County has a land use code number. Properties with land use code numbers associated with potential contamination of ground-water were identified through analysis of the Real Property Tax Assessment Database by Space Track, Inc. The types of land uses in the potential contamination category include:

- ! Industrial facilities;
- ! Gas stations;
- ! Dry cleaners; and
- ! Auto repair facilities

Where possible, approximate locations of these sites are shown as triangles on the GIM.

Town of Blooming Grove:

- NYSDOT Bin 100325, Bridge, Oxford Road and Route 17
- NYSDOT Bin 1003270, Museum Village Road over Route 17
- NYSDOT Bin 1034840, Route 94 and Conrail
- NYSDOT Bin 1034850, Route 94 over Cromline Creek
- Rob's Auto Body Repairs, Route 94
- NYSDOT Bin 1003269, Bridge at Route 17
- Abandon RR
- NYSDOT Bin 1003289, Bridge Route 17 Orange Rock Lake
- NYSDOT Bin 1040540, Bridge Route 208 Erie RR
- Mayer Landfill, Prospect and Peddler Hill Roads
- Lake Anne Realty Sanitary Landfill
- F & D Construction and Demolition Debris Landfill
- Ziegler Construction and Demolition Debris Landfill
- Advanced Auto Body Repair Service 1, Orris Mills Road, Salisbury
- Keller Auto Machine Service, 46 Orrs Mills Road, Salisbury Mills

Village of Washingtonville:

- Atlantic Service Station, 32 East Main Street

NYSDOT Contract D253135, Route 94, North Street
Orange County Trans, 9 Hallock Drive
Village of Washingtonville, Route 94 East
Washingtonville Agway Coop 1, 7 Depot Street and State Route 20
Woodcock Auto Body and Repairs, Woodcock and Mountain Roads
Riger Homes Construction and Demolition Debris Landfill,

Petroleum Bulk Storage Facilities

The FOIL request from the NYSDEC inventoried 18 petroleum bulk storage facilities in the Town of Blooming Grove. These facilities are listed in Table 5.

The above sites are listed as potential ground-water contamination sites. Further investigations would be required to determine if contamination exists at the respective locations.

TABLE 1
TOWN OF BLOOMING GROVE
Summary of Available Well Data

Well ----- Water District	Tax Map Municipality Section --- Block --- Lot	Map Location ----- I.D. #	Well Status	Reported Yield (gpm) Original ----- Present	Depth of Well (feet)	Well Diameter (inches)	Length of Casing (feet)	Well Screen Length (feet) ----- Setting Interval (feet)	Aquifer	Date Drilled	Comments
1 W.D. # 6 (Merriewol d)	Blooming Grove 46 9 27	Blooming Grove BG-1	Inactive	200 47 (1989)	406	8	NA		Bedrock On	1953	Cannot be used when Well 3 on-line
2 W.D. # 6 (Merriewol d)	Blooming Grove 46 9 27	Blooming Grove BG-2	Standby	130 NA	360	8	NA		Bedrock On	1967	Lost water after town took over Whorley Hts and drilled additional wells
3 W.D. # 6 (Merriewol d)	Blooming Grove 46 9 27	Blooming Grove BG-3	Main Producer	200 135+ (1990)	410	8	110		Bedrock On	1974	
1A W.D. # 1 (Whorley Hts)	Blooming Grove 45 1 14.2	Blooming Grove BG-4	Active	NA 84	440	8	70		Bedrock On	NA	

**TABLE 1
(continued)**

TOWN OF BLOOMING GROVE

Summary of Available Well Data

Well ----- Water District	Tax Map Municipality Section --- Block --- Lot	Map Location ----- I.D. #	Well Status	Reported Yield (gpm) Original ----- Present	Depth of Well (feet)	Well Diameter (inches)	Length of Casing (feet)	Well Screen Length (feet) ----- Setting Interval (feet)	Aquifer	Date Drilled	Comments
5A W.D. # 1 (Whorley Hts)	Blooming Grove 50 2 16	Blooming Grove BG-5	Active	30 14	699	6	40		Bedrock Dh	NA	Behind house #15 Galvaston Drive
7 W.D. # 1 (Whorley Hts)	Blooming Grove 45 1 14.2	Blooming Grove BG-6	Auxiliary (Active)	25 6	600	8	130		Bedrock On	1988	Near ballfield
8 W.D. # 1 (Whorley Hts)	Blooming Grove 45 1 14.2	Blooming Grove BG-7	Active	120 73	425	8	95		Bedrock On	1989	
1 W.D. # 2 (Oxford Hts)	Blooming Grove 60 5 11	Blooming Grove BG-8	Active	30 30	276	6	NA		Bedrock On	1971	Located in pump house
3 W.D. # 2 (Oxford Hts)	Blooming Grove 60 5 12	Blooming Grove BG-9	Standby	15	675	6	20		Bedrock On	1987	

TABLE 1
(continued)

TOWN OF BLOOMING GROVE

Summary of Available Well Data

Well ----- Water District	Tax Map Municipality Section --- Block --- Lot	Map Location ----- I.D. #	Well Status	Reported Yield (gpm) Original ----- Present	Depth of Well (feet)	Well Diameter (inches)	Length of Casing (feet)	Well Screen Length (feet) ----- Setting Interval (feet)	Aquifer	Date Drilled	Comments
4 W.D. # 2 (Oxford Hts)	Blooming Grove 60 5 12	Blooming Grove BG-10	Standby	11	425	6	17		Bedrock On	1987	
1 W.D. # 3 (Tomahawk Lake)	Blooming Grove 15 1 19	Blooming Grove BG-11	Active	21 12	140	8	NA		Bedrock On	1979	In building
2 W.D. # 3 (Tomahawk Lake)	Blooming Grove 15 1 19	Blooming Grove BG-12	Standby	15 ---	400	6	NA		Bedrock On	1989	
3 W.D. # 4 (Tappan Homes)	Blooming Grove 61 2 37	Blooming Grove BG-33	Standby	23 ---	600	6	NA		Bedrock On	NA	
1 W.D. # 4 (Tappan Homes)	Blooming Grove 61 2 37	Blooming Grove BG-13	Standby	21 12	363	6	37		Bedrock On	1969	

**TABLE 1
(continued)**

TOWN OF BLOOMING GROVE

Summary of Available Well Data

Well ----- Water District	Tax Map Municipality Section --- Block --- Lot	Map Location ----- I.D. #	Well Status	Reported Yield (gpm) Original ----- Present	Depth of Well (feet)	Well Diameter (inches)	Length of Casing (feet)	Well Screen Length (feet) ----- Setting Interval (feet)	Aquifer	Date Drilled	Comments
6 W.D. # 4 (Tappan Homes)	Blooming Grove 61 2 37	Blooming Grove BG-14	Active	25 20	400	10	40		Bedrock On	1988	
7 W.D. # 4 (Tappan Homes)	Blooming Grove 61 2 37	Blooming Grove BG-15	Emergency Use Standby	NA NA	450	6	41		Bedrock On	1990	
3 W.D. # 5 (Mountain View Est)	Blooming Grove 8 1 15	Blooming Grove BG-16	Active	50 30	60	8	NA	3 feet (set at 54 feet)	Gravel	1974	
4 W.D. # 5 (Mountain View Est)	Blooming Grove 8 1 15	Blooming Grove BG-17	Active	15 10	29	6	NA		Bedrock On	NA	
1 Mountain Lodge Pk.	NA	Blooming Grove BG-18	Inactive (1990)	150 (197 3) NA	250	8	40		Shale Bedrock Ds	1973	

TABLE 1
(continued)

TOWN OF BLOOMING GROVE

Summary of Available Well Data

Well ----- Water District	Tax Map Municipality Section --- Block --- Lot	Map Location ----- I.D. #	Well Status	Reported Yield (gpm) Original ----- Present	Depth of Well (feet)	Well Diameter (inches)	Length of Casing (feet)	Well Screen Length (feet) ----- Setting Interval (feet)	Aquifer	Date Drilled	Comments
2 Mountain Lodge Pk.	NA	Blooming Grove BG-19	Seasonal	150 (197 3) NA	250	8	40		Bedrock Ds	1973	Summer Only
1 Orange and Rockland	Blooming Grove 54 1 8.23	Blooming Grove BG-20	Active	70 60	455	8	NA	NA	Bedrock Dh	1981	Fire Protection; Lawn Maint.
4 Orange and Rockland	Blooming Grove 54 1 8.22	Blooming Grove BG-21	Test Well	140 NA	375	4	NA	NA	Bedrock Dh	1981	Abandoned
1 Orchard Lake Pk.	Blooming Grove 21 2 27	Blooming Grove BG-22	Seasonal	35	142	8	30		Shale Bedrock On	1957	Upper Well House #1 Sum- mer Supply
2 Orchard Lake Pk.	Blooming Grove 21 2 27	Blooming Grove BG-23	Active	55 40	200	8	NA		Bedrock Ds	1950's	Upper Well House # 2 Year Round Supply

**TABLE 1
(continued)**

TOWN OF BLOOMING GROVE

Summary of Available Well Data

Well ----- Water District	Tax Map Municipality Section --- Block --- Lot	Map Location ----- I.D. #	Well Status	Reported Yield (gpm) Original ----- Present	Depth of Well (feet)	Well Diameter (inches)	Length of Casing (feet)	Well Screen Length (feet) ----- Setting Interval (feet)	Aquifer	Date Drilled	Comments
4 Orchard Lake Pk.	Blooming Grove 21 2 27	Blooming Grove BG-24	Active	60 NA	160	8	NA		Bedrock On	1956	Lower well
1 Lake Anne Wa- ter Corp.	Blooming Grove 41 1 1.14	Blooming Grove BG-25	Auxiliary	36 NA	283	6	NA	NA	NA	1950	Operates with #2 Simultaneously Artesian
2 Lake Anne Wa- ter Corp.	Blooming Grove 41 1 1.14	Blooming Grove BG-26	Auxiliary	20 NA	300	8	110		Bedrock On	1950	Artesian
3 Lake Anne Wa- ter Corp.	Blooming Grove 41 1 1.14	Blooming Grove BG-27	Primary Source	180 25	300	6	NA	NA	Bedrock On	1971	Artesian

**TABLE 1
(continued)**

TOWN OF BLOOMING GROVE

Summary of Available Well Data

Well ----- Water District	Tax Map Municipality Section --- Block --- Lot	Map Location ----- I.D. #	Well Status	Reported Yield (gpm) Original ----- Present	Depth of Well (feet)	Well Diameter (inches)	Length of Casing (feet)	Well Screen Length (feet) ----- Setting Interval (feet)	Aquifer	Date Drilled	Comments
1 Oxford Manor	Blooming Grove 52 1 50.51	Blooming Grove BG-28	Inactive	40 NA	NA	NA	NA		Bedrock On	1988	Interfered with domestic wells during pumping test
2 Oxford Manor	Blooming Grove 52 1 50.51	Blooming Grove BG-29	Inactive	110 NA	435	NA	NA		Bedrock On	1988	
3 Oxford Manor	Blooming Grove 52 1 50.51	Blooming Grove BG-34	Inactive	80 NA	400	NA	NA		Bedrock On	1988	
1	Washingtonville 117 2 20	Blooming Grove BG-30	Inactive*	450	42	10	30	12'(8") NA	Gravel	1941	

**TABLE 1
(continued)**

TOWN OF BLOOMING GROVE

Summary of Available Well Data

Well ----- Water District	Tax Map Municipality Section --- Block --- Lot	Map Location ----- I.D. #	Well Status	Reported Yield (gpm) Original ----- Present	Depth of Well (feet)	Well Diameter (inches)	Length of Casing (feet)	Well Screen Length (feet) ----- Setting Interval (feet)	Aquifer	Date Drilled	Comments
2	Washingtonville 117 2 20	Blooming Grove BG-31	Inactive*	450	35	8	27	10'(8")	Gravel	1962	Used to supplement Well #1 during peak period
3	Washingtonville 117 2 20	Blooming Grove BG-32	Active	750	375	24"(outside) 18"(inside)	Both 29.5	8'(18")	Gravel	1992	

* Presently inactive due to drought conditions - will probably be utilized as backups to well No. 3.

TABLE 2A
TOWN OF BLOOMING GROVE
Summary of Well Yield Capacities

Well ----- Water District	WSA No. ----- Permitted Yield (gpm)	Average Yield Capacity (gpm) ----- (gpd)	Maximum Yield Caacity (gpm) ----- (gpd)	Comments
1A ----- WD # 1 (Worley Hts)	8477 ----- 225	84 ----- 120,900	84 ----- 120,900	
3 ----- WD # 1 (Worley Hts)	5684 ----- 400	ABANDONED ----- NA	NA	
5A ----- WD # 1 (Worley Hts)	8477 ----- 225	14 ----- 20,100	14 ----- 20,100	
7 ----- WD # 1 (Worley Hts)	8477 ----- 225	5.5 ----- 8,000	5.5 ----- 8,000	
8 ----- WD # 1 (Worley Hts)	8477 ----- 225	73 ----- 105,100	87 ----- 125,280	Temporarily out of service - Pump broke off in well.
TOTALS	(Total Permitted Yield) 225 gpm -----	(Total Yield Capacity) 177 gpm ----- 255,000 gpd	(Total Maximum Yield Capacity) 191 gpm ----- 275,000 gpd	

gpm - Gallons per minute.
gpd - Gallons per day.

WSA No. - Water Supply Application Number.
NA - For blank if not available.

TABLE 2B
TOWN OF BLOOMING GROVE
Summary of Well Yield Capacities

Well ----- Water District	WSA No. ----- Permitted Yield (gpm)	Average Yield Capacity (gpm) ----- (gpd)	Maximum Yield Caacity (gpm) ----- (gpd)	Comments
1 ----- WD # 2 (Oxford Hts)	7590 ----- NA	30 ----- 43,200	30 ----- 43,200	
3 ----- WD # 2 (Oxford Hts)	7590 ----- ---	ABANDONED ----- NA	NA	Standby - No flows available from operator.
4 ----- WD # 2 (Oxford Hts)	7590 ----- NA	NA	NA	Standby - No flows available from operator.
TOTALS	(Total Permitted Yield) ---	(Total Yield Capacity) 30 gpm ----- 43,200 gpd	(Total Maximum Yield Capacity) 30 gpm ----- 43,200 gpd	

gpm - Gallons per minute.
gpd - Gallons per day.

WSA No. - Water Supply Application Number.
NA - For blank if not available.

TABLE 2C

TOWN OF BLOOMING GROVE

Summary of Well Yield Capacities

Well ----- Water District	WSA No. ----- Permitted Yield (gpm)	Average Yield Capacity (gpm) ----- (gpd)	Maximum Yield Caacity (gpm) ----- (gpd)	Comments
1 ----- WD # 3 (Tomahawk Lake)	7845 ----- NA	12 ----- 17,300	12 ----- 17,300	
2 ----- WD # 3 (Tomahawk Lake)	7845 ----- NA	NA	NA	Standby
TOTALS	(Total Permitted Yield) NA	(Total Yield Capacity) 12 gpm ----- 17,300 gpd	(Total Maximum Yield Capacity) 12 gpm ----- 17,300 gpd	

gpm - Gallons per minute.
gpd - Gallons per day.

WSA No. - Water Supply Application Number.
NA - For blank if not available.

TABLE 2D
TOWN OF BLOOMING GROVE
Summary of Well Yield Capacities

Well ----- Water District	WSA No. ----- Permitted Yield (gpm)	Average Yield Capacity (gpm) ----- (gpd)	Maximum Yield Caacity (gpm) ----- (gpd)	Comments
1 ----- WD # 4 (Tappan Homes)	7412 ----- 96	12 ----- 17,300	12 ----- 17,300	Standby
6 ----- WD # 4 (Tappan Homes)	7412 ----- 96	17 ----- 24,480	20 ----- 28,800	
7 ----- WD # 4 (Tappan Homes)	7412 ----- 96	NA	NA	Standby
3 ----- WD # 4 (Tappan Homes)	8157 ----- NA	17 ----- 24,480	23 ----- 33,120	Standby
TOTALS	(Total Permitted Yield) 96 gpm	(Total Yield Capacity) 46 gpm ----- 66,260 gpd	(Total Maximum Yield Capacity) 55 gpm ----- 79,220 gpd	

gpm - Gallons per minute.
gpd - Gallons per day.

WSA No. - Water Supply Application Number.
NA - For blank if not available.

TABLE 2E
TOWN OF BLOOMING GROVE
Summary of Well Yield Capacities

Well ----- Water District	WSA No. ----- Permitted Yield (gpm)	Average Yield Capacity (gpm) ----- (gpd)	Maximum Yield Caacity (gpm) ----- (gpd)	Comments
3 ----- WD # 5 (Mountain View Est.)	4419 ----- 50	30 ----- 43,200	37 ----- 53,280	WSA # 7381 - acquisition by the Town.
4 ----- WD # 5 (Mountain View Est.)	4419 ----- 50	10 ----- 14,400	10 ----- 14,400	
TOTALS	(Total Permitted Yield) 50 gpm	(Total Yield Capacity) 40 gpm ----- 57,600 gpd	(Total Maximum Yield Capacity) 47 gpm ----- 67,680 gpd	

gpm - Gallons per minute.
gpd - Gallons per day.

WSA No. - Water Supply Application Number.
NA - For blank if not available.

TABLE 2F
TOWN OF BLOOMING GROVE
Summary of Well Yield Capacities

Well ----- Water District	WSA No. ----- Permitted Yield (gpm)	Average Yield Capacity (gpm) ----- (gpd)	Maximum Yield Caacity (gpm) ----- (gpd)	Comments
1 ----- WD # 6 (Merriewold)	8978 ----- NA	Inactive	NA	
2 ----- WD # 6 (Merriewold)	8978 ----- NA	Standby	NA	Inside Building
3 ----- WD # 6 (Merriewold)	8978 ----- NA	160 ----- 230,400	160 ----- 230,400	Outside Building
TOTALS	(Total Permitted Yield) NA	(Total Yield Capacity) 160 gpm ----- 230,400 gpd	(Total Maximum Yield Capacity) 160 gpm ----- 230,400 gpd	

gpm - Gallons per minute.
gpd - Gallons per day.

WSA No. - Water Supply Application Number.
NA - For blank if not available.

TABLE 2G
TOWN OF BLOOMING GROVE
Summary of Well Yield Capacities

Well ----- Water District	WSA No. ----- Permitted Yield (gpm)	Average Yield Capacity (gpm) ----- (gpd)	Maximum Yield Caacity (gpm) ----- (gpd)	Comments
1 ----- Mountain Lodge Park	NA	NA	NA	Wells are not metered as per O.C.H.D.
2 ----- Mountain Lodge Park	NA	NA	NA	Wells are not metered as per O.C.H.D.
TOTALS	(Total Permitted Yield) NA	(Total Yield Capacity) NA	(Total Maximum Yield Capacity) NA	

gpm - Gallons per minute.
gpd - Gallons per day.

WSA No. - Water Supply Application Number.
NA - For blank if not available.

TABLE 2H
TOWN OF BLOOMING GROVE
Summary of Well Yield Capacities

Well ----- Water District	WSA No. ----- Permitted Yield (gpm)	Average Yield Capacity (gpm) ----- (gpd)	Maximum Yield Caacity (gpm) ----- (gpd)	Comments
1 ----- Orange and Rockland	NA	NA	NA	Well is not metered.
2 ----- Orange and Rockland	NA	NA	NA	Well is not metered.
TOTALS	(Total Permitted Yield) NA	(Total Yield Capacity) NA	(Total Maximum Yield Capacity) NA	

gpm - Gallons per minute.
gpd - Gallons per day.

WSA No. - Water Supply Application Number.
NA - For blank if not available.

TABLE 2I
TOWN OF BLOOMING GROVE
Summary of Well Yield Capacities

Well ----- Water District	WSA No. ----- Permitted Yield (gpm)	Average Yield Capacity (gpm) ----- (gpd)	Maximum Yield Caacity (gpm) ----- (gpd)	Comments
1 ----- Orchard Lake Park	NA	NA	NA	Wells are not metered as per O.C.H.D.
2 ----- Orchard Lake Park	NA	NA	NA	
4 ----- Orchard Lake Park	NA	NA	NA	
TOTALS	(Total Permitted Yield) NA	(Total Yield Capacity) NA	(Total Maximum Yield Capacity) NA	

gpm - Gallons per minute.
gpd - Gallons per day.

WSA No. - Water Supply Application Number.
NA - For blank if not available.

TABLE 2J
TOWN OF BLOOMING GROVE
Summary of Well Yield Capacities

Well ----- Water District	WSA No. ----- Permitted Yield (gpm)	Average Yield Capacity (gpm) ----- (gpd)	Maximum Yield Caacity (gpm) ----- (gpd)	Comments
1 ----- Lake Anne	NA	NA	NA	Wells are not metered as per O.C.H.D.
3 ----- Lake Anne	NA	NA	NA	
4 ----- Lake Anne	NA	NA	NA	
TOTALS	(Total Permitted Yield) NA	(Total Yield Capacity) NA	(Total Maximum Yield Capacity) NA	

gpm - Gallons per minute.
gpd - Gallons per day.

WSA No. - Water Supply Application Number.
NA - For blank if not available.

TABLE 2K
TOWN OF BLOOMING GROVE
Summary of Well Yield Capacities

Well ----- Water District	WSA No. ----- Permitted Yield (gpm)	Average Yield Capacity (gpm) ----- (gpd)	Maximum Yield Caacity (gpm) ----- (gpd)	Comments
1 ----- Washingtonville	6622 ----- 695	330 ----- 475,200	460 ----- 665,000	Overall well field withdraw- al 1 mgd.
2 ----- Washingtonville	6622 ----- 695	330 ----- 475,200	460 ----- 665,000	
3 ----- Washingtonville	8732 ----- NA	NA	700 ----- 1,008,000	
TOTALS	(Total Permitted Yield) 695 gpm	(Total Yield Capacity) 330 gpm ----- 475,200 gpd	(Total Maximum Yield Capacity) 700 gpm ----- 1,008,000 gpd	

gpm - Gallons per minute.
gpd - Gallons per day.

WSA No. - Water Supply Application Number.
NA - For blank if not available.

TABLE 3A
Town of Blooming Grove

Summary of Water-Supply Source

The Town of Blooming Grove currently operates six municipal water districts. There are also several private water supplies in the Town. All water suppliers have their own wells.

	Water District	Groundwater (mgd)
Current Average Daily Water Demand	1	0.102
	2	0.010
	3	0.017
	4	0.037
	5	0.019
	6	<u>0.110</u>
	TOTAL:	0.295
Current Maximum Daily Water Demand	1	0.115
	2	0.012
	3	0.017
	4	0.043
	5	0.023
	6	<u>0.230</u>
	TOTAL:	0.440
Maximum Yield Capacity	1	0.275
	2	0.043
	3	0.017
	4	0.079
	5	0.068
	6	<u>0.230</u>
	TOTAL:	0.712
Average Yield Capacity	1	0.255
	2	0.043
	3	0.017
	4	0.066
	5	0.058
	6	<u>0.230</u>
	TOTAL:	0.669
Proposed Sources (Average Day)		0.600
*TOTAL MAXIMUM YIELD CAPACITY (MGD) = -----		0.712 -----
*CURRENT MAXIMUM DAILY USE (MGD) =		0.440

mgd - Million gallons per day.

* Combine surface water and ground-water sources.

COMMENTS:

C Proposed Source; Oxford Manor Wells, Mountain Lodge Park Wells, Orange and Rockland Wells, and Lake Anne Wells.

TABLE 3B
Village of Washingtonville

Summary of Water-Supply Source

The Village of Washingtonville has three wells installed in a sand and gravel aquifer, only one of which is currently in service, but which supplies enough water to fill the Village's current needs.

	Water District	Ground Water (mgd)
Current Average Daily Water Demand	Washingtonville	0.325 (1992)
Current Maximum Daily Water Demand	Washingtonville	0.404 (1993)
Maximum Yield Capacity	Washingtonville	1.008 (1992)
Average Yield Capacity	Washingtonville	0.475 (1992)
Proposed Sources (Average Day)	NA	0
TOTAL MAXIMUM YIELD CAPACITY (MGD) = -----		1 MGD -----
CURRENT MAXIMUM DAILY USE (MGD) =		0.404

mgd - Million gallons per day.

TABLE 4A
TOWN OF BLOOMING GROVE

Projected Water Demand
1993 - 2020
(mgd)

Water District	Current Maximum Yield Capacity (mgd)	Current and Proposed* Maximum Yield Capacity (mgd)	1993 Projected Water Demand ----- Water-Supply Adequacy**	2000 Projected Water Demand ----- Water-Supply Adequacy** or ***	2010 Projected Water Demand ----- Water-Supply Adequacy** or ***	2020 Projected Water Demand ----- Water-Supply Adequacy** or ***
Town of Blooming Grove	0.712	1.312	0.295 ----- + 0.417**	0.350 ----- + 0.362***	0.436 ----- + 0.876***	0.626 ----- + 0.686***
TOTAL	0.712	1.312	0.295 ----- + 0.417**	0.350 ----- + 1.362***	0.436 ----- + 0.876***	0.626 ----- + 0.686***

mgd - Million gallons per day.

* Combined yield capacity of both current and proposed water supply(s).

** Calculated by current maximum yield capacity minus projected water demands.

*** Calculated by current and proposed maximum yield capacity minus projected water demands.

+ Surplus water supply, mgd.

- Water supply deficiency (mgd).

COMMENTS:

! Current and Proposed: Mountain Lodge, O&R, Orchard Lake, Lake Anne Wells.

TABLE 4B
VILLAGE OF WASHINGTONVILLE

Projected Water Demand
1993 - 2020
(mgd)

Water District	Current Maximum Yield Capacity (mgd)	Current and Proposed* Maximum Yield Capacity (mgd)	1993 Projected Water Demand ----- Water-Supply Adequacy**	2000 Projected Water Demand ----- Water-Supply Adequacy** or ***	2010 Projected Water Demand ----- Water-Supply Adequacy** or ***	2020 Projected Water Demand ----- Water-Supply Adequacy** or ***
Village of Washingtonville	1.000	1.000	0.395 ----- + 0.675**	0.404 ----- + 0.596**	0.450 ----- + 0.550**	0.500 ----- + 0.500**
TOTAL	1.000	1.000	0.395 ----- + 0.675**	0.404 ----- + 0.596**	0.450 ----- + 0.550**	0.500 ----- 0.500**

mgd - Million gallons per day.

* Combined yield capacity of both current and proposed water supply(s).

** Calculated by current maximum yield capacity minus projected water demands.

+ Surplus water supply, mgd.

- Water supply deficiency (mgd).

TABLE 5

REGIONAL GROUND-WATER STUDY
TOWN OF BLOOMING GROVE
ORANGE COUNTY, NEW YORK

Petroleum Bulk Storage Facilities

Facility Name	Location	Municipality
Blooming Grove Operating Facility	500 Route 208	Blooming Grove
Pennings Rose Acres, Inc.	Route 94, Box 32	Salisbury Mills
Bob Riffland Bulldozing	49 Bull Road	Washingtonville
Atlantic Refining #0363-2189	32 East Main Street	Washingtonville
Blooming Grove Highway Department	Route 94	Washingtonville
Bordens Bus Storage Building	West Main Street	Washingtonville
Colonial Garden Apts. Bldg. #1	72 East Main Street	Washingtonville
Colonial Garden Apts. Bldg. #2	72 East Main Street	Washingtonville
Johnny's Service Center	21 West Main Street	Washingtonville
Maglat, Inc.	26 East Main Street	Washingtonville
Pete & Tony, Inc.	P. O. Box K	Washingtonville
Ralph's Motor Repair	12 South Street	Washingtonville
Round Hill Elementary School	Route 208	Washingtonville
Spindler Bulk Transport, Inc.	Locust Street Box 211	Washingtonville
Stewart's Shop #322	Route 94	Washingtonville
Taft Elementary School	Toleman Road	Washingtonville
Village of Washingtonville	Rt 94 East Main Street	Washingtonville
Washingtonville Senior High School	38-54 West Main Street	Washingtonville