

# **Appendix A**

**Water quality monitoring point: MB0401**

**Town:** Mason, NH

**Waterbody:** Mason Brook

**Years site has been monitored:** 2000 - 2001

**Location:** 100 ft DS of Jed's Lane bridge

Mason Brook. 100 ft DS of Jed's Lane bridge			Mason, NH						
New Site ID	Old Site ID	Date (2000)	4/15	5/20	6/17	7/15	8/19	9/16	10/14
MB0401	MB02	F. C. (col/100 ml)	ND	ND	ND	ND	ND	28	ND
MB0401	MB02	E. coli (col/100 ml)	ND	40	160	ND	ND	ND	ND
MB0401	MB02	D.O. (mg/L)	ND	13.5	7.1	ND	1.7	6.3	ND
MB0401	MB02	Temp. (°C)	ND	10.0	18.0	ND	18.0	14.0	10.0
MB0401	MB02	D.O. (% sat)	ND	ND	75.1	ND	17.3	61.2	ND
MB0401	MB02	pH	ND	5.9	6.0	ND	6.1	6.1	5.9
MB0401	MB02	Alk (mg/L)	ND	4.9	4.7	ND	4.4	5.4	4.8

Mason Brook. 100 ft DS of Jed's Lane bridge			Mason, NH						
New Site ID	Old Site ID	Date (2001)	4/21	5/19	6/16	7/21	8/18	9/15	10/20
MB0401	MB02	F. C. (col/100 ml)	ND	ND	ND	ND	ND	ND	ND
MB0401	MB02	E. coli (col/100 ml)	ND	20	ND	ND	ND	ND	ND
MB0401	MB02	D.O. (mg/L)	ND	7.1	6.4	ND	7.4	5.6	ND
MB0401	MB02	Temp. (°C)	6	10	19.5	ND	18	10	ND
MB0401	MB02	D.O. (% sat)	ND	63.0	69.8	ND	78.3	49.7	ND
MB0401	MB02	pH	5.8	8.2	8.3	ND	8.7	8.4	ND
MB0401	MB02	Alk (mg/L)	0.2	8.4	3.7	ND	8.6	6.3	ND

**Water quality monitoring point: MB0420**

**Town:** Townsend, MA

**Waterbody:** Squannacook River

**Years site has been monitored:** 1999 - 2001

**Location:** 0.1 mile US of Jed's Lane bridge off Rt. 123

Mason Brook. 0.1 mile US of Jed's Lane bridge off Rt. 123			Mason, NH						
New Site ID	Old Site ID	Date (1999)	4/17	5/15	6/19	7/17	8/14	9/18	10/16
MB0420	991102	F.C. (col/100 ml)	ND	ND	85	ND	3190	ND	65
MB0420	991102	E. coli (col/100 ml)	ND	ND	20	ND	80	ND	0
MB0420	991102	D.O. (mg/L)	ND	ND	7.4	ND	6.8	8.1	8.6
MB0420	991102	Temp. (°C)	ND	ND	12.5	ND	19.0	12.5	5.5
MB0420	991102	D.O. (% sat)	ND	ND	70.4	ND	72.0	76.0	68.4
MB0420	991102	pH	ND	ND	6.6	ND	6.3	5.5	6.0
MB0420	991102	Alk (mg/L)	ND	ND	9.0	ND	6.0	4.0	5.0

Mason Brook. 0.1 mile US of Jed's Lane bridge off Rt. 123			Mason, NH						
New Site ID	Old Site ID	Date (2000)	4/15	5/20	6/17	7/15	8/19	9/16	10/14
MB0420	MB01	F. C. (col/100 ml)	760	20	ND	ND	ND	36	ND
MB0420	MB01	E. coli (col/100 ml)	ND	ND	60	ND	100	40	20
MB0420	MB01	D.O. (mg/L)	8.9	ND	8.4	ND	1.6	6.4	ND
MB0420	MB01	Temp. (°C)	8.0	10.0	18.0	ND	16.5	14.0	12.0
MB0420	MB01	D.O. (% sat)	75.2	119.7	67.7	ND	16.4	62.2	ND
MB0420	MB01	pH	5.7	5.9	8.0	ND	8.0	8.1	8.1
MB0420	MB01	Alk (mg/L)	4.2	4.1	3.7	ND	5.1	5.4	5.2

Mason Brook. 0.1 mile US of Jed's Lane bridge off Rt. 123			Mason, NH						
New Site ID	Old Site ID	Date (2001)	4/21	5/19	6/16	7/21	8/18	9/15	10/20
MB0420	MB01	F. C. (col/100 ml)	ND	ND	ND	ND	ND	ND	ND
MB0420	MB01	E. coli (col/100 ml)	ND	20	ND	ND	ND	20	ND
MB0420	MB01	D.O. (mg/L)	ND	7.2	5.1	ND	5.6	5.8	ND
MB0420	MB01	Temp. (°C)	6	10.5	19.5	ND	18	9.5	ND
MB0420	MB01	D.O. (% sat)	ND	64.6	55.7	ND	59.3	50.8	ND
MB0420	MB01	pH	5.8	6.0	6.1	ND	6.5	6.7	ND
MB0420	MB01	Alk (mg/L)	0.5	9.0	3.8	ND	9.5	8.4	ND

**Water quality monitoring point: WK0360**

**Town:** Mason, NH

**Waterbody:** Walker Brook

**Years site has been monitored:** 1997 - 2001

**Location:** South end of Old Walker Brook Rd (dirt), near 124

South end of Old Walker Brook Rd (dirt), near 124			Mason, NH						
New Site ID	Old Site ID	Date (1997)	4/18	5/16	6/20	7/18	8/15	9/19	10/17
WK0360	44150.003.25 (.2)	F.C. (col/100 ml)	ND	4	32	148	1380	60	0
WK0360	44150.003.25 (.2)	E. coli (col/100 ml)	ND	0	ND	ND	ND	ND	ND
WK0360	44150.003.25 (.2)	D.O. (mg/L)	ND	ND	9.3	9.3	8.5	9.5	8.3
WK0360	44150.003.25 (.2)	Temp (C)	ND	7	17.0	ND	17.0	14.0	5.0
WK0360	44150.003.25 (.2)	D.O. (% sat)	ND	ND	96.0	ND	88.0	92.0	62.0
WK0360	44150.003.25 (.2)	pH	ND	ND	6.7	ND	6.6	6.9	6.6
WK0360	44150.003.25 (.2)	Alk (mg/L)	ND	ND	8.0	ND	8.5	9.5	9.5

South end of Old Walker Brook Rd (dirt), near 124			Mason, NH						
New Site ID	Old Site ID	Date (1998)	4/18	5/16	6/20	7/18	8/15	9/19	10/17
WK0360	44150.003.25	F.C. (col/100 ml)	ND	0	80	ND	ND	0	70
WK0360	44150.003.25	E. coli (col/100 ml)	ND	ND	ND	ND	ND	0	ND
WK0360	44150.003.25	D.O. (mg/L)	11.5	10	9.5	ND	ND	10.5	7
WK0360	44150.003.25	Temp (C)	8.5	14	17	ND	ND	14.5	8
WK0360	44150.003.25	D.O. (% sat)	99	100	98	ND	ND	103	59
WK0360	44150.003.25	pH	6.6	6.5	6.5	ND	ND	6.8	6.5
WK0360	44150.003.25	Alk (mg/L)	5	4.5	5	ND	ND	9	7
WK0360	44150.003.25	BOD	ND	ND	ND	ND	ND	ND	ND

South end of Old Walker Brook Rd (dirt), near 124			Mason, NH						
New Site ID	Old Site ID	Date (1999)	4/17	5/15	6/19	7/17	8/14	9/18	10/16
WK0360	991101	F.C. (col/100 ml)	ND	ND	5	ND	ND	380	5
WK0360	991101	E. coli (col/100 ml)	ND	ND	0	ND	ND	ND	5
WK0360	991101	D.O. (mg/L)	ND	ND	7.1	ND	4.5	9.1	9.4
WK0360	991101	Temp. (°C)	ND	ND	10.0	ND	18.5	13.0	6.0
WK0360	991101	D.O. (% sat)	ND	ND	63.0	ND	47.6	86.5	75.6
WK0360	991101	pH	ND	ND	6.7	ND	6.8	6.0	6.5
WK0360	991101	Alk (mg/L)	ND	ND	8.0	ND	10.0	4.0	7.0

South end of Old Walker Brook Rd (dirt), near 124			Mason, NH						
New Site ID	Old Site ID	Date (2000)	4/15	5/20	6/17	7/15	8/19	9/16	10/14
WK0360	WB01	F. C. (col/100 ml)	880	40	ND	ND	ND	552	8
WK0360	WB01	E. coli (col/100 ml)	ND	60	ND	ND	ND	240	10
WK0360	WB01	D.O. (mg/L)	11.9	11.0	8.1	ND	2.2	9.0	ND
WK0360	WB01	Temp. (°C)	7.0	9.0	19.0	ND	15.0	13.0	11.0
WK0360	WB01	D.O. (% sat)	96.2	95.2	87.4	ND	20.6	85.6	ND
WK0360	WB01	pH	6.2	6.5	6.7	ND	6.8	6.8	6.6
WK0360	WB01	Alk (mg/L)	4.8	6.5	6.2	ND	7.9	7.0	7.2

South end of Old Walker Brook Rd (dirt), near 124			Mason, NH						
New Site ID	Old Site ID	Date (2001)	4/21	5/19	6/16	7/21	8/18	9/15	10/20
WK0360	WB01	F. C. (col/100 ml)	ND	ND	ND	ND	ND	ND	ND
WK0360	WB01	E. coli (col/100 ml)	ND	120	20	ND	ND	ND	ND
WK0360	WB01	D.O. (mg/L)	ND	9.2	8.0	ND	8.5	7.7	ND
WK0360	WB01	Temp. (°C)	5	9	17.5	ND	17	8	ND
WK0360	WB01	D.O. (% sat)	ND	7.2	83.8	ND	88.0	65.1	ND
WK0360	WB01	pH	6.5	6.7	6.7	ND	6.8	6.8	ND
WK0360	WB01	Alk (mg/L)	3.2	10.6	3.9	ND	7.7	9.9	ND

**Water quality monitoring point: WK0554**

**Town:** Mason, NH

**Waterbody:** Walker Brook (west branch)

**Years site has been monitored:** 1997 - 1999

**Location:** Below Walker Brook Rd, west branch, W of Rt 31

Below Walker Brook Rd, west branch, W of Rt 31			Mason, NH						
New Site ID	Old Site ID	Date (1997)	4/18	5/16	6/20	7/18	8/15	9/19	10/17
WK0554	44150.005.50	F.C. (col/100 ml)	ND	4	32	208	360	0	40
WK0554	44150.005.50	E. coli (col/100 ml)	ND	0	ND	ND	ND	ND	ND
WK0554	44150.005.50	D.O. (mg/L)	ND	11.25	9	8.75	8	9	6.3
WK0554	44150.005.50	Temp (C)	ND	7	17	ND	18	15	5
WK0554	44150.005.50	D.O. (% sat)	ND	93	93	ND	85	89	49.4
WK0554	44150.005.50	pH	ND	6.5	6.6	ND	6.7	6.9	6.6
WK0554	44150.005.50	Alk (mg/L)	ND	7.5	13	ND	20	16.5	16

Below Walker Brook Rd, west branch, W of Rt 31.			Mason, NH						
New Site ID	Old Site ID	Date (1998)	4/18	5/16	6/20	7/18	8/15	9/19	10/17
WK0554	44150.004.00	F.C. (col/100 ml)	ND	54	120	ND	ND	74	80
WK0554	44150.004.00	E. coli (col/100 ml)	ND	0	ND	ND	ND	0	ND
WK0554	44150.004.00	D.O. (mg/L)	14	10	9.5	ND	ND	7	10.5
WK0554	44150.004.00	Temp (C)	8	14	17	ND	ND	15	7
WK0554	44150.004.00	D.O. (% sat)	118	100	98	ND	ND	70	87
WK0554	44150.004.00	pH	6.6	6.5	6.3	ND	ND	6.6	6.5
WK0554	44150.004.00	Alk (mg/L)	6	6	5	ND	ND	26	8
WK0554	44150.004.00	BOD	ND	0.92	ND	ND	ND	1	ND

Below Walker Brook Rd, west branch, W of Rt 31			Mason, NH						
New Site ID	Old Site ID	Date (1999)	4/17	5/15	6/19	7/17	8/14	9/18	10/16
WK0554	trib at Rt 31	F.C. (col/100 ml)	ND	ND	30	ND	no flow	ND	0
WK0554	trib at Rt 31	E. coli (col/100 ml)	ND	ND	0	ND		ND	0
WK0554	trib at Rt 31	D.O. (mg/L)	ND	ND	4.4	ND		8.4	5.2
WK0554	trib at Rt 31	Temp. (°C)	ND	ND	11.0	ND		12.5	7.0
WK0554	trib at Rt 31	D.O. (% sat)	ND	ND	40.0	ND		78.9	42.9
WK0554	trib at Rt 31	pH	ND	ND	6.7	ND		6.5	6.5
WK0554	trib at Rt 31	Alk (mg/L)	ND	ND	11.0	ND		8.0	8.0

**Water quality monitoring point: WK0545**

**Town:** Mason, NH

**Waterbody:** Walker Brook

**Years site has been monitored:** 1998

**Location:** DS of confluence of W branch and main branch, E of Rt 31

Walker Brook. DS of confluence of W branch and main branch, E of Rt 31.			Mason, NH						
New Site ID	Old Site ID	Date (1998)	4/18	5/16	6/20	7/18	8/15	9/19	10/17
WK0545	44150.004.01	F.C. (col/100 ml)	ND	67	80	ND	ND	0	90
WK0545	44150.004.01	E. coli (col/100 ml)	ND	ND	ND	ND	ND	0	40
WK0545	44150.004.01	D.O. (mg/L)	13	10.5	9.25	ND	ND	9.5	10.5
WK0545	44150.004.01	Temp (C)	8	15	17.5	ND	ND	14.5	7
WK0545	44150.004.01	D.O. (% sat)	110	100	97	ND	ND	93	87
WK0545	44150.004.01	pH	6.6	6.4	6.4	ND	ND	6.4	6.4
WK0545	44150.004.01	Alk (mg/L)	5	5	6	ND	ND	6	5
WK0545	44150.004.01	BOD	ND	ND	ND	ND	ND	ND	ND

# **Appendix B**

## Inventory of Public Water Supply Sources and Potential and Existing Sources of Groundwater Contamination in MASON, NH

- Notes:**
1. Report prepared December 7, 2006 by the NHDES Water Supply Engineering Bureau.
  2. The map-cell column in the report indicates which 1000-foot grid cell the site or facility is located on the accompanying map. For example, a map-cell value of "G-11" indicates column "G" and row "11".
  3. Only those sites or facilities that are within a 4000-foot buffer of the map's named city or town are listed in this report.

### Source Water Hazard Inventory Sites

This includes all Groundwater Hazard Inventory, Remediation Sites, and Initial Response Spill Sites regulated by NHDES to ensure water resource protection. For a description of particular project types, please see the attached key.

MAP CELL	FACILITY SITE#	FACILITY NAME AND ADDRESS	PROJECT TYPE
X-15	199612016	FLETCHER QUARRY STARCH MILL ROAD MASON TAX MAP: B, LOT: 17	LAST (INACTIVE) Risk: 8
X-15	199612016	FLETCHER QUARRY STARCH MILL ROAD MASON TAX MAP: B, LOT: 17	UIC Risk: 8 Staff: REGISTRATION
I-17	200406128	CONCRETE PRODUCTS INC. 87 ADAMS HILL RD GREENVILLE	SPILL/RLS (INACTIVE) Risk: 8
I-19/ I-20	199103026	GREENVILLE ABANDONED DUMP OFF OLD MASON ROAD GREENVILLE TAX MAP: 2, LOT: 44	OLD DUMP Risk: NDY Staff: UNASSIGNED
I-23	200302057	PATRICA PIPER 602 FITCHBURG ROAD, LOT 26 GREENVILLE	OPUF (INACTIVE) Risk: 8
I-23	199706037	STEVEN DONALDSON 602 FITCHBURG ROAD LOT 20 GREENVILLE TAX MAP: 00F, LOT: 20	OPUF (INACTIVE) Risk: 8
Y-23	200102011	KEN ENGLISH 773 BROOKLINE RD MASON	OPUF (INACTIVE) Risk: 8
K-29	199306002	ROBERT BELANGER 51 GREENVILLE ESTATES PARK GREENVILLE	SPILL/RLS (INACTIVE) Risk: 8
K-32	200108003	TWEEDY TRANSPORT- INACTIVE 49 FITCHBURG ROAD MASON	UIC Risk: 1 Staff: REGISTRATION
K-34	200203054	WEE DREAMS LEARNING CENTER 712 TURNPIKE RD NEW IPSWICH	ETHER (INACTIVE) Risk: 8
K-35	200204044	WILLIAM FALGARES 93 TURNPIKE RD MASON	OPUF (INACTIVE) Risk: 8

MAP CELL	FACILITY SITE#	FACILITY NAME AND ADDRESS	PROJECT TYPE
K-35	198906043	STATELINE VARIETY 403 FITCHBURG RD MASON TAX MAP: J, LOT: 20	LUST Risk: 5 Staff: WHIPPLE
J-36	198903002	RUGGIERO PIG FARM CHURCHILL ROAD MASON TAX MAP: J, LOT: 69	HAZWASTE (INACTIVE) Risk: 8

### Aboveground Storage Tank Facilities

These are facilities where there are, or where in the case of inactive sites, aboveground storage tanks. If there is a documented release from a tank, it becomes a LUST project type and is listed in the Source Water Hazard Inventory.

MAP CELL	FACILITY SITE#	FACILITY NAME AND ADDRESS	# TANKS
		<< NO FACILITIES PRESENT >>	

### Underground Storage Tank Facilities

These are facilities where there are, or where in the case of inactive sites, underground storage tanks. If there is a documented release from a tank, it becomes a LUST project type and is listed in the Source Water Hazard Inventory.

MAP CELL	FACILITY SITE#	FACILITY NAME AND ADDRESS	# TANKS
X-15	0111086	FLETCHER QUARRY STARCH MILL ROAD MASON TAX MAP: B, LOT: 17	TANKS: 0 (INACTIVE)
R-29	0112150	TOWN OF MASON 101 DEPOT RD MASON TAX MAP: G, LOT: 73	TANKS: 0 (INACTIVE)
R-29	0114049	MASON HIGHWAY DEPT 83 DEPOT RD MASON	TANKS: 1
K-35	0113717	STATELINE VARIETY ROUTE 31 & 124 MASON TAX MAP: J, LOT: 20	TANKS: 0 (INACTIVE)

### Automobile Salvage Yards

MAP CELL	FACILITY SITE#	FACILITY NAME AND ADDRESS	STATUS
		<< NO FACILITIES PRESENT >>	

### Local Potential Contamination Source Inventory Sites

Includes potential contamination sources within a source water protection area. The sites were located by Public Water Systems applying for a sampling waiver, or by NHDES-WSEB staff during "windshield surveys".

MAP CELL	SITE#	SITE NAME AND ADDRESS	PROJECT TYPE
M-32	15150301A	<UNNAMED SITE>  MASON	WSPS
K-35	15150301B	JT's Power Equipment Route 124 MASON	GSR

### National Pollutant Discharge Elimination System (NPDES) Outfalls

All facilities which discharge any pollutant from point sources to surface waters (directly or indirectly) are required to obtain a federal permit from the US Environmental Protection Agency and a State Water Discharge Permit from NHDES.

MAP CELL	OUTFALL ID#	FACILITY NAME AND ADDRESS	STATUS TYPE CATEGORY WATER BODY
Y-13	0020524	FLETCHER QUARRY STARCH MILL ROAD MASON	INACTIVE MINOR WW SPAULDING BROOK VIA TRIB.

### Point/Non-point Potential Pollution Sources

These include local land-use inventories performed by the Regional Planning Commission in 1995. For a description of the Project Types, see the attached key.

MAP CELL	SITE#	SITE NAME AND ADDRESS	PROJECT TYPE
AI-15	195-07	BURBEE GRAVEL PIT MILE SLIP ROAD MILFORD	MS

### Resource Conservation & Recovery Act (RCRA) Sites

These are facilities that generate hazardous waste. If a release is documented, it listed under the Source Water Hazard Inventory Sites.

MAP CELL	FACILITY SITE#	FACILITY NAME AND ADDRESS	STATUS REGULATED GEN. TYPE
AG-04	NHD500014436	CONSOLIDATED RECYCLING INC 164 MILE SLIP RD MILFORD	DECLASSIFIED RCRA REGULATED NONE
G-07	NHD066750480	KIMBALL PHYSICS 311 KIMBALL HILL RD WILTON	ACTIVE RCRA REGULATED SQG(CESQG)
X-15	NHD510101272	FLETCHER QUARRY 589 STARCH MILL RD MASON	ACTIVE STATE REGULATED NONE
I-22	NHD048725816	FROST FARM SERVICE INC 53 MASON RD GREENVILLE	ACTIVE STATE REGULATED NONE

### Registered Water Users

"Use of water" includes the withdrawal of water from the ground or surface water body, the delivery of water from another supplier to the user indicated, the release of water from the user indicated to another facility, and/or the return of water to the environment.

MAP CELL	SDID	FACILITY NAME AND ADDRESS	ACTION TYPE WATER BODY
Y-13	20405-D01	FLETCHER QUARRY STARCH MILL ROAD MASON	RETURN (INACTIVE) INDUSTRIAL OLD QUARRY POND
Z-13	20405-S01	FLETCHER QUARRY STARCH MILL ROAD MASON	WITHDRAWAL (INACTIVE) INDUSTRIAL OLD QUARRY POND
K-29	20700-S01	GREENVILLE ESTATES 41 OLD ASHBY ROAD GREENVILLE	WITHDRAWAL WATER SUPPLIER BEDROCK WELLFIELD

## PUBLIC DRINKING WATER SUPPLIES - MASON, NH

- Notes:**
1. Report prepared December 7, 2006 by the NHDES Water Supply Engineering Bureau.
  2. Public Water Supply Sources are labeled on the map with their respective PWS ID numbers. The map-cell values (shown in parenthesis beneath the PWSID in the report) indicates which 1000-foot grid cell the source is located on the accompanying map. For example, a map-cell value of "G-11" indicates column "G" and row "11".
  3. Only those sources that are within a 4000-foot buffer of the map's named city or town are listed in this report.

PWSID	SYSTEM NAME AND ADDRESS	SYS. TYPE	SYS. ACTIVE	SRC. TYPE	SRC. ACTIVE	SRC. REC.	WELL TYPE	WELL DEPTH	POP. SERVED
2522010-001 (U-05)	ORCHARD VIEW ORCHARD VIEW DR WILTON	C	I	G	A	SG	BRW	345	15
1518010-001 (L-12)	PICKITY PLACE NUTTING HILL RD, PO BOX 544 MASON	N	A	G	A	SG	BRW	100	60
1518010-501 (L-12)	PICKITY PLACE NUTTING HILL RD, PO BOX 544 MASON	N	A	E	A	PT		0	60
1518010-002 (L-12)	PICKITY PLACE NUTTING HILL RD, PO BOX 544 MASON	N	A	G	A	SG	BRW	0	60
0993030-001 (I-23)	FROST TRAILER PARK RTE 31 GREENVILLE	C	A	G	A	SG	BRW	181	73
0993030-002 (I-23)	FROST TRAILER PARK RTE 31 GREENVILLE	C	A	G	A	SG	BRW	275	73
0993030-501 (I-23)	FROST TRAILER PARK RTE 31 GREENVILLE	C	A	E	A	PT		0	73
0999010-001 (K-25)	MERRIAM HILL CENTER 148 MERRIAM HILL RD, RTE 123 GREENVILLE	N	I	G	A	SG	BRW	180	25
1515010-001 (P-25)	MASON PUBLIC SCHOOL RTE 123 MASON	P	A	G	A	SG	BRW	290	111
1515010-501 (P-25)	MASON PUBLIC SCHOOL RTE 123 MASON	P	A	E	A	PT		0	111
1519010-001 (P-26)	MASON CONGREGATIONAL CHURCH VALLEY ROAD MASON	N	I	G	A	SG		0	15

PWSID	SYSTEM NAME AND ADDRESS	SYS. TYPE	SYS. ACTIVE	SRC. TYPE	SRC. ACTIVE	SRC. REC.	WELL TYPE	WELL DEPTH	POP. SERVED
1518020-001 (AC-26)	PARKERS MAPLE BARN/SUGAR HOUSE 1349 BROOKLINE RD MASON	N	A	G	A	SG	BRW	1230	300
1518020-002 (AC-26)	PARKERS MAPLE BARN/SUGAR HOUSE 1349 BROOKLINE RD MASON	N	A	G	A	SG	BRW	1250	300
1518020-501 (AC-26)	PARKERS MAPLE BARN/SUGAR HOUSE 1349 BROOKLINE RD MASON	N	A	E	A	PT		0	300
0993020-001 (J-29)	GREENVILLE EST TENANTS COOP RTE 31 GREENVILLE	C	A	G	I	SG	BRW	380	480
0993020-002 (J-29)	GREENVILLE EST TENANTS COOP RTE 31 GREENVILLE	C	A	G	I	SG	BRW	126	480
0993020-003 (J-29)	GREENVILLE EST TENANTS COOP RTE 31 GREENVILLE	C	A	G	A	SG	BRW	150	480
0993020-004 (J-29)	GREENVILLE EST TENANTS COOP RTE 31 GREENVILLE	C	A	G	I	SG	BRW	430	480
0993020-005 (J-29)	GREENVILLE EST TENANTS COOP RTE 31 GREENVILLE	C	A	E	A	PT		0	480
0993020-503 (J-29)	GREENVILLE EST TENANTS COOP RTE 31 GREENVILLE	C	A	E	A	PT		0	480
0993020-006 (K-29)	GREENVILLE EST TENANTS COOP RTE 31 GREENVILLE	C	A	G	A	SG	BRW	600	480
1712020-001 (B-34)	THE COLONIAL APARTMENTS MASON RD NEW IPSWICH	C	I	G	A	SG	BRW	365	25
1515030-001 (K-34)	IMAGINE THAT EARLY LRNING CTR 339 FITCHBURG RD, RTE 31 MASON	P	A	G	A	SG	BRW	0	40
1515030-501 (K-35)	IMAGINE THAT EARLY LRNING CTR 339 FITCHBURG RD, RTE 31 MASON	P	A	E	A	PT		0	40

# **Appendix C**

# Assessments of Public Water Supply Sources - MASON

This report is a summary of NH Department of Environmental Services' assessments of the vulnerability of each source used by the public water system(s) located in this municipality. The sources listed here are grouped first by the type of public water system and then by the system itself. Each source was ranked according to a number of criteria; a vulnerability ranking is given for each criterion that applies to the source. *An explanation of each column in the report can be found on the last page.*

Source Number	Source Description	Source Type	Date Assessment Completed	Number of Vulnerability Rankings			Susceptibility Ranking Criteria												
				Highs	Mediums	Lows	Detects	Well/Intake	KCSs	PCSs	Highways/RRs	Pesticides	Septics	Urban Land Cover	Ag Land Cover	Animals	Lagoons	Dry discharges	Sanitary radius
System Type <input type="checkbox"/> N C=Community; P=Non-Transient, Non-Community; N=Transient																			
EPAID	1518010	System Name: PICKITY PLACE																	
001	BRW	G	01/31/2001	2	0	7	L	L	L	H	L	H	L			L	L		
EPAID	1518020	System Name: PARKERS MAPLE BARN/SUGAR HOUSE																	
001	BRW	G	01/31/2001	1	0	8	L	L	L	H	L	L	L			L	L		
002	BRW	G	09/27/2000	1	0	8	L	L	L	H	L	L	L			L	L		
System Type <input type="checkbox"/> P C=Community; P=Non-Transient, Non-Community; N=Transient																			
EPAID	1515010	System Name: MASON PUBLIC SCHOOL																	
001	BRW	G	09/28/2001	1	3	8	L	L	L	L	H	L	M	L	M	L	L	M	

## Explanatory Notes

*Abbreviations used in the following notes:*

**HAC** = hydrologic area of concern for a surface water source. For small or undeveloped watersheds, the HAC includes the entire watershed. For all other surface sources, the HAC includes only a portion of the watershed close to the water system intake.

**WHPA** = wellhead protection area for a groundwater source. For community and non-transient systems, the WHPA is the area from which water is expected to flow to the well under extremely dry conditions. For transient systems, the WHPA is the area within 500 ft of the well.

**EPAID:** Each public water system is identified by a 7-digit federal ID number.

**Source number:** Each source is further identified by a 3-digit number.

**Source description:** An abbreviated description of the source from NHDES's database. (Some common abbreviations: BRW=bedrock well; GPW=gravel-pack well; GRW=gravel well; DUG=dug well; PTW=point well; SPR=spring; ART=artesian well; INF=infiltration well.)

**Source type:** G=groundwater (well or spring); S=surface water (lakes, reservoirs, ponds, rivers); E = water purchased from another system (*Purchased sources are not assessed per se, but the original sources used by the seller are assessed*).

**Date Assessment Completed:** The date NHDES completed the process of reviewing available data, collecting new data, and entered the assessment information into its database.

**Number of Vulnerability Rankings:** The number of High, Medium, and Low rankings for that source listed in the columns to the right. Each criterion is explained below. Some criteria do not apply to all types of sources or systems.

**Detects:** Confirmed detections of certain contaminants (after treatment) of suspected human origin, not including disinfection byproducts. L = none detected at or above trigger levels in the most recent round of sampling. There is no M ranking for this criterion. H = contaminants were detected at or above trigger levels.

**Well/Intake:** The integrity of the well (if a groundwater source) or the intake (if a surface water source). L = no unresolved deficiencies with the well or intake identified in the most recent sanitary survey. There is no M ranking for this criterion. H = there are unresolved deficiencies.

**KCSs:** Known contamination sources in the vicinity of the source. This includes any site known to DES where contaminants are known or very likely to have been released to the ground, and where remediation is not complete. L = none present in the WHPA (for groundwater sources) or in the HAC (for surface water sources). M (for community and non-transient systems) = one or more KCSs in the WHPA or HAC but not within 1,000 ft of the well or intake. *There is no M ranking for transient systems.* H = one or more KCSs within the WHPA or HAC within 1,000 ft of the well or intake.

**PCSs:** Potential contamination sources in the vicinity of the source. This includes any site known to DES where contaminants are known or very likely to be used in significant quantities, but where there are no known releases to the ground. L (for community and non-transient systems) = no PCSs within 1,000 ft of the well in the WHPA (for groundwater sources) or none present in the HAC (for surface water sources). L (for transient systems) = none present in the WHPA. M (for groundwater sources serving community and non-transient systems) = 10 or fewer PCSs within 1,000 ft of the well in the WHPA. M (for surface water sources) = one or more PCSs in the HAC but not within

1,000 ft of the intake. *There is no M ranking for transient systems.* H (for groundwater sources serving community and non-transient systems) = more than 10 PCSs within 1,000 ft of the well in the WHPA. H (for transient sources) = one or more PCSs in the WHPA. H (for surface water sources) = one or more within 1,000 ft of the intake in the HAC.

**Highways/RRs:** The presence of numbered state highways or active railroads in the vicinity of the source. L = none present in the WHPA or HAC. M (for community and non-transient groundwater sources) = one or more in the WHPA but not within 1,000 ft of the well. M (for surface sources) = one or more in the HAC but not within 300 ft of the source water. *There is no M ranking for transient systems.* H (for transient sources) = one or more in the WHPA. H (for community and non-transient groundwater sources) = one or more in the WHPA within 1,000 ft of the well. H (for surface sources) = one or more in the HAC within 300 ft of the source water.

**Pesticides:** Whether or not pesticides have been routinely applied in the vicinity of the source. This is based on the presence of land parcels owned by registered pesticide applicators. L = no application areas in WHPA or HAC. M (for community and non-transient sources) = application site(s) in WHPA or HAC but not within 500 ft of the well or within 300 ft of the intake. *There is no M ranking for transient systems.* H = application site(s) within 500 ft of the well or within 300 ft of the intake.

**Septics:** The presence or density of septic systems and sewer lines in the vicinity of the source. L (for community and non-transient groundwater sources) = no septic systems or sewer lines located within 500 ft of the well, and fewer than 30 septic systems in the remainder of the WHPA. L (for surface sources) = no septic systems within 500 ft of surface water. L (for transient sources) = no septic systems or sewer lines within 75 ft of the well. M (for community and non-transient groundwater sources) = fewer than 10 septic systems and no sewer line located within 500 ft of well, and fewer than 30 septic systems in remainder of the WHPA. M (for surface sources) = low density of septic systems (lots averaging 2 acres or more) within 500 ft of surface water in the HAC. *There is no M ranking for transient systems.* H (for community and non-transient groundwater sources) = 10 or more septic systems or any sewer line within 500 ft of the well and/or high density of septic systems (more than 30) in the WHPA. H (for surface sources) = densely developed shoreline (lots averaging less than 2 acres) within 500 ft of surface water in the HAC. H (for transient sources) = one or more septic systems or sewer lines within 75 ft of the well.

**Urban Land Cover:** The percentage of urban land cover in the vicinity of the source, based primarily on satellite images. *This criterion does not apply to sources serving transient systems.* L = less than 10% of the WHPA or HAC is urban, and less than 10% of the WHPA within 1,000 ft of the well is urban. M (for community and non-transient groundwater sources) = less than 10% of WHPA is urban but 10% or more of the WHPA within 1,000 ft of the well is urban. M (for surface sources) = between 10% and 20% of HAC is urban. H (for community and non-transient groundwater sources) = 10% or more of WHPA is urban. H (for surface sources) = 20% or more of HAC is urban.

**Ag Land Cover:** The percentage of agricultural land cover in the vicinity of the source (in the WHPA or within 300 ft of surface water in the HAC), based primarily on satellite images. *This criterion does not apply to sources serving transient systems.* L = no ag land. M = less than 10% ag land. H = 10% or more ag land.

**Animals:** The presence of concentrations of 10 or more animal units in the vicinity of the source. L = none in the WHPA or (for a surface source) within 300 ft of surface water in the watershed. M (for community and non-transient groundwater sources) = one or more such farms in the WHPA but not within 1,000 ft of the well. M (for a surface source) = none within 300 ft of surface water in the HAC, but one or more within 300 ft of surface water in the watershed. *There is no M ranking for transient systems.* H = one or more in the WHPA within 1,000 ft of the well or (for a surface source) within 300 ft of surface water in the HAC.

**Lagoons:** The presence of wastewater treatment lagoons or spray irrigation sites in the vicinity of the source. L = none in the WHPA or (for a surface source) in the entire watershed. M (for community and non-transient groundwater sources) = one or more in the WHPA but not within 1,000 ft of the well. M (for a surface source) = none within 300 ft of surface water in the HAC, but one or more in the watershed. *There is no M ranking for transient systems.* H = one or more in the WHPA within 1,000 ft of the well or (for a surface source) within 300 ft of surface water in the HAC.

**Dry Discharge:** The presence of dry-weather stormwater discharge sites in the vicinity of the source. *Only a handful of surface sources were evaluated for such discharges; no discharges were found.*

**Sanitary Radius:** The presence of development not associated with the well within the sanitary radius (within 75 to 400 ft of the well). *Applies only to groundwater sources serving community and non-transient systems.* Of particular concern are sewer lines, septic systems, or storage of regulated substances in this area. L = no inappropriate land uses or practices. No medium ranking. H = inappropriate land uses or practices were discovered during the most recent sanitary survey, and have not been corrected.

**Trophic status:** The projected trophic (nutrient) status of the source as predicted by a computer model using a future land development scenario for the watershed. *This criterion applies only to 24 lakes, ponds, and reservoirs included in the phosphorus loading study.* L = oligotrophic (relatively good clarity and water quality with low algae population). M = mesotrophic (intermediate clarity, quality, and algae population). H = eutrophic

# **Appendix D**



# Protecting Groundwater Resources

By Pierce Rigrod

**M**any states and leading experts continue to stress the importance of containing and managing hazardous materials as a necessary strategy to maintain water quality. Managing hazardous materials to avoid releases to New Hampshire's water continues to be an important goal to ensure high-quality water resources. Releases of hazardous materials, such as gas, oil or solvents, often occur when stormwater washes them from commercial or industrial activities and into surrounding water resources. Treating stormwater containing more contaminants has a cost, and even as stormwater technology and designs improve, the additional cost and complexity of those systems underscores the need to have in place simple controls and management systems for potential ground or surface water contaminants.

The New Hampshire Department of Environmental Services' (DES) approach to protecting groundwater is a hierarchical approach that includes land conservation for the most sensitive resource areas, prohibiting a few "high-risk" land use restrictions and then applying proper management of hazardous substances.

Hazardous substances can be properly used in a manner that minimizes the risk of a spill or other release to groundwater or nearby surface water. Accordingly, the focus of groundwater protection programs should be on management of existing activities as well as effective performance standards for those new developments that utilize regulated substances. The need for local management to ensure proper use is apparent as many commercial and industrial areas "build out" in New Hampshire. Many of these industrial and commercial areas are located over the most productive stratified drift aquifers.

## Better Management Through Best Management Practices (BMPs)

As directed by the New Hampshire legislature under the Groundwater Protection Act (RSA 485-C) the DES has established "best management practices" (BMPs) that must be employed by potential contamination sources (PCSs, defined under RSA 485-C) throughout the state. However, the reality is that local entities (municipalities and public water suppliers) are indispensable partners with DES in ensuring compliance with the BMP requirements. DES's Best Management Practices rule, (Env-Ws 421) applies to a defined set of "regulated substances" that pose a higher risk to groundwater quality. The BMPs are basic practices, which include the use of appropriate containers, labeling on containers, impervious floor surfaces and outdoor storage. For example, the BMP rule establishes that containers with regulated substances stored outside must be covered and placed upon impervious surfaces.

The BMP rule applies to *any* non-residential activity that uses more than household quantities (more than five gallons) of regulated substances, with few exceptions. Determining whether an activity or operation is following the state BMPs is not difficult or time consuming. Many water suppliers and local health officers visit these facilities to ensure BMPs are being used.

DES inspects underground storage tanks (USTs), above ground storage tanks (ASTs), hazardous waste generators, and solid waste facilities (to name several) to ensure that similar BMPs are employed at these facilities. However, many activities that use regulated substances do not require a state permit or registration, and could benefit from local review and oversight.

For example, recent DES experiences with some auto salvage yards suggest that there is still more work to be done to both raise awareness and implement basic controls on storage, handling and use of gasoline, used oil, antifreeze and other potential contaminants that can be released into the surface or groundwater.

**What Is a Local Groundwater Management Program?**

Local groundwater protection can take a variety of forms, from having the Girl Scouts stenciling storm drains that discharge urban runoff or the Public Works instituting a low-salt policy near a community well. Usually, a groundwater management program is an organized approach to protecting an important groundwater resource area by providing regular public education activities and conducting on-site inspections to ensure compliance with the BMPs in the Env-Ws 421 rule or similar protections. Public education is targeted to residents and PCSs, and is typically distributed on an annual or a triennial basis. Towns or water suppliers are using creative strategies that maximize their educational messages,

Examples of BMPs	
<p><b>Storage</b></p> <ul style="list-style-type: none"> <li>• Store regulated substances on an impervious surface</li> <li>• Cover regulated containers in outside storage areas</li> <li>• Keep regulated containers at least 50 feet from storm drains, if no secondary containment</li> </ul>	<p><b>Handling</b></p> <ul style="list-style-type: none"> <li>• Place drip pans under spigots, valves and pumps</li> <li>• Have spill control and containment equipment readily available</li> <li>• Perform transfers (for example, filling containers) over impervious surface</li> </ul>

often publishing through multiple media outlets (that is, Web site, cable access TV, tax bills or town reports). Stratham, for example, puts information on managing potential contaminants within their town report, which is mailed to all residents of the town.

Where PCSs exist, a groundwater protection management program must address how BMPs are used within the context of specific industrial or commercial activities. This is done through BMP inspections, also referred to as BMP “surveys” of existing PCS activities and they are typically completed once every three years. Most local BMP inspection programs are conducted on a volun-

tary basis, meaning the PCS owners are not required to participate because the local entity has no regulatory authority. Where local entities acquire regulatory authority, either through local health regulations or through the groundwater reclassification process (see below), compliance with BMPs can be locally enforced. In New Hampshire approximately 73 public water systems conduct voluntary BMP surveys, mostly without enforcement authority.

A local groundwater management program may involve enforcement of state BMPs under RSA 485-C or RSA 147. A municipal health officer, under RSA 147, has the authority to enter onto private property to inspect and order removal of a nuisance that is “injurious” to the public’s health. RSA 485-C:16 also gives concurrent authority (with DES) to health agents to issue cease and desist orders, when deemed necessary to protect groundwater. For example, enforcement to remove an open drum of oil or gas that is leaking and presents a public health nuisance can be conducted under the authority provided under RSA 147:4. But in circumstances where BMP rules are not being followed and there is no immediate nuisance or public health injury, a health officer must rely upon a local health ordinance or state groundwater reclassification for the authority to enforce state BMPs.



Above: Poor control of regulated fluids at an auto salvage yard, 2005. Photo courtesy New Hampshire Department of Environmental Services.

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## A Local Health Ordinance as a Groundwater Management Program

A town may adopt a local health ordinance to require local compliance with Env-421 BMPs, and establish a health agent's authority to enforce BMPs. Such a health ordinance should also spell out the local process regarding, PCS notification and BMP survey procedures, and local certification of compliance. Adopting a local health ordinance will be useful to ensure a BMP program is properly administered and consistent with other local ordinances. Several steps should be taken in advance when planning the adoption of a health ordinance, including: 1) delineating the groundwater resource area, (that is, wellhead protection areas or aquifer); 2) identifying PCSs within that area that will be surveyed; and 3) establishing a survey protocol for use by the health agent. By adopting a local health ordinance, the municipality may specifically define the set of activities or land use activities that it determines to be PCSs, beyond what is considered a PCS as listed under RSA 485C. DES provides a model health ordinance for communities interested in adopting a local health ordinance, however, consult with town counsel and DES in advance of adoption. (DES's Model Health Ordinance can be found at [www.des.nh.gov/dwspp/hodoc4.pdf](http://www.des.nh.gov/dwspp/hodoc4.pdf).)

## State Reclassification as a Groundwater Management Program

The legislature also allows a local entity (town or water supplier) to make application to DES to "reclassify" a specific area around a public water supply well, an aquifer or other area that contains locally important groundwater resources as determined by the local entity. Reclassification of wellhead protection areas (WHPAs) or other

*Reclassification of wellhead protection areas (referred to as GAA in RSA 485-C) also prohibits the development of new solid waste landfill or hazardous waste disposal facility, outdoor storage of deicing chemicals (including salt), auto salvage yards, snow dumps or wastewater or septage lagoons within the wellhead protection area of a public water supply.*

areas of high-value groundwater (that is, highly productive aquifers), also involves instituting a local PCS education and survey program as a means to greater adherence to BMPs.

Reclassification through RSA 485-C:15 also gives the authority to local health agents to enter onto private property to enforce provisions under the statute, including the state BMPs. DES's Model Health Ordinance provides an approach with draft language for adopting a local health ordinance in conjunction with or independently from state groundwater reclassification.

## New Development and Groundwater Protection Zoning Ordinances

The focus of a groundwater protection program should not only be on what currently is "on the ground" but also what activities are coming in the future. At least sixty-two municipalities have land use restrictions to protect groundwater resources. The state Model Groundwater Protection Ordinance combines a few land use restrictions with required performance standards that are based upon the requirements of Env-Ws 421 BMPs. Groundwater protection zoning or rules can establish performance standards that improve stormwater quality and require spill control plans that reduce the release of regulated substances to groundwater. Beyond zoning, site plan review rules can be drafted to improve the control of regulated substances and limit the commingling of contaminated surfaces with clean stormwater through the

design and management of loading pads, fuel transfer areas, outdoor storage or waste areas. Good site design can offset poor management by having structural protection built around or within the operations or activities that take place upon the site.

RSA 674 permits local governments to adopt innovative land use controls that include environmental characteristics zoning (that is, wetlands, groundwater, etc.) and performance standards. For example, if there is a violation of a local performance standard that protects groundwater (for example, improper storage of wastes) local governments may issue cease and desist orders (RSA 676:17-a) and local land use citations (RSA 676:17-b), or may pursue civil penalties and injunctive relief in superior or district court (RSA 676:15, 17). Again, when considering the adoption of a groundwater protection ordinance or enforcement, consult your local town counsel.

DES can provide BMP survey training, sample forms and letters, model zoning language, maps and information as well as references to existing local groundwater protection programs.

*Pierce Rigrod is a Principal Planner with DES's Source Water Protection Program and provides technical assistance to municipal officials and water suppliers on protecting drinking water supplies in New Hampshire. He can be contacted by e-mail at [prigrod@des.state.nh.us](mailto:prigrod@des.state.nh.us) or by phone at 603.271.0688.*