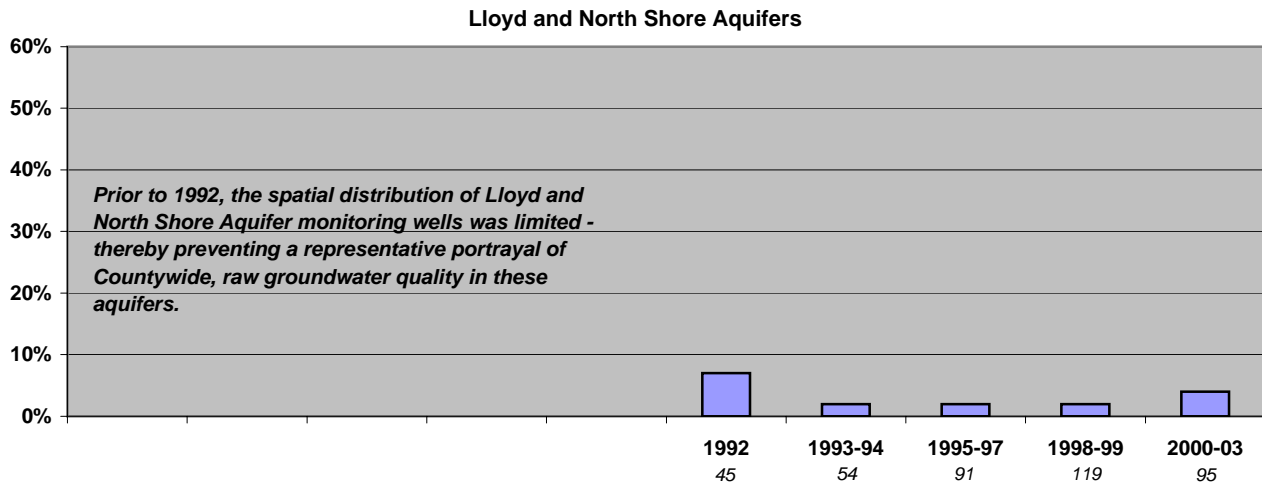
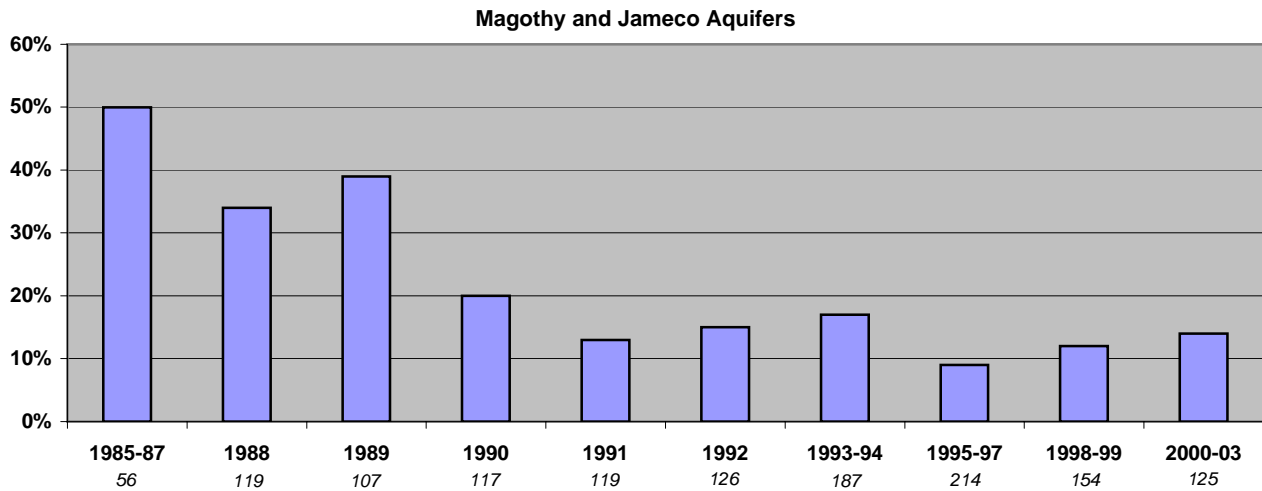
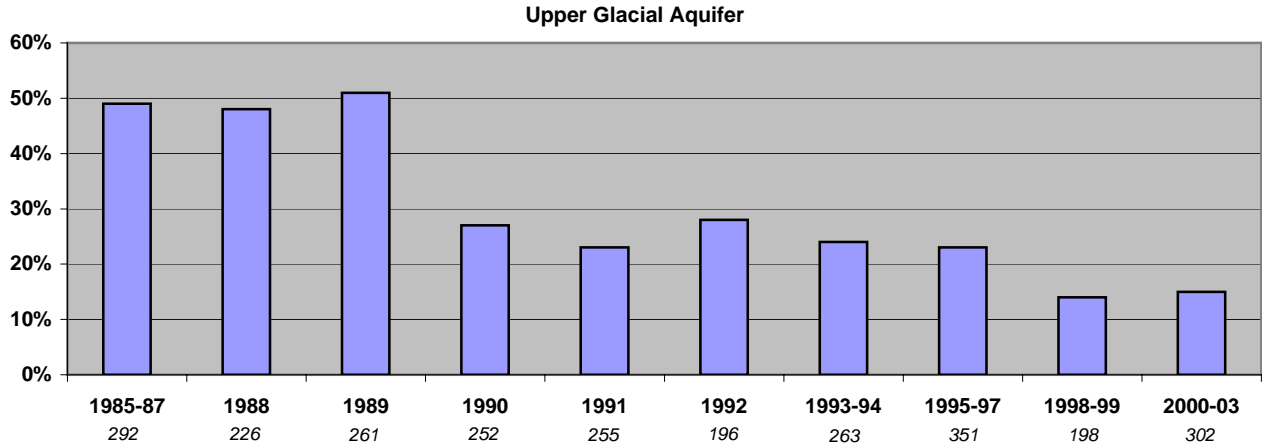


FIGURE 5-11

*Monitoring Well Network
Raw Groundwater Quality Sampling*

PERCENT OF MONITORING WELL SAMPLES WITH TVOC > 5 PPB

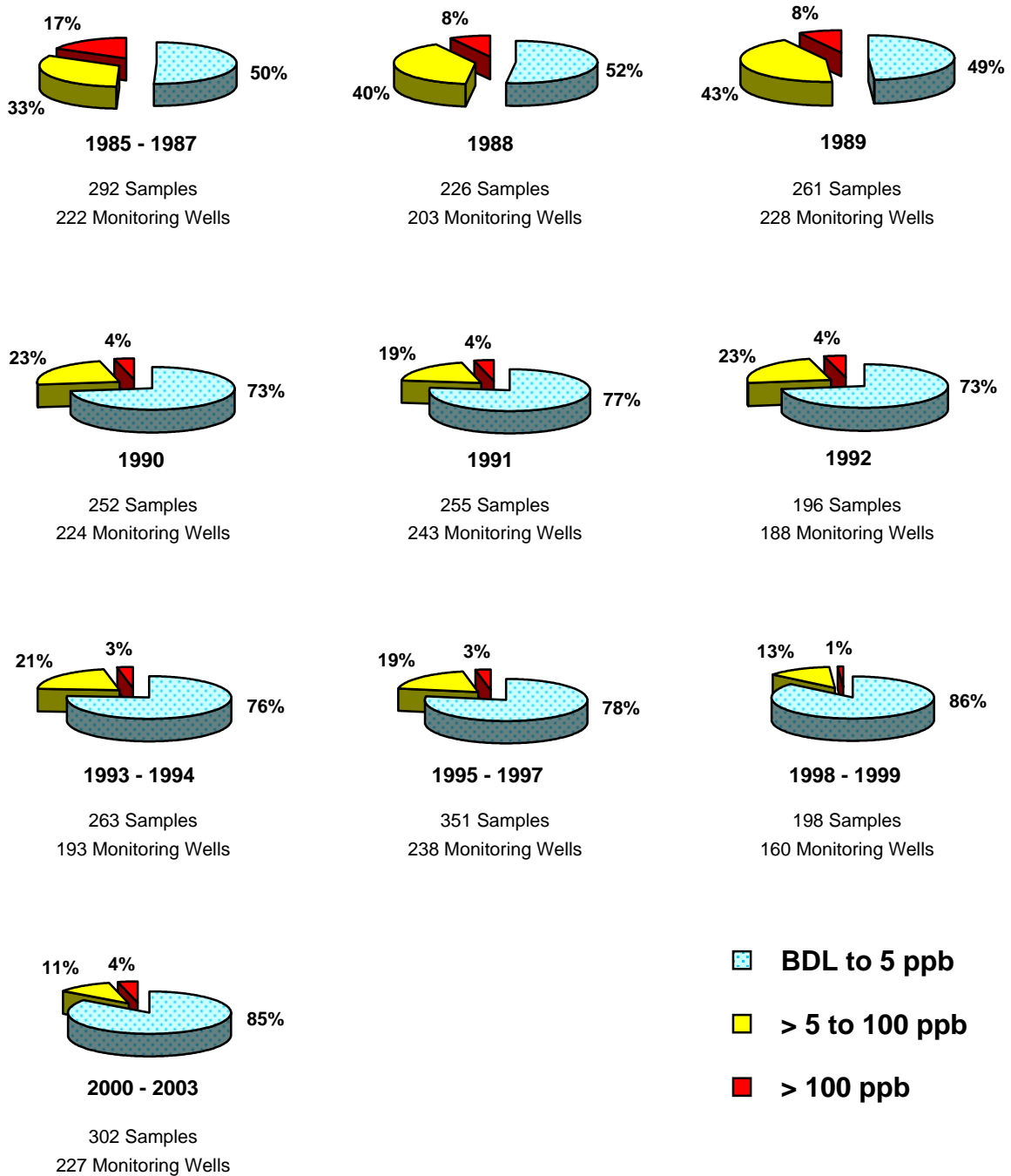


All time periods represent Countywide, raw groundwater quality in the respective aquifers. Numbers in italics beneath each time period indicate the number of raw groundwater quality samples taken during that period.

FIGURE 5-12

*Monitoring Well Network
Raw Groundwater Quality Sampling*

**TVOC CONCENTRATION DISTRIBUTIONS
UPPER GLACIAL AQUIFER MONITORING WELL SAMPLES**

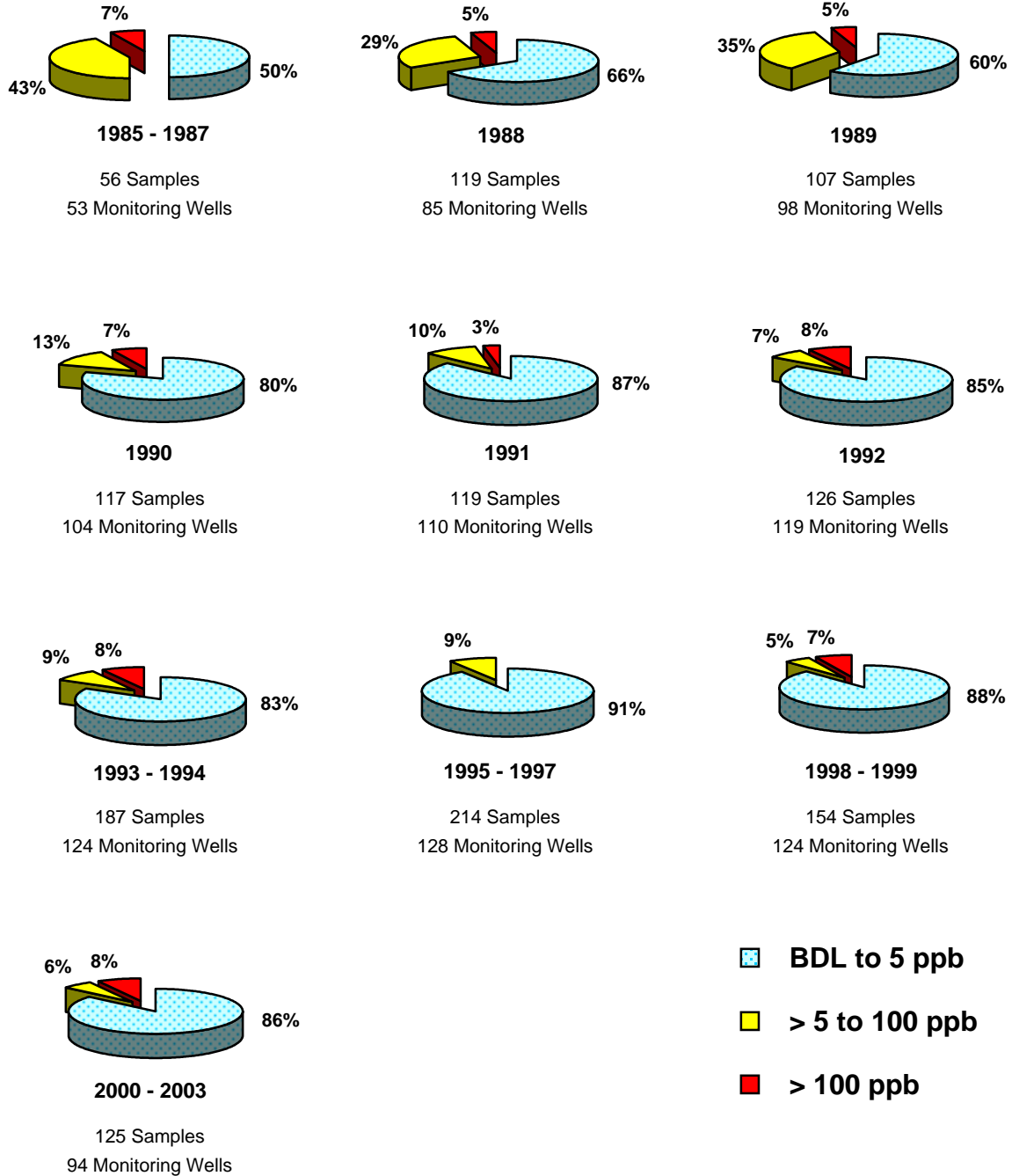


All time periods contain a sufficient number of spatially distributed monitoring wells to give an overall representation of raw groundwater quality in the Upper Glacial aquifer.

FIGURE 5-13

*Monitoring Well Network
Raw Groundwater Quality Sampling*

**TVOC CONCENTRATION DISTRIBUTIONS
MAGOTHY AND JAMECO AQUIFER MONITORING WELL SAMPLES**

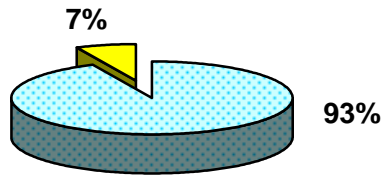


All time periods contain a sufficient number of spatially distributed monitoring wells to give an overall representation of raw groundwater quality in the Magothy and Jameco aquifers.

FIGURE 5-14

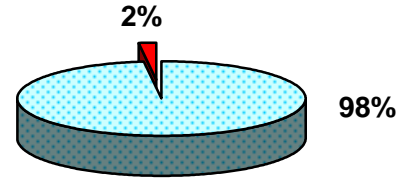
*Monitoring Well Network
Raw Groundwater Quality Sampling*

**TVOC CONCENTRATION DISTRIBUTIONS
LLOYD AND NORTH SHORE AQUIFER MONITORING WELL SAMPLES**



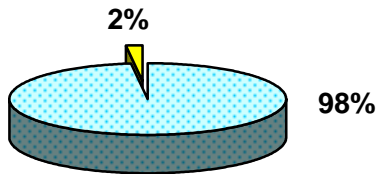
1992

45 Samples
37 Monitoring Wells



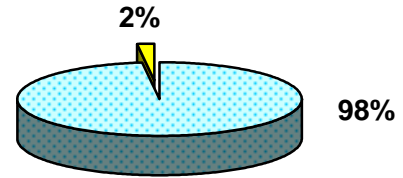
1993 - 1994

54 Samples
48 Monitoring Wells



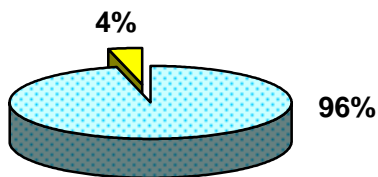
1995-1997

91 Samples
64 Monitoring Wells



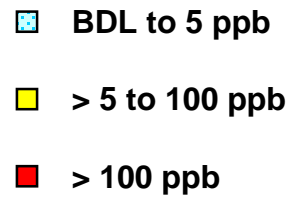
1998-1999

119 Samples
73 Monitoring Wells

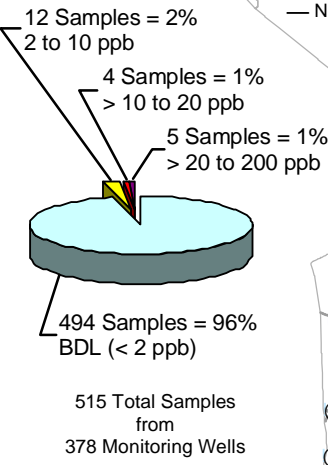
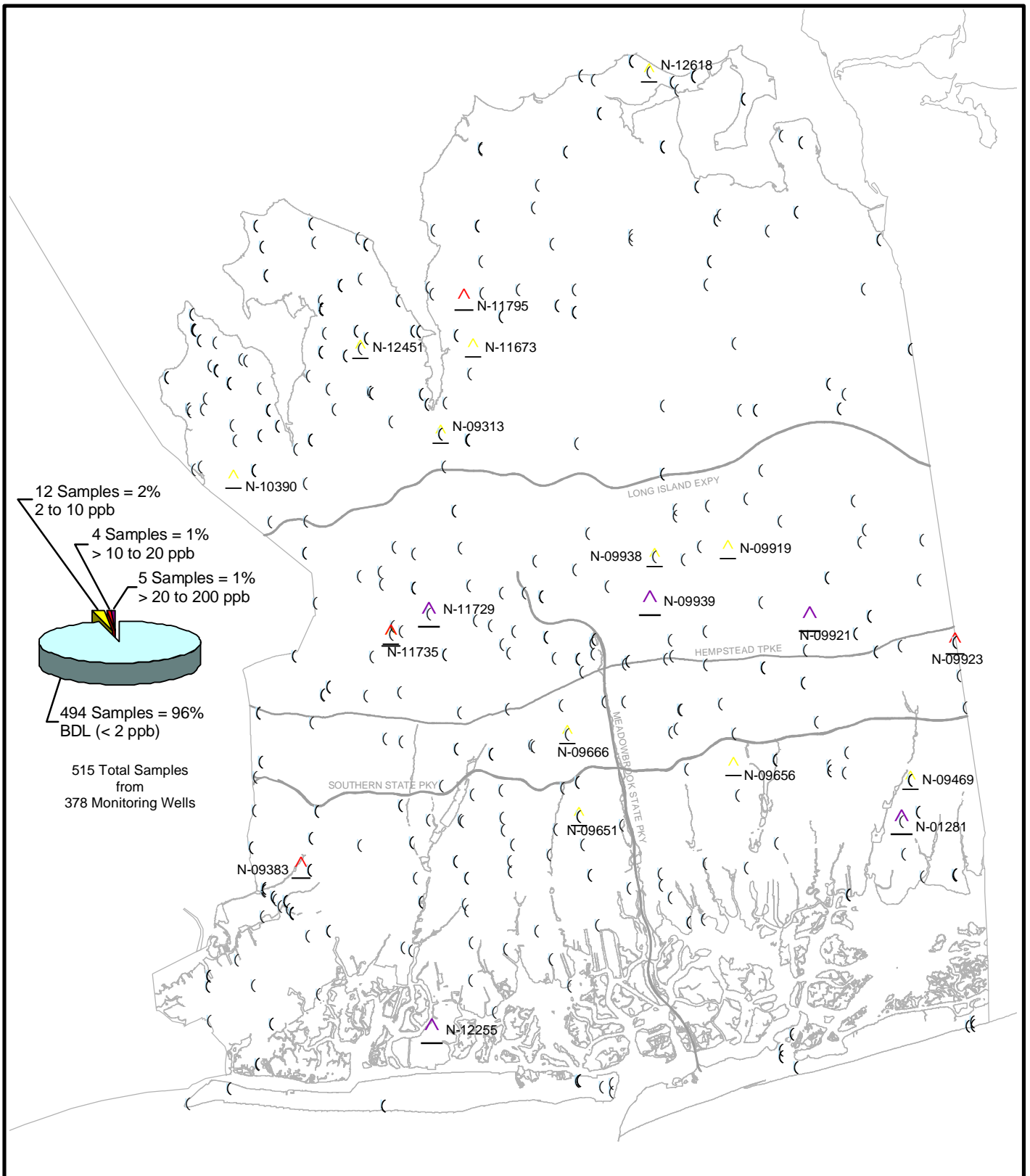


2000-2003

95 Samples
64 Monitoring Wells



All time periods contain a sufficient number of spatially distributed monitoring wells to give an overall representation of raw groundwater quality in the Lloyd and North Shore aquifers.



Legend

MTBE Detections

- (BDL (< 2 ppb)
- ▲ 2 to 10 ppb
- ▲ > 10 to 20 ppb
- ▲ > 20 to 200 ppb

BDL = Below Detection Level



Site Location

FIGURE 5-15

**MTBE DETECTIONS
RAW GROUNDWATER**

2000 - 2003

Prepared By: Nassau County Dep't. of Public Works



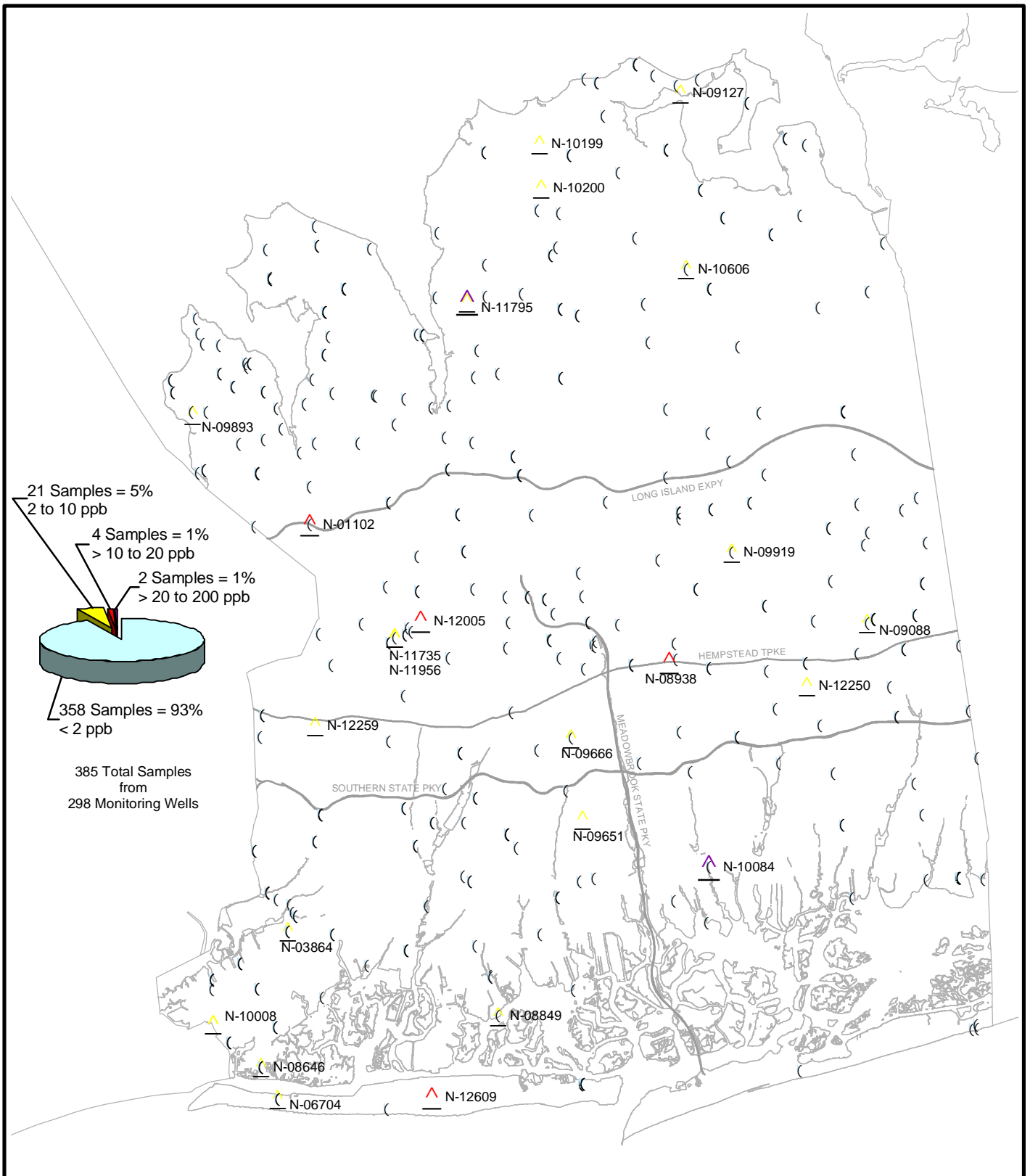
Nassau County



Geographic Information System

Copyright 1993-2002
County of Nassau, New York

Date: 12/31/2003



Legend

MTBE Detections

(< 2 ppb
△	2 to 10 ppb
▲	> 10 to 20 ppb
▽	> 20 to 200 ppb

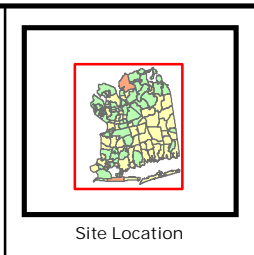


FIGURE 5-16

MTBE DETECTIONS
RAW GROUNDWATER
1995 - 1999

Prepared By: Nassau County Dep't. of Public Works

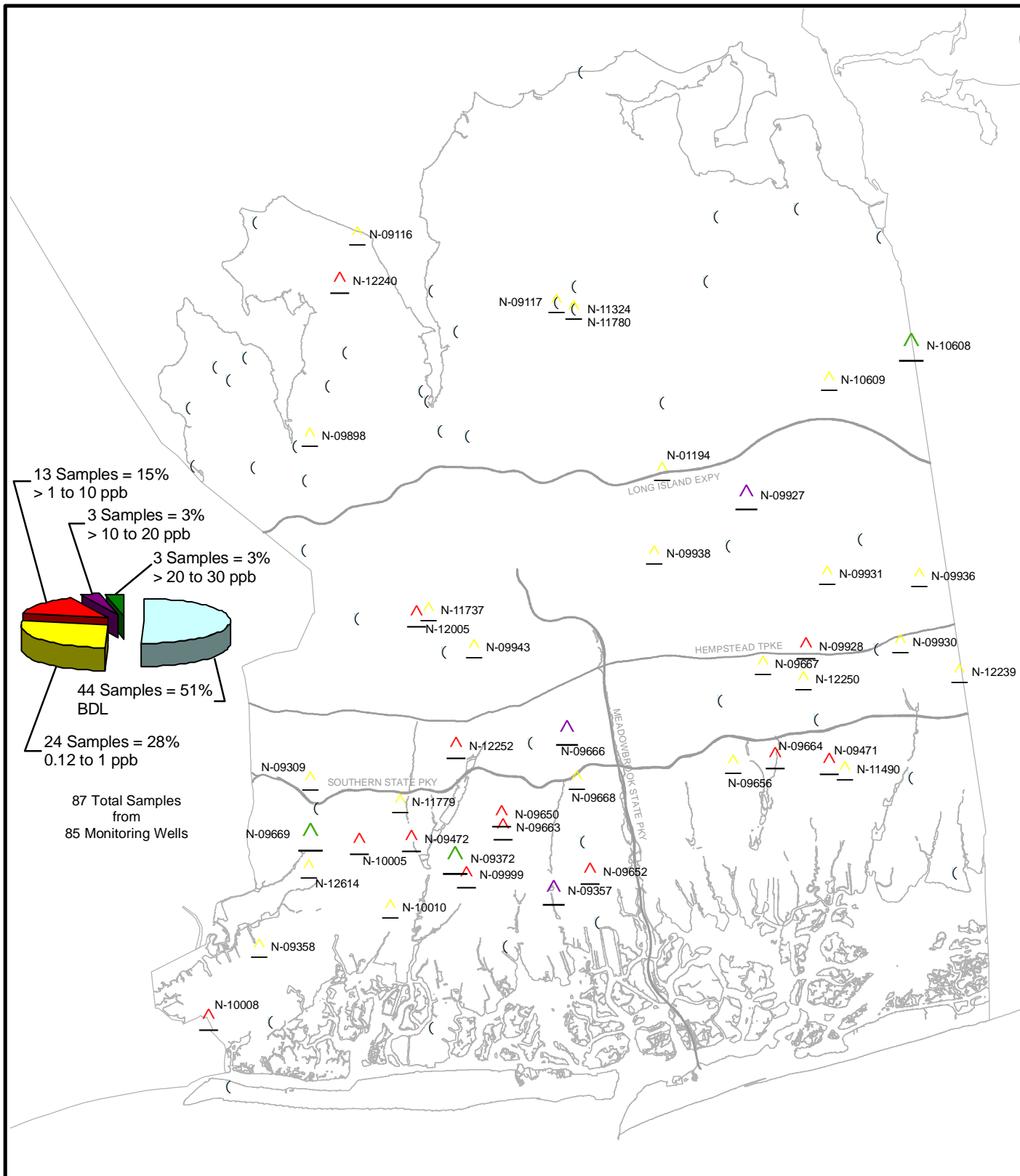
Feet
0 4,000 8,000 16,000

Nassau County

Geographic Information System

Copyright 1993-2002
County of Nassau, New York

Date: 12/31/2003



Legend	
(BDL
△	0.12 to 1 ppb
▲	> 1 to 10 ppb
△	> 10 to 20 ppb
▲	> 20 to 30 ppb
BDL = Below Detection Level	

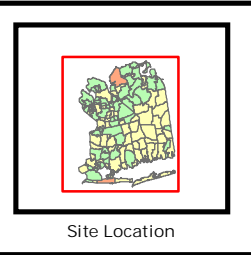


FIGURE 5-17
TOTAL PESTICIDE DETECTIONS
RAW GROUNDWATER
 2001 - 2003

Prepared By: Nassau County Dep't. of Public Works

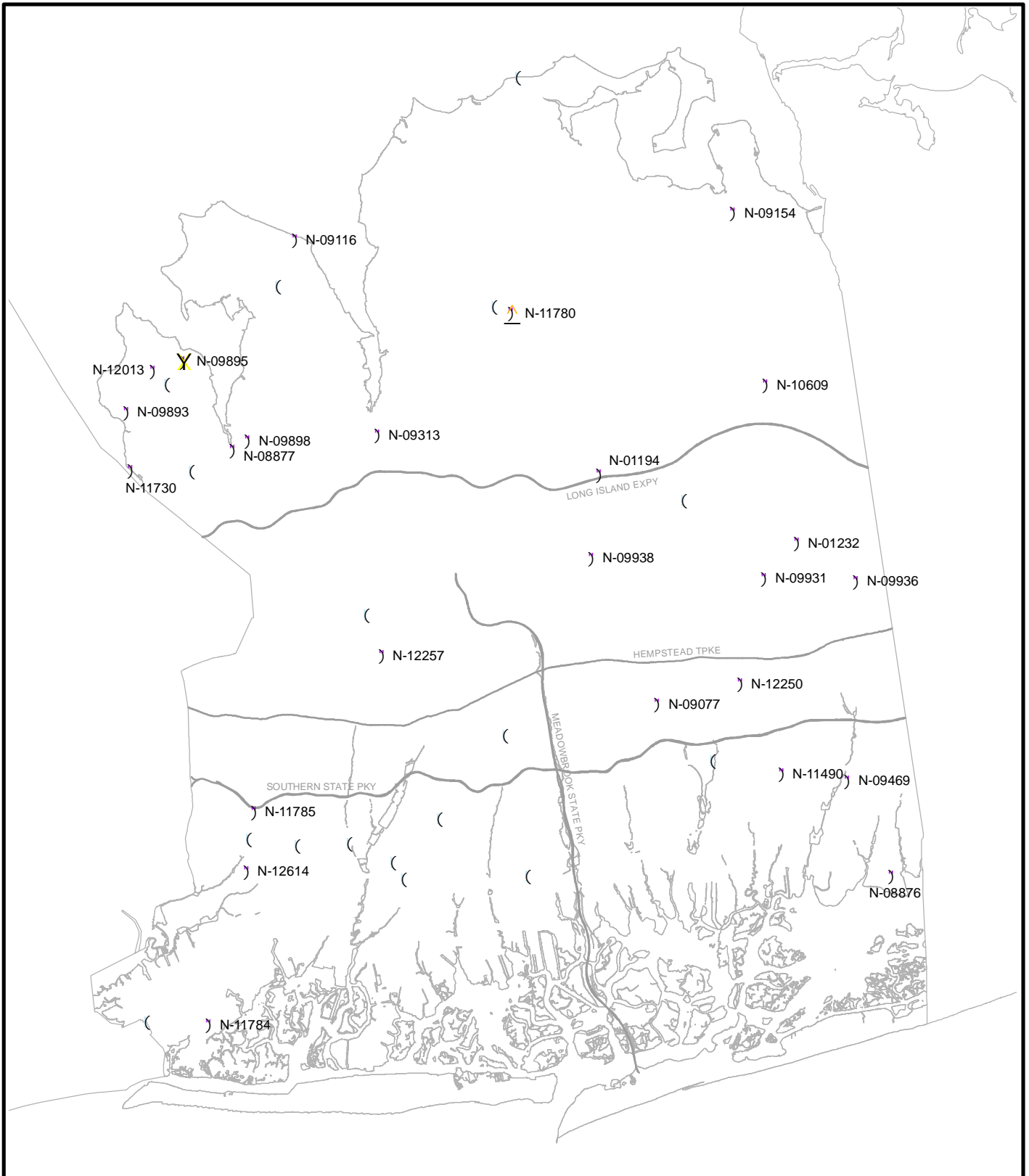
0 4,000 8,000 16,000 Feet

Nassau County

Geographic Information System

Copyright 1993-2002
 County of Nassau, New York

Date: 12/31/2003



Legend

Pharmaceutical Detections

- (BDL
-) Butylated hydroxytoluene: 0.12 to 1.75 ppb
- △ Butylated hydroxyanisole: 0.47 ppb
- X Carbamazepine: 0.37 ppb

BDL = Below Detection Level

Site Location

FIGURE 5-18

PHARMACEUTICAL DETECTIONS
RAW GROUNDWATER

2002 - 2003

Prepared By: Nassau County Dep't. of Public Works

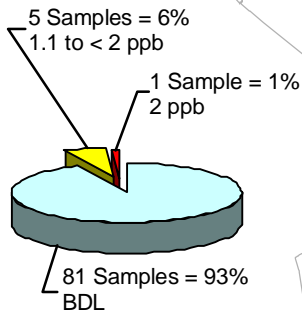
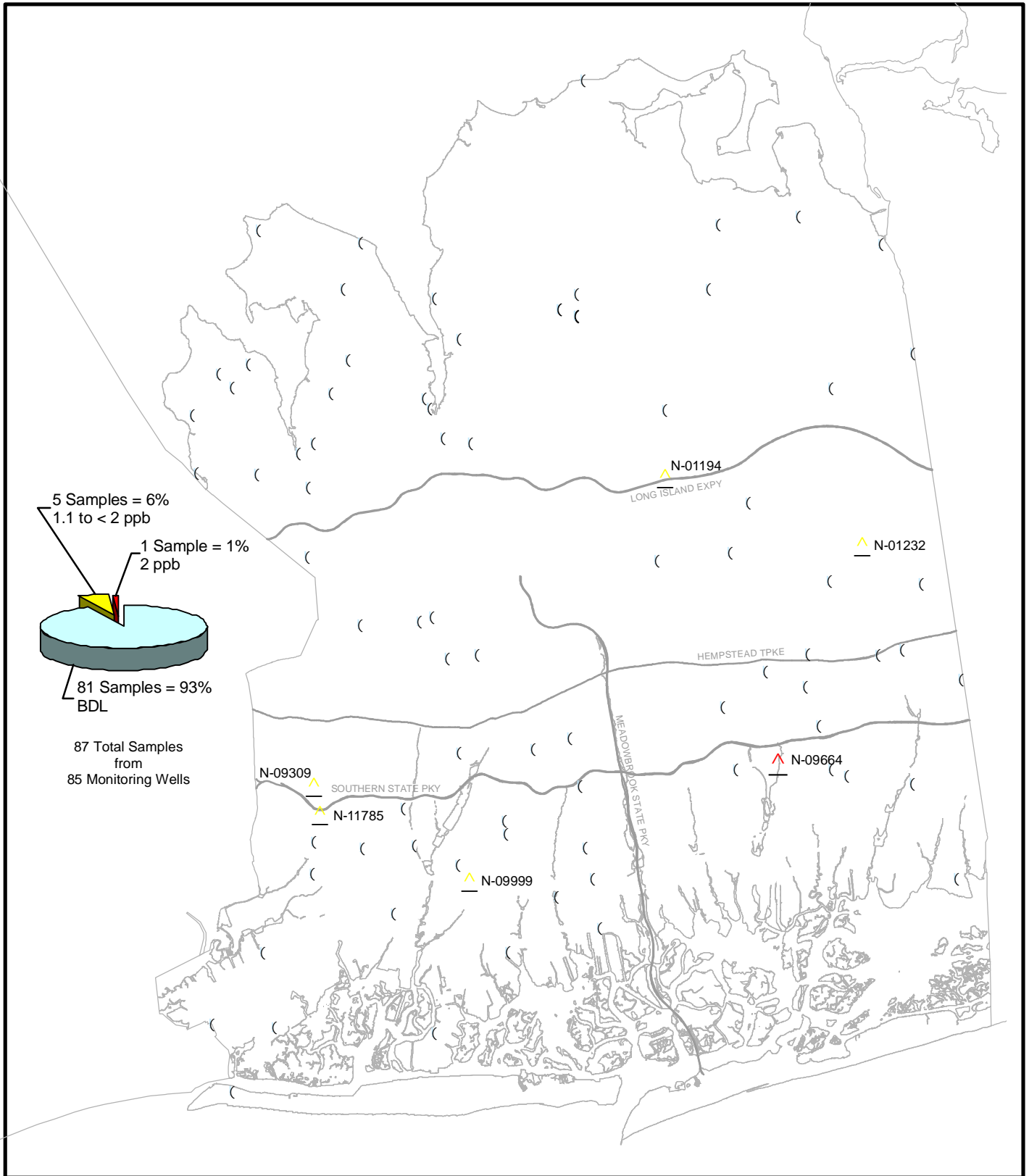
0 4,000 8,000 16,000 Feet

Nassau County

Geographic Information System

Copyright 1993-2002
County of Nassau, New York

Date: 12/31/2003



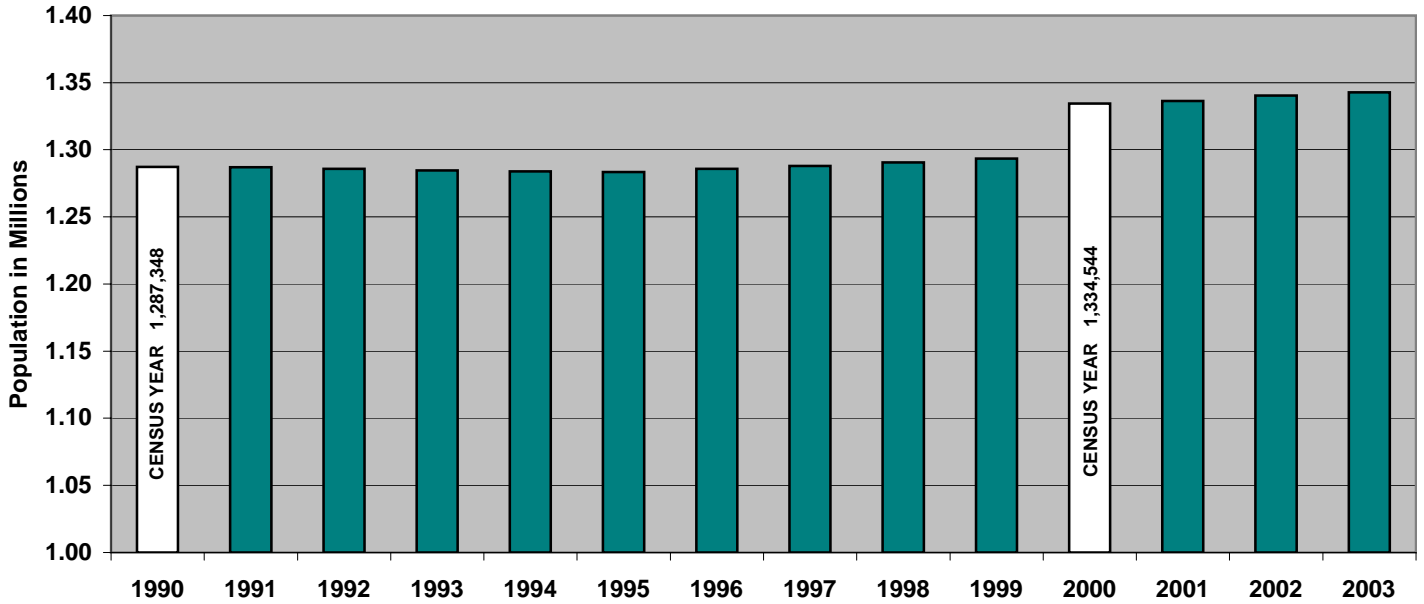
87 Total Samples
from
85 Monitoring Wells

<p>Legend</p> <p>Perchlorate Detections</p> <p>(BDL</p> <p>△ 1.1 to < 2 ppb</p> <p>▲ 2 ppb</p> <p>BDL = Below Detection Level</p>	<p>Site Location</p>	<p>FIGURE 5-19</p> <p>PERCHLORATE DETECTIONS RAW GROUNDWATER</p> <p>2001 - 2003</p> <p>Prepared By: Nassau County Dep't. of Public Works</p>	<p>Nassau County</p> <p>Geographic Information System</p> <p><small>Copyright 1993, 2002 County of Nassau, New York</small></p> <p>Date: 12/31/2003</p>
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FIGURE 5-20

POPULATION ESTIMATES AND PUBLIC WATER SUPPLY WITHDRAWAL

POPULATION ESTIMATES BY LONG ISLAND POWER AUTHORITY
(from LIPA's 2003 Long Island Population Survey)



ANNUAL PUBLIC WATER SUPPLY WITHDRAWAL

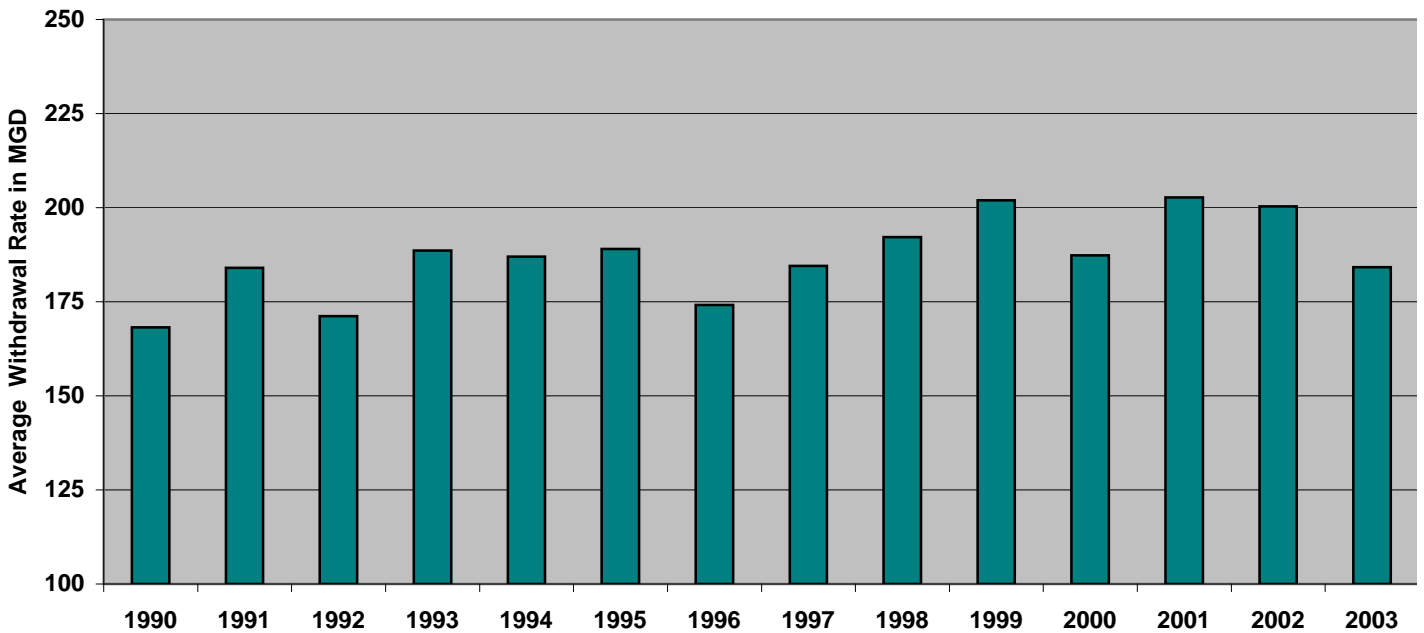
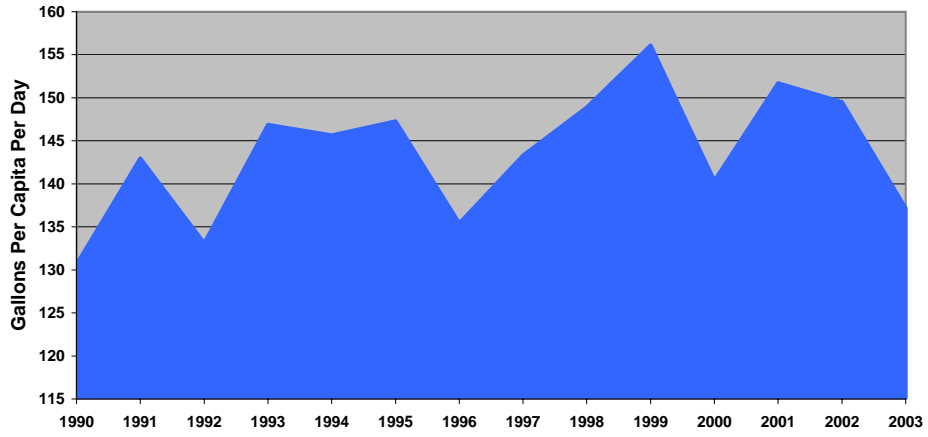


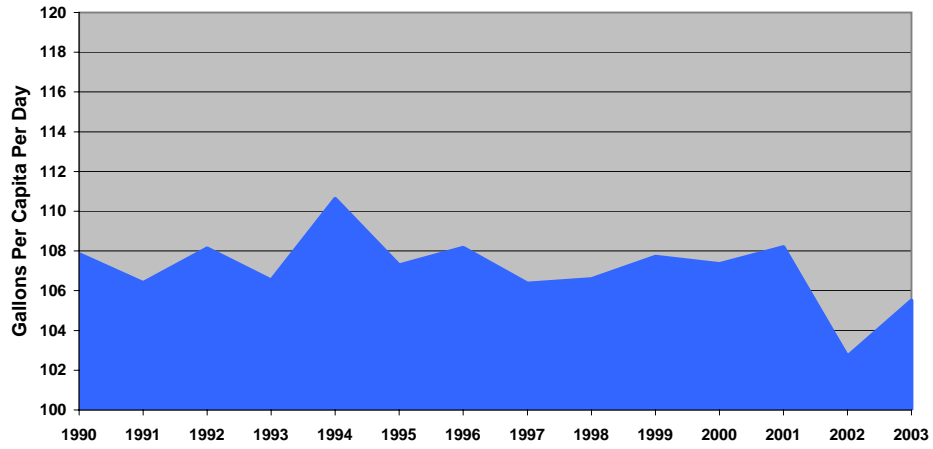
FIGURE 5-21

PER CAPITA WATER DEMAND IN NASSAU COUNTY

ANNUAL PER CAPITA DEMAND
(based on total annual groundwater withdrawal)



PER CAPITA DEMAND DURING BASE PUMPING MONTHS
(Jan, Feb, Mar, Nov, and Dec of each year)



PER CAPITA DEMAND DURING PEAK PUMPING MONTHS
(Apr, May, Jun, Jul, Aug, Sept, and Oct of each year)

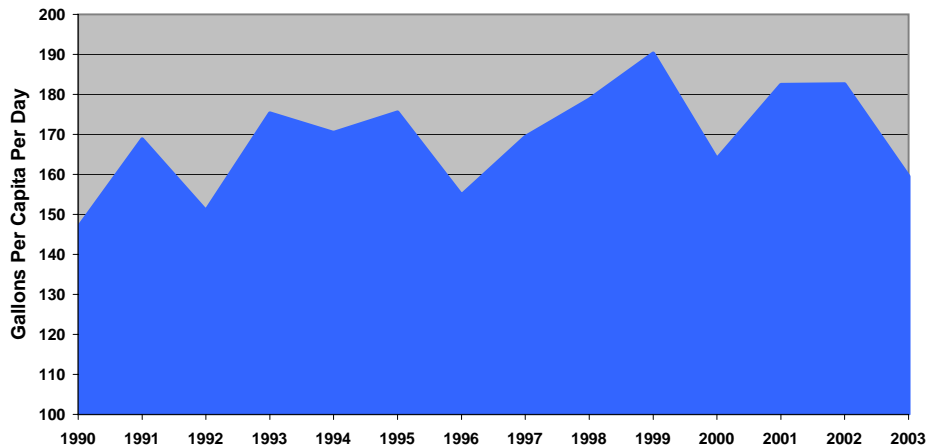


TABLE 5-1

Weather Monitoring

MAJOR RAINFALL EVENTS [a]
RECORDED AT NASSAU COUNTY WEATHER STATIONS

Date	Station [b]	1 Hour		2 Hour		4 Hour		8 Hour		16 Hour		24 Hour		Comments
		Rainfall Amount (in.)	Recurrence Interval (years)	Rainfall Amount (in.)	Recurrence Interval (years)	Rainfall Amount (in.)	Recurrence Interval (years)	Rainfall Amount (in.)	Recurrence Interval (years)	Rainfall Amount (in.)	Recurrence Interval (years)	Rainfall Amount (in.)	Recurrence Interval (years)	
08/11 - 08/12/55	M [c]	1.51	2	2.48	10	4.24	35	4.78	35	7.78	100	8.96	100	Tropical Storm Connie
09/10 - 09/11/54	M	0.60	-----	1.20	-----	2.00	-----	3.20	6	5.25	32	5.35	22	Hurricane Edna
09/11 - 09/12/60	M	1.15	-----	2.10	4	3.35	11	4.14	15	5.13	25	5.24	20	Hurricane Donna
04/21 - 04/22/00	W [c]	0.71	-----	1.22	-----	2.22	-----	4.15	18	5.05	25	5.08	17	
01/03 - 01/04/99	W	1.79	5	3.10	25	4.34	45	4.84	40	4.90	23	4.94	15	
10/07/72	M	0.80	-----	1.50	2	2.30	-----	3.70	10	4.50	15	4.90	15	
09/12 - 09/13/44	M	0.86	-----	1.59	2	2.01	-----	3.46	8	4.73	20	4.82	13	Hurricane
9/15 - 9/16/99	P [c]	0.60	-----	1.01	-----	1.99	-----	3.19	6	4.38	13	4.82	13	Tropical Storm Floyd
06/12 - 06/13/98	W	1.39	2	2.02	4	2.43	-----	2.43	-----	3.81	7	4.80	13	
11/07 - 11/08/77	M	0.73	-----	1.30	-----	1.88	-----	3.66	10	4.29	12	4.77	12	
09/15 - 09/16/99	UB [c]	0.45	-----	0.90	-----	1.64	-----	2.80	-----	3.97	8	4.61	10	Tropical Storm Floyd
09/14/44	M	1.36	2	1.88	4	3.18	9	4.45	25	4.46	15	4.52	9	"The Great Atlantic Hurricane"
07/27/42	M	1.00	-----	1.77	3	3.34	10	3.97	14	4.32	12	4.39	8	
07/31/90	P	2.16	13	3.25	30	4.29	40	4.35	22	4.35	13	4.35	7	
06/30/84	M	2.60	25	3.85	65	4.15	30	4.30	22	4.30	12	4.30	7	
09/01 - 09/02/02	P	0.50	-----	0.92	-----	1.57	-----	2.48	-----	3.99	8	4.24	6	
08/11/92	UB	1.51	2	2.74	16	4.14	35	4.22	20	4.22	11	4.22	6	
08/18 - 08/19/91	UB	0.91	-----	1.45	-----	2.50	-----	3.63	10	4.15	10	4.22	6	
10/19 - 10/20/96	UB	0.71	-----	1.29	-----	1.79	-----	2.92	-----	4.10	10	4.19	6	
09/08/04	UB	0.89	-----	1.70	3	3.07	8	3.78	12	4.04	9	4.16	6	Remnants of "Frances"
08/29/02	UB	0.90	-----	1.35	-----	2.25	-----	3.60	10	4.12	10	4.12	6	
9/28 - 9/29/04	M	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	4.09	10	4.09	5	Remnants of "Jeanne"
08/18 - 08/19/91	M	0.70	-----	1.33	-----	2.15	-----	3.11	5	4.02	9	4.07	5	Hurricane Bob
01/03/99	M	0.98	-----	1.80	3	3.20	10	3.93	14	4.05	9	4.05	5	
01/03/99	UB	1.06	-----	2.00	4	3.17	9	3.92	14	4.02	9	4.02	5	
08/28 - 08/29/02	M	1.70	4	2.10	4	3.07	8	3.70	10	4.00	9	4.00	5	
08/18 - 08/19/91	W	0.70	-----	1.25	-----	2.35	-----	3.40	8	3.89	8	3.93	-----	Hurricane Bob

TABLE 5-1

Weather Monitoring

MAJOR RAINFALL EVENTS [a]
RECORDED AT NASSAU COUNTY WEATHER STATIONS

Date	Station [b]	1 Hour		2 Hour		4 Hour		8 Hour		16 Hour		24 Hour		Comments
		Rainfall Amount (in.)	Recurrence Interval (years)	Rainfall Amount (in.)	Recurrence Interval (years)	Rainfall Amount (in.)	Recurrence Interval (years)	Rainfall Amount (in.)	Recurrence Interval (years)	Rainfall Amount (in.)	Recurrence Interval (years)	Rainfall Amount (in.)	Recurrence Interval (years)	
07/26 - 07/27/00	P	0.59	-----	0.90	-----	1.46	-----	2.25	-----	2.94	-----	3.92	-----	
08/09 - 08/10/76	M	1.00	-----	1.95	4	2.30	-----	3.40	8	3.83	7	3.91	-----	Hurricane Belle
09/01 - 09/02/02	UB	0.38	-----	0.74	-----	1.26	-----	2.01	-----	3.51	5	3.82	-----	
04/09 - 04/10/80	M	0.71	-----	0.83	-----	2.05	-----	2.94	-----	3.61	5	3.81	-----	
01/20 - 01/21/79	M	0.50	-----	0.90	-----	1.72	-----	2.92	-----	3.57	5	3.80	-----	
11/08 - 11/09/72	M	0.56	-----	1.11	-----	1.73	-----	2.80	-----	3.52	5	3.79	-----	
10/19 - 10/20/89	M	0.85	-----	1.50	2	1.95	-----	2.29	-----	3.09	-----	3.74	-----	Remnants of Hurricane Jerry
08/20/91	P	1.64	3	1.93	4	3.45	13	3.53	9	3.73	6	3.73	-----	Hurricane Bob
09/08/04	W	0.97	-----	1.91	4	2.86	6	3.11	5	3.68	6	3.73	-----	Remnants of "Frances"
01/23 - 01/24/98	M	0.60	-----	1.02	-----	1.68	-----	2.72	-----	3.45	-----	3.65	-----	
9/28 - 9/29/04	UB	0.51	-----	0.77	-----	1.43	-----	2.44	-----	3.30	-----	3.65	-----	Remnants of "Jeanne"
07/26 - 07/27/00	UB	0.64	-----	0.99	-----	1.54	-----	2.39	-----	3.15	-----	3.61	-----	
12/11/92	UB	0.29	-----	0.53	-----	0.93	-----	1.53	-----	2.89	-----	3.61	-----	
04/21 - 04/22/00	UB	0.59	-----	0.99	-----	1.72	-----	2.89	-----	3.50	5	3.60	-----	
08/28 - 08/29/02	W	1.11	-----	1.55	2	2.41	-----	3.03	-----	3.58	5	3.59	-----	
08/08/76	M	0.89	-----	1.01	-----	1.52	-----	2.20	-----	3.55	5	3.55	-----	Hurricane Belle
07/26 - 07/27/00	M	0.44	-----	0.87	-----	1.45	-----	2.25	-----	3.04	-----	3.55	-----	
08/24 - 08/25/75	M	1.38	2	2.23	6	2.58	-----	3.25	6	3.36	-----	3.53	-----	
01/03/99	P	1.01	-----	1.69	3	2.60	-----	3.34	7	3.51	5	3.51	-----	
06/06 - 06/07/00	UB	0.44	-----	0.77	-----	1.32	-----	1.95	-----	2.88	-----	3.51	-----	
10/23/90	W	0.61	-----	1.14	-----	2.22	-----	3.18	6	3.42	-----	3.45	-----	
10/19 - 10/20/89	P	0.65	-----	0.89	-----	1.31	-----	1.85	-----	2.92	-----	3.44	-----	Remnants of Hurricane Jerry
10/22 - 10/23/90	UB	0.65	-----	1.30	-----	2.25	-----	3.11	5	3.38	-----	3.43	-----	
07/31/96	M	2.60	25	3.05	25	3.28	10	3.28	6	3.38	-----	3.38	-----	
06/17/01	M	0.99	-----	1.71	3	2.55	-----	3.20	6	3.35	-----	3.37	-----	
09/08/04	M	0.63	-----	0.94	-----	1.60	-----	2.41	-----	3.36	-----	3.36	-----	Remnants of "Frances"
9/28 - 9/29/04	W	0.59	-----	0.99	-----	1.60	-----	2.28	-----	3.30	-----	3.36	-----	Remnants of "Jeanne"

TABLE 5-1

Weather Monitoring

MAJOR RAINFALL EVENTS [a]
RECORDED AT NASSAU COUNTY WEATHER STATIONS

Date	Station [b]	1 Hour		2 Hour		4 Hour		8 Hour		16 Hour		24 Hour		Comments
		Rainfall Amount (in.)	Recurrence Interval (years)	Rainfall Amount (in.)	Recurrence Interval (years)	Rainfall Amount (in.)	Recurrence Interval (years)	Rainfall Amount (in.)	Recurrence Interval (years)	Rainfall Amount (in.)	Recurrence Interval (years)	Rainfall Amount (in.)	Recurrence Interval (years)	
08/28 - 08/29/02	P	0.88	-----	1.33	-----	2.21	-----	3.25	6	3.35	-----	3.35	-----	
10/19/96	P	0.77	-----	1.47	-----	2.09	-----	2.84	-----	3.32	-----	3.35	-----	
01/23 - 01/24/98	UB	0.58	-----	1.01	-----	1.71	-----	2.57	-----	3.21	-----	3.35	-----	
03/05 - 03/06/79	M	0.33	-----	0.60	-----	1.02	-----	1.58	-----	2.77	-----	3.35	-----	
09/21/66	M	1.05	-----	1.39	-----	1.95	-----	2.80	-----	3.30	-----	3.34	-----	
08/23 - 08/24/90	W	0.63	-----	1.10	-----	1.30	-----	2.56	-----	3.29	-----	3.31	-----	
10/19/96	M	0.64	-----	1.11	-----	1.77	-----	2.39	-----	3.22	-----	3.30	-----	NorEaster
10/23 - 10/24/90	M	0.60	-----	1.13	-----	1.93	-----	2.82	-----	3.17	-----	3.22	-----	
07/18/95	UB	1.34	2	2.50	10	3.06	8	3.20	6	3.20	-----	3.20	-----	
08/26 - 08/27/99	P	1.33	2	2.27	7	2.66	-----	3.01	-----	3.02	-----	3.20	-----	
07/28/69	M	0.81	-----	1.14	-----	1.39	-----	2.14	-----	2.14	-----	3.15	-----	
11/02 - 11/03/54	M	0.77	-----	1.17	-----	1.62	-----	2.15	-----	2.91	-----	3.14	-----	
10/19 - 10/20/89	W	0.77	-----	1.20	-----	1.80	-----	2.07	-----	2.57	-----	3.14	-----	Remnants of Hurricane Jerry
12/11 - 12/12/94	P	0.23	-----	0.45	-----	0.78	-----	1.23	-----	2.40	-----	3.03	-----	
Average:		0.91		1.48		2.25		3.03		3.71		3.94		
Maximum:		2.60		3.85		4.34		4.84		7.78		8.96		
Minimum:		0.23		0.45		0.78		1.23		2.14		3.03		

Notes:

[a] Rainfall events are listed in order of highest to lowest recurrence interval based on rainfall events in excess of or equal to 3" over a 24-hour period.

[b] Weather recording station location code: M=Mineola; W=Wantagh at Cedar Creek Park; UB=Upper Brookville at Planting Fields Arboretum; P=Plandome at Leed's Pond Preserve.

[c] Period of record for: Mineola - 1941 to the present; Wantagh - 1987 to the present; Upper Brookville - 1990 to the present; Plandome - 1988 to 2003.

TABLE 5-2

*Monitoring Well Network
Raw Groundwater Quality Sampling*

SUMMARY OF PESTICIDE/PHARMACEUTICAL/PERCHLORATE DETECTIONS
(all concentrations in ppb)

Analyte	No. Wells Sampled	No. Wells Detected	Concentration Ranges for Analyte With No. of Detections			
			Trace	>0.2 - 2.0	>2.0 - 10.0	>10.0 - 31.0
(1) Butylated Hydroxytoluene (BHT)	42	25	3	22	0	0
			Trace	---	>2.0 - 10.0	>10.0 - 31.0
(2) Bis-2-ethylhexyl phthalate (DEHP)	85	13	0	---	9	4
			Trace	>0.2 - 2.0	>2.0 - 10.0	>10.0 - 31.0
(3) Dieldrin	85	12	3	9	0	0
			Trace	>1.0 - 2.0	>2.0 - 10.0	>10.0 - 31.0
(4) Chlordane	85	10	6	3	1	0
			Trace	>0.2 - 2.0	>2.0 - 10.0	>10.0 - 31.0
(5) Benzyl butyl phthalate	25	9	7	2	0	0
			Trace	---	>2.0 - 10.0	>10.0 - 31.0
(6) Perchlorate	85	6	5	---	1	0
			Trace	>0.2 - 2.0	>2.0 - 10.0	>10.0 - 31.0
(7) Diethyltoluamide (DEET)	25	6	1	4	0	1
			Trace	>0.5 - 2.0	>2.0 - 10.0	>10.0 - 31.0
(8) Prometon	85	4	3	1	0	0
			Trace	>0.2 - 2.0	>2.0 - 10.0	>10.0 - 31.0
(9) Atrazine	85	3	0	3	0	0
			Trace	>0.3 - 2.0	>2.0 - 10.0	>10.0 - 31.0
(10) Metolachlor Metabolite	85	3	1	2	0	0
			Trace	>0.2 - 2.0	>2.0 - 10.0	>10.0 - 31.0
(11) Simazine	85	3	2	1	0	0
			Trace	>1.0 - 2.0	>2.0 - 10.0	>10.0 - 31.0
(12) Diethyl phthalate	42	2	0	2	0	0
			Trace	>0.5 - 2.0	>2.0 - 10.0	>10.0 - 31.0
(13) Bromacil	85	2	1	1	0	0
			Trace	>0.2 - 2.0	>2.0 - 10.0	>10.0 - 31.0
(14) Phenanthrene	25	2	1	1	0	0
			Trace	>1.0 - 2.0	>2.0 - 10.0	>10.0 - 31.0
(15) Dibutyl phthalate	25	1	0	1	0	0

TABLE 5-2

*Monitoring Well Network
Raw Groundwater Quality Sampling*

SUMMARY OF PESTICIDE/PHARMACEUTICAL/PERCHLORATE DETECTIONS
(all concentrations in ppb)

Analyte	No. Wells Sampled	No. Wells Detected	Concentration Ranges for Analyte With No. of Detections			
			Trace	>0.2 - 2.0	>2.0 - 10.0	>10.0 - 31.0
(16) Dioctyl phthalate	25	1	0	1	0	0
(17) Carbamazepine	20	1	0	1	0	0
(18) Bis-2-ethylhexyl adipate	85	1	0	0	1	0
(19) Dichlorbenil	85	1	0	0	1	0
(20) Tebuthiuron	85	1	0	1	0	0
(21) Alachlor ESA	85	1	0	1	0	0
(22) Deisopropylatrazine	85	2	2	0	0	0
(23) Desethylatrazine	85	2	2	0	0	0
(24) Metolachlor ESA	85	1	1	0	0	0
(25) Butylated Hydroxyanisole	42	1	1	0	0	0
(26) Chlorothalonil	85	1	1	0	0	0
(27) Disulfoton Sulfone	42	1	1	0	0	0
(28) Fluoranthene	42	1	1	0	0	0
Summary	Total No. Analyses for all Detected Compounds	Total No. Detections	Trace	>0.2 - 2.0	>2.0 - 10.0	>10.0 - 31.0
	1800	116	42	56	13	5