

Municipality/Organization: Town of Weston

EPA NPDES Permit Number: MAR041068

MaDEP Transmittal Number: W-035252

**Annual Report Number
& Reporting Period:** No. 11: March 2013-March 2014

NPDES PII Small MS4 General Permit Annual Report

Part I. General Information

Contact Person: Stephen R. Fogg, P.E.

Title: Town Engineer

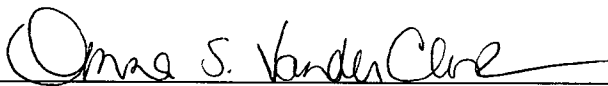
Telephone #: 781-786-5115

Email: fogg.s@westonmass.org

Certification:

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

Signature:



Printed Name: Donna VanderClock

Title: Town Manager

Date: April 30, 2014

Municipality/Organization: Town of Weston

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Signature:

Printed Name: Donna VanderClock

Title: Town Manager

Date: April 30, 2014

Part II. Self-Assessment

The Town of Weston has completed the required self-assessment and has determined that our municipality is in compliance with all permit conditions, except for the following provisions:

BMP 1-6, Outreach to Private Ways, has only been partially completed. The Town Engineer has been in communications with the Weston Roads Trust, which owns and manages several miles of private ways and their associated drainage systems.

BMP 2, Public Involvement and participation has not been achieved to the desired degree. Despite this, the passing of the Town of Weston Stormwater & Erosion Control By-law and Stormwater & Erosion Control Regulations has raised awareness levels in the building community, and for residents doing major home additions or other improvements that involve the creation of new impervious area.

Part III. Summary of Minimum Control Measures

1. Public Education and Outreach

BMP ID #	BMP Description	Responsible Dept./Person Name	Measurable Goal(s)	Progress on Goal(s) – Permit Year 11 (13-14) (Reliance on non-municipal partners indicated, if any)	Planned Activities – Permit Year 12 (14-15)
1-1	Flyer to residents	SUASCO WCC and SRF	Distribute to 75% of residents	Completed in year 1	Additional flyers on Stormwater
Revised	<i>Septic Info flyer to residents</i>	<i>BOH</i>	<i>On Town website</i>	<i>Completed</i>	<i>Distribute flyers to all residents</i>
1-2	Lesson Plan for Fifth Graders	SUASCO WCC and SRF	Lesson plan taught	Lesson plan continuing in schools. Completed lesson and activity for 4 th and 5 th graders on “Exploring Stormwater”.	Lesson Plan to continue.
Revised	<i>Plan to be taught in 4th grade</i>				
1-3	Media Campaign	SUASCO WCC and SRF	Media packet given to press		Stormwater education article in local media spots.
Revised					
1-4	Flyer to Businesses	SRF & RES	Distribute to 50% of businesses	Mailed 165 letters/flyers March 2013	Send additional updates, memos, flyers.
Revised			<i>Distribute to 100 % of businesses</i>	<i>No additional letters.</i>	
1-5	Video	SUASCO WCC and SRF	Show video at public meeting		
Revised	<i>“Stormwater Matters Outreach and Participation Campaign”</i>	<i>SUASCO</i>	<i>Implement stormwater advertising campaign</i>	<i>Ad campaign displayed at informational meetings in spring 2011</i>	<i>Provide information to public including post cards, pamphlets, etc. available at Town buildings.</i>
1-6	High School Students involvement in stormwater outreach	SRF	Submit reports to school and to Town Engineer	Students prepared and planned stormwater outreach	Continue with student involvement in stormwater outreach with new students

1a. Additions

1-7	Outreach to Private Ways	DPW	Develop and send correspondence to road trusts and private way owners about stormwater issues	Continued updates of road conditions to Roads Trust.	Follow up as necessary
<i>Revised</i>		<i>DPW</i>	<i>Private roads monitored as part of and during construction of Stormwater Management Permits projects.</i>	<i>2-Way Communication with Roads Trusts.</i>	<i>Continue to monitor roads and alert road trusts of conditions.</i>
1-8	Illicit Discharge Detection and Elimination By-Law	DPW, Stormwater Working Group	Hold public meeting to describe proposed bylaw and regulations	Completed in previous year	Revisit residential discharges to Town drainage systems.
1-8	Public Presentations	Conservation Agent	Make presentation to community groups about stormwater	Two-Part Presentation to Env. Science students at school. Presentation to Boy Scouts at Town Hall.	Continue as opportunities arise; possible library presentation
1-9	Proposed by-law	Stormwater Working Group	Hold informational meetings and hearings on proposed stormwater and erosion control by-law	By-law adopted at 2011 Annual Town Meeting, May, 2011	Continued outreach and education around new by-law
<i>Revised</i>	<i>Amend/Update By-law</i>		<i>Revise some language in By-law</i>	<i>Vote anticipated May, 2014</i>	<i>Pass and incorporate changes to By-law.</i>
1-10	Stormwater talk to High School	SRF	High School biology class learned about stormwater pollution.	Class visited DPW for tour, and presentation on Stormwater to class, April 2013	Class to visit again.

2. Public Involvement and Participation

BMP ID #	BMP Description	Responsible Dept./Person Name	Measurable Goal(s)	Progress on Goal(s) – Permit Year 11 (13-14) (Reliance on non-municipal partners indicated, if any)	Planned Activities – Permit Year 12 (14-15)
2-1	Traveling Display	SUASCO WCC and SRF	3 months on display	None - Completed in year 1	Use display as opportunity arises. Display at Town Hall

<i>Revised</i>					and/or other common area.
2-2	Poster contest (5 th grade)	SUASCO WCC and SRF	Hold contest	Contest held in previous years.	None
<i>Revised</i>					
2-3	Summit Event	SUASCO WCC and SRF	Hold local stormwater summit meeting	none	none
<i>Revised</i>					
2-4	Photo contest (High School)	SUASCO WCC and SRF	Hold contest	None	None – being considered for next permit cycle
<i>Revised</i>					
2-5	Super—summit event	SUASCO WCC and SRF	Participate in regional “super-summit”		
<i>Revised</i>	<i>“Stormwater Matters Outreach and Participation Campaign”</i>	<i>SUASCO</i>	<i>Implement stormwater advertising campaign</i>	<i>Ad campaign displayed at informational meetings in spring, 2013.</i>	

2a. Additions

2-6	Stream team survey of Seaverns Brook	SRF and stream team	Complete survey	None	Provide GIS mapping and complete survey
<i>Revised</i>	<i>Stream team survey of Hobbs Brook</i>	<i>Weston Girl Scouts</i>	<i>Complete survey</i>	<i>Survey completed, April 2008</i>	
2-7	Catch basin stenciling program	SRF	Volunteer group(s) to install 180 storm drain markers in selected locations	completed in a previous year	Continue program to other areas of Town

3. Illicit Discharge Detection and Elimination

BMP ID #	BMP Description	Responsible Dept./Person Name	Measurable Goal(s)	Progress on Goal(s) – Permit Year 11 (13-14) (Reliance on non-municipal partners indicated, if any)	Planned Activities – Permit Year 12 (14-15)
3-1	Stormwater System Mapping	DPW	Complete mapping of stormwater system over a 3 year period	None – completed during year 3	Completion of stormwater system mapping using GPS to construct pipe network
3-2	Dry weather screening of outfalls	DPW	Visual inspection/report of known outfalls, 33% each year	Senior high school student inspected some outfalls.	Continue to inspect outfalls and document changes from last inspection
<i>Revised</i>		<i>DPW</i>	<i>Create database and tracking system for outfall inspections.</i>	<i>Completed</i>	
3-3	Illicit Discharge Elimination	DPW, Board of Health	Trace non-stormwater flows and eliminate within 1 year	none	Sample flowing outfalls using IDDE protocol
3-4	Water Quality Monitoring	Cambridge Water Supply	Obtain and review results of regular monitoring	Water quality data summary from CWS - See Attachment A	Same as prior years
3-5	Amend Stormwater regulations	DPW	Amended regulations adopted at 2003 Annual town Meeting	Goal met	
<i>Revised</i>			<i>Amended regulations adopted at 2010 Annual Town Meeting</i>	<i>Goal met</i>	
<i>Revise-2</i>	<i>Amend/update Stormwater regulations</i>	<i>SWPA</i>	<i>Meetings/discussions to update stormwater regulations</i>	<i>In progress; vote anticipated this year.</i>	<i>Continue to monitor regulations compliance.</i>
3-6	Septic System Monitoring Program	Board of Health	Develop, implement and enforce septic pumping	BOH not planning to institute mandatory pumping	
.			System in place to identify frequent pumping	Database created and in use; frequent pumping locations are investigated	
3-7	Dechlorination of New Water Mains	DPW - Water Div.	Use dechlorination tablets when flushing new mains	New water mains installed in two streets, and were dechlorinated before flushing.	As needed

3-8	Trench Dewatering Policy	DPW	Require siltation control on all trench dewatering projects	Siltation control specified on all capital projects; controls used on DPW projects	As needed
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4. Construction Site Stormwater Runoff Control

BMP ID #	BMP Description	Responsible Dept./Person Name	Measurable Goal(s)	Progress on Goal(s) – Permit Year 11 (13-14) (Reliance on non-municipal partners indicated, if any)	Planned Activities – Permit Year 12 (14-15)
4-1	Erosion and Sediment Control Bylaw	Stormwater Working Group	Develop, implement and enforce bylaw	By-law adopted at Town Meeting, May 2011 Stormwater Management Permits reviewed and approved; construction projects monitored & inspected.	Continue full implementation of by-law and regulations
<i>Revised</i>	<i>Implementation of by-law and regulations</i>	<i>Stormwater Permitting Authority(SWPA)</i>	<i>All projects meeting established thresholds of land disturbance required to obtain Stormwater Permit</i>	<i>Regulations and permit procedures in place November 2011;</i>	<i>Same as prior years</i>
4-2	Planning Board review of projects	Planning Board	All projects reviewed for compliance with runoff control measures	All applicants are required to demonstrate that they are addressing stormwater runoff control during construction	Same as prior years
4-3	Conservation Commission review of projects	Conservation Commission	All projects reviewed for compliance with runoff control measures	All applicants are required to demonstrate that they are addressing stormwater runoff control during construction	Same as prior years

4-4	Street Opening permit process	DPW	Inspections conducted for compliance with Stormwater Regulations	DPW inspector assigned to this task	Inspections documented and reported in annual report – continue this program.
4-5	Building Permit process	See 4-1	See 4-1	Stormwater Permit must be approved before Building permit is issued.	

4a. Additions

4-6	Stormwater Management Permit review of projects	SWPA	Review all applications; conduct site inspections	Reviewed 70 Stormwater Management Permit Applications	Review as needed
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5. Post-Construction Stormwater Management in New Development and Redevelopment

BMP ID #	BMP Description	Responsible Dept./Person Name	Measurable Goal(s)	Progress on Goal(s) – Permit Year 11 (13-14) (Reliance on non-municipal partners indicated, if any)	Planned Activities – Permit Year 12 (14-15)
5-1	Erosion and Sediment Control By-law	DPW	Same as control measure 4-1	Bylaw and regulations in place.	Monitor the progress of the new By-law.
Revised	<i>Implementation of by-law and regulations</i>	<i>Stormwater Permitting Authority</i>	<i>All projects meeting established thresholds of land disturbance required to obtain Stormwater Permit</i>	<i>Regulations and permit procedures in place November 2011; Stormwater Engineer hired Dec. 2011 Refer to Attachment B for Stormwater and Erosion Control Regulations</i>	<i>Same as prior years</i>
5-2	DPW Runoff Control Policy	See 5-1		No new additional stormwater runoff to streets allowed.	Continue to monitor projects.

5-3	Compliance with stormwater O&M plans under Con Com review	Conservation Commission	Ensure compliance with post-construction stormwater O&M Plans	Any project approved under the Con Com's jurisdiction which increases impervious surfaces by 2,000 s.f. or more must demonstrate that there will be no increase in the rate or volume (offsite) of the 100 year storm. Applicants are required to submit a stormwater O&M plan and annual inspection checklist for the first year after construction	Con Com will not issue a Cert. of Compliance until the Applicant has completed a post-construction stormwater structure(s) inspection and submitted a completed maintenance checklist

6. Pollution Prevention and Good Housekeeping in Municipal Operations

BMP ID #	BMP Description	Responsible Dept./Person Name	Measurable Goal(s)	Progress on Goal(s) – Permit Year 11 (13-14) (Reliance on non-municipal partners indicated, if any)	Planned Activities – Permit Year 12 (14-15)
6-1	Street Sweeping	DPW	Sweep all public streets annually	All public streets swept at least once per year	Same as prior years
6-2	Catch Basin Cleaning	DPW	Clean all public catch basins annually	All public catch basins cleaned at least annually	Same as prior years
6-3	Drainage Improvement Projects	DPW	Incorporate structural BMPs into each project	Church Street project completed, including approx. 750 lin. ft. of drainage and road improvements, incorporating stormwater BMPs.	North Ave. drainage project construction; South side drainage project design (flood mitigation) 5 year capital plan to continue
6-4	DPW Housekeeping	DPW	Conduct environmental audit, implement rec.	Completed	none
<i>Revised</i>	<i>Environmental Management System</i>	<i>DPW</i>	<i>Develop and Implement Environmental Management System</i>	<i>Implementation of Stormwater Best Management Practices at new DPW facility opened February 2011</i>	<i>Update maintenance program. Continuing program</i>

6-5	Roadway De-icing Program	DPW	Install computerized spreader controls in previous year. Monitored salt usage	Continued to track usage to achieve optimal application rates. Application rate 734 lbs./lane mile	Continue to seek optimal levels to achieve balance between public safety and environmental impact
6-6	Waterway Maintenance	DPW	Clear waterways of debris, 3 year rotating basis	Notice of Intent filed with Conservation Commission for permit to do maintenance	Continuing project
<i>Revised</i>	<i>Ditch maintenance</i>	<i>East Middlesex Mosquito Control Project</i>	<i>Clear sediment from ditches</i>	<i>ditch clearing accomplished in one area</i>	<i>Identify and clean as time and budget allows</i>

6a. Additions

6-7	Employee Training Program	DPW	Provide all departments with training	Done for DPW staff as part of EMS program	
<i>Revised</i>	<i>Stormwater training</i>	<i>SRF & RES</i>	<i>Outside stormwater training</i>	<i>Completed</i>	<i>Continue training as available.</i>
6-8	New DPW Facility	DPW	Incorporate Green Building Design into project	Construction completed and building opened Feb. 2011	Implementation of Stormwater Best Management Practices at new DPW facility opened February 2011; Continue Maintenance Program of BMPs.
<i>Revised</i>	<i>DPW maintenance of drainage systems.</i>	<i>DPW</i>	<i>Maintenance of facility drainage</i>	<i>Cleaned all drainage structures</i>	<i>Continued annual maintenance; repairs as needed.</i>
6-9	Erosion repairs	DPW	Repair eroded slope at water tower-Cat Rock Hill	Completed-new soil added with slope reinforcement and grass planted	Monitor Town land for erosion issues and repair.

Part IV. Summary of Information Collected and Analyzed

Attachment A - A summary of water quality monitoring results from Cambridge Water Supply (CWS) is included as Attachment A. In general the most recent data shows low levels of E-Coli bacteria compared to the range of concentrations measured at stream locations in prior sampling rounds. Weston has received no notification of specific water quality concerns from staff in the Watershed Protection Division of CWS. This agency has staff dedicated to monitoring water quality within the watershed on a daily basis.

Attachment B – Town of Weston Board of Health has produced flyer “Your Septic System, What Is It Worth? It Is Priceless!” which informs residents of the value of caring for their septic systems and how they function.

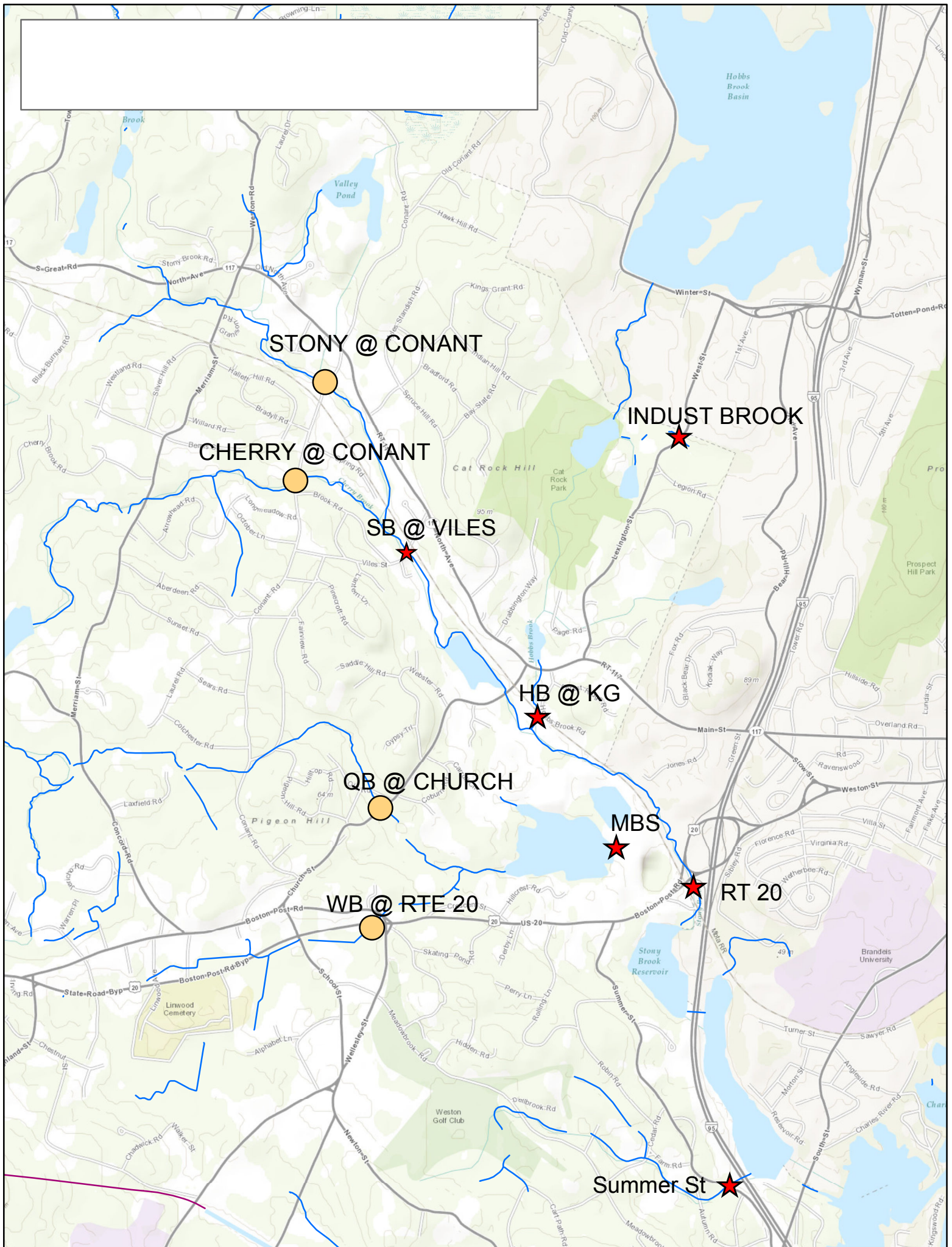
Other

A tracking system was put in place in 2004 for private development stormwater BMPs that are reviewed and approved by the Town Engineer. This system was updated to incorporate the new Stormwater Permit provisions under the Stormwater and Erosion Control By-Law and Regulation. To date, approximately 400 projects have been reviewed.

The Stormwater Engineer reviews Stormwater Management Permit Applications for compliance with the Town of Weston Stormwater & Erosion Control By-Law and Regulations. 70 Stormwater Permit Applications were submitted and reviewed in 2013.

ATTACHMENT A

CAMBRIDGE WATER SUPPLY – WATER QUALITY MONITORING SUMMARY



2013 Surface Water Quality Data, Cambridge Watershed, Weston																		
Baseflow (no secondary tributary or stormwater samples in Weston, 2013)																		
SiteID	USGS ID	Date	Time	Water temp. (°C)	SpC (µS/cm)	DO (%Saturation)	DO (mg/L)	pH	Orp mV	Salinity PSS	TDS (mg/L)	Air temp. (°F)	BP (mmHg)	Staff Height	Discharge (inst. cfs)	Comments	NH3 (mg/L)	TKN (mg/L)
SB@VILES	01104370	3/5/2013	10:39:31	2.28	228	93.4	12.82	7.13	80	0.10	146.10	38	761	1.70	46.0		<0.02	<0.5
SB@VILES	01104370	5/2/2013	11:04:59	13.33	328	99.4	10.57	7.19	85	0.15	209.60	69	773	0.88	8.3	NO3/NO2 analyzed by	<0.02	<0.5
SB@VILES	01104370	8/1/2013	10:04:49	19.15	321	88.8	8.23	7.05	102	0.15	205.70	76	762	0.73	6.4	Large crawfish sighting	<0.02	<0.5
SB@VILES	01104370	9/19/2013	10:34:40	12.40	362	90.4	9.71	7.42	59	0.17	231.70	67	765	0.48	2.0		0.092	<0.5
SB@VILES	01104370	9/19/2013														FDUP	0.084	<0.5
SB@VILES	01104370	10/29/2013	10:45:47	5.54	390	90.0	11.51	7.45	84	0.18	249.60	40	772	0.45	1.8		<0.05	<0.5
SB@VILES	01104370	12/10/2013	12:59:15	2.27	349	92.1	12.62	7.15	115	0.16	223.40	33	759	0.79	7.3	USGS side-by-side sam	0.160	<0.5
RT 20	01104460	11/6/2012	11:00:03	6.22	393	88.9	11.09	7.21	52	0.18	251.4	37.4	767	5.29	25.00	SH, Q from WEB	0.100	<0.5
RT 20	01104460	1/24/2013	10:33:01	0.46	499	91.0	13.18	7.32	31	0.23	319.6	10.0	764	5.15	18.00	SH taken from USGS	0.035	<0.5
RT 20	01104460	1/24/2013														FDUP	<0.02	<0.5
RT 20	01104460	3/26/2013	10:58:09	4.93	507	97.2	12.29	7.37	60	0.24	324.5	39.6	752	5.90	63.00	SH taken from USGS sit	<0.02	<0.5
RT 20	01104460	7/16/2013	10:09:01	21.00	681	89.7	8.03	7.19	121	0.33	435.5	84.9	765	5.47	34.00	SH taken from USGS sit	0.120	<0.5
RT 20	01104460	8/27/2013	10:24:21	22.45	732	88.7	7.64	7.14	89	0.35	468.6	75.0	757	5.40	31.00	Cl, NO3, NO2 analyzed	0.084	<0.5
RT 20	01104460	10/22/2013	10:40:47	10.47	588	72.7	8.08	7.12	33	0.28	376.4	60.4	758	4.54	3.00		0.064	<0.5
RT 20	01104460	12/10/2013	11:55:06	2.44	575.9	88.3	12.03	7.25	47	0.27	368.6	32.9	759	4.97	12.00	CWD samples taken im	0.067	<0.5
SUMMER ST	01104475	1/24/2013	10:53:02	0.92	285.7	96.7	13.84	7.68	83	0.13	182.8	10.8	764.0	0.52	0.92	ge taken from USGS, 10	<0.02	<0.5
SUMMER ST	01104475	3/26/2013	11:14:55	6.47	258	100.5	12.22	7.65	73	0.12	164.9	39.7	752.0	0.74	2.10		<0.02	<0.5
SUMMER ST	01104475	7/16/2013	10:26:22	17.33	313	95.9	9.26	7.43	150	0.15	200.2	86.7	765.0	0.30	0.20	Flow held back at West	<0.05	<0.5
SUMMER ST	01104475	8/27/2013	10:48:52	15.88	309	94.7	9.32	7.47	136	0.14	197.8	76.1	757.0	0.26	0.14	analyzed by Premier. P	0.16	<0.5
SUMMER ST	01104475	8/27/2013	10:48:52													FDUP	0.11	<0.5
SUMMER ST	01104475	10/22/2013	11:00:50	10.96	287	84.9	9.33	7.43	121	0.13	183.7	61.9	758.0	0.24	0.14		<0.05	<0.5
MBS	01104453	3/5/2013	11:03:27	3.84	570	83.90	11.04	7	105	0.27	364.60	39.2	761.00	96.75	9.40		<0.02	<0.5
MBS	01104453	5/2/2013	10:33:33	17.21	615	82.70	8.08	7	113	0.30	393.70	66.4	773.00	96.34	3.80	Geese present. Branch	<0.02	<0.5
MBS	01104453	8/1/2013	10:27:14	22.96	563	4.90	0.42	6.30	-20	0.27	360.40	78.6	762.00	96.40	2.80	Noticably smelly.	<0.02	<0.5
MBS	01104453	9/19/2013	10:59:50	16.13	590	12.60	1.25	7	124	0.28	377.30	68.54	765.0	96.58	6.80		0.120	<0.5
MBS	01104453	9/19/2013	11:01:16	16.85	592	15.60	1.52	7	57	0.28	378.60	68.54	765.0	96.58		In situ measurements taken in eddie to compa		
MBS	01104453	10/29/2013	11:12:07	7.61	647	50.60	6.13	7	113	0.31	413.90	42.1	772.00	96.23	0.01	Low flow. Discharge re	0.110	0.580
MBS	01104453	10/29/2013														FDUP	0.100	<0.5
HB@KG	01104440	3/12/2013	8:58:08	4.03	905.3	97.0	12.72	7.46	68	0.4	579.3	46.4	763	1.99	22.38	measurement taken in	<0.02	<0.5
HB@KG	01104440	3/12/2013														FDUP	<0.02	<0.5
HB@KG	01104440	6/25/2013	10:34:22	20.99	749.3	94.0	8.35	7.23	122	0.4	479.5	83.1	759	1.94	20.80	estimated from CWD Ra	<0.02	<0.5
HB@KG	01104440	8/6/2013	10:36:10	18.31	702.6	92.7	8.75	7.25	125	0.3	449.6	72.9	764	0.96	1.69	obbs Gates shut for We	<0.02	<0.5
HB@KG	01104440	9/26/2013	11:11:06	15.97	731.6	94.8	9.37	7.52	110	0.4	468.2	60.3	762	1.30	5.50	estimated from 2012 Ra	0.140	<0.5
HB@KG	01104440	11/26/2013	10:31:41	0.73	783.3	94.7	13.69	7.52	101	0.37	501.3	35.6	769	0.90	1.60	d from 2012 Rating Cur	0.091	<0.5
HB@KG	01104440	11/26/2013														FDUP	0.086	<0.5
INDUST BROOK	01104433	3/12/2013	9:24:01	6.84	2080	75.30	9.15	6.88	44	1.06	1331.0	47.84	763	1.04	0.98	Discharge estimated fr	0.14	<0.5
INDUST BROOK	01104433	6/25/2013	10:19:16	19.72	1993	79.00	7.17	6.84	50	1.01	1275.0	82.94	759	0.80	0.23	Discharge estimated fr	0.17	0.51
INDUST BROOK	01104433	8/6/2013	10:19:29	17.23	1764	79.70	7.66	6.92	69	0.89	1129.0	71.78	764	0.74	0.14	Discharge estimated fr	0.04	<0.5
INDUST BROOK	01104433	9/26/2013	10:52:15	15.28	1448	65.00	6.50	7.07	39	0.73	926.8	60.62	762	0.72	0.11	Discharge estimated fr	0.20	0.60
INDUST BROOK	01104433	9/26/2013														FDUP	0.23	0.68
INDUST BROOK	01104433	11/26/2013	10:11:06	0.42	1092	33.90	4.94	7.21	21	0.53	698.9	35.06	769	0.66	0.05	Discharge estimated fr	0.24	<0.5

ATTACHMENT B

THE TOWN OF WESTON BOARD OF HEALTH FLYER

“Your Septic System, What Is It Worth? It Is Priceless”

YOUR SEPTIC SYSTEM

WHAT IS IT WORTH?

IT IS PRICELESS!



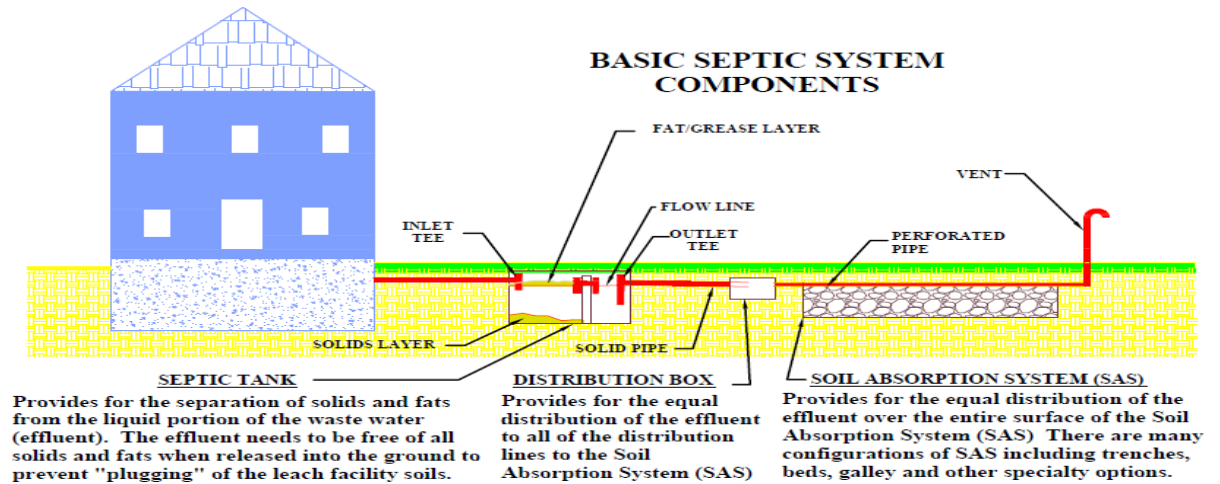
Your septic system is designed to take the waste water from your home and process it so that only clean water ends up going into the water table.

There are three parts to your septic system:

(1) Septic Tank: Waste water from your home is piped to the septic tank. This water stays in the tank for 3-5 days - enough time for fats and solids to separate out. Fats rise to the top, solids sink to the bottom, and clarified water lies between them. Compartments and a T-shaped outlet prevent the sludge and scum from leaving the tank and traveling into the Soil Absorption System (SAS) area. Some homes have a [cesspool](#) which is an open jointed structure that receives un-separated waste. This type of system adds more nutrients to the ground water.

(2) Distribution Box: Clarified waste water from the septic tank is piped to a distribution box. This box evenly distributes the flow of water out to the next part of your system which is the SAS.

(3) Soil Absorption System: Waste water from the distribution box is spread across an underground leaching field or trench system. The wastewater



percolates into the soil, naturally removing harmful coliform bacteria, viruses, and nutrients. Some septic systems have pumps or other treatment components.

How do I know it is working?



A foul odor isn't always the first sign of a malfunctioning septic system. Call a septic professional or the Board of Health if you notice any of the following:

- Wastewater backing up into household drains.
- Bright green, spongy grass on the drain field, even during dry weather.
- Pooling water or muddy soil around your septic system or in your basement.
- A strong odor around the septic tank or soil absorption system drain.

Mind the signs of a failing system. Not all problems with a septic system mean the entire system is in failure but a small problem could create an entire system failure so **FIX it FAST!**



How do I take care of my septic system?

Have your septic tank pumped once every 2-3 years. Pump yearly if you have children or a garbage grinder!

Pumping requires that the scum layer on top and solids or sludge at bottom of the tank be removed. You should inspect the septic tank immediately after pumping while your service person is still present to ensure all scum and sludge has been removed.

The Board of Health is available to provide you with information regarding the location of your septic system components and discuss the care and maintenance of your system.

Don't flush fats/oils, kitty litter, paper towels, baby wipes, feminine products, medicines, paints, latex products or other chemicals down your toilet. Fix leaking toilets and faucets quickly because the excess water will inundate your SAS with more than 5x's the design criteria, causing premature failure.

Know where all of your septic components are located and avoid locating structures like play sets or sheds over any of the systems structures.



What do I do if it breaks?

If you have noticed something that indicates there may be a problem with your system you will need to determine which professional service can help you.

Call the Board of Health to obtain a current list of licensed pumping companies and septic installers.

(1) Septic Pumping Company

Typically a pumping company is your first call if you notice a backup of water in a sink or tub on the lowest level of your home or water is collecting over one of the septic system components. There are many reasons this might be happening including a clogged line, a broken pipe or a clogged drain field.

A septic pumping company will locate your septic tank, pump it to clean out the solids and scum layer and determine if a clogged line or broken pipe is present.

Most pumping companies can do small repairs such as replace a broken pipe or distribution box but they must be licensed by the Board of Health and obtain a permit to do the work. At the completion of the repair the Board of Health will perform an inspection to ensure compliance with Title 5 Regulations then issue a Certificate of Compliance.

(2) Sanitarian/Engineer/ Soil Evaluator

If it is determined that the soil absorption system is clogged then you will need to engage a Professional Engineer or Registered Sanitarian to perform the necessary work. There are several steps involved in this process which will be described here. Your project may include some or all of these steps.

A. Soil Testing Your Engineer or Sanitarian will determine the possible locations for siting a septic system on your property, apply for a soil test date with the Board of Health and schedule an excavator to be on site for the soil tests. On the day of testing the Engineer or Sanitarian will prepare at least two deep test holes and two percolation test holes. These soil tests are done to determine if ledge is present, the depth to ground water and the porosity of the soil which determines how many square feet of leaching area must be provided.

- **Deep Test Holes** are dug more like a large long trench about two feet wide and to a minimum depth of 10 feet (unless

ledge is present). Two vital pieces of information are obtained during this test.

- The first is to establish the depth from the surface of the ground down to the highest point ground water can reach.
- The second is to make sure there is at least 4 feet of existing pervious soil to properly treat the effluent.
- **Percolation Test Holes** are holes that are 1 foot in diameter and 1.5 feet in depth. These test holes must be dug in the "parent soil" layer which typically starts at a depth of 2 to 3 feet. Water is poured into this hole and timed to determine the percolation rate of the soil.
- **Title 5 310 CMR 15.000** the State Regulations for Onsite Waste Management assigns an application coefficient for the percolation rate. The highest is for percolation rates up to 5 min./in. which is 0.74 gallons /sf of leach area, the lowest is 60 min./in which has a coefficient of 0.2gal./sf of leach area.

B. Septic System Design - Your Engineer or Sanitarian will design a plan that meets the requirements of Title 5 and submit this design to the Board of Health for review and approval.

C. Approval Letter - The Board of Health will review the plan for compliance with Title 5 and issue an approval letter to the owner.

D. Permit to Construct the Septic System - Once the plan has received Board of Health approval you may choose a licensed septic installer. Permits to construct a septic system are only issued to Licensed Septic Installers.

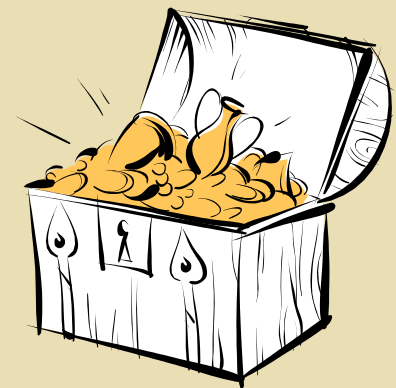
E. Construction of the Septic System - Typically the septic system is installed over a one to two week period. The Board of Health and Design Engineer/Sanitarian will conduct installation inspections during this time to ensure compliance with Title 5. The Design person will also locate all the components of the septic system to prepare an "As Built" plan.

F. Certificate of Compliance - When the installation of the system is complete the Installer must submit a certification statement and materials documentation and the Designer must submit an "As Built" to the Board of Health. When all meet Title 5 requirements the Board of Health will issue a Certificate of Compliance.

The Board of Health recommends that home owners get two or three bids on any repair work that may be necessary

YOU MAY HAVE \$50,000 BURIED IN YOUR BACK YARD!

**TO FIND OUT WHERE IT IS,
CONTACT THE
WESTON BOARD OF HEALTH!**



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