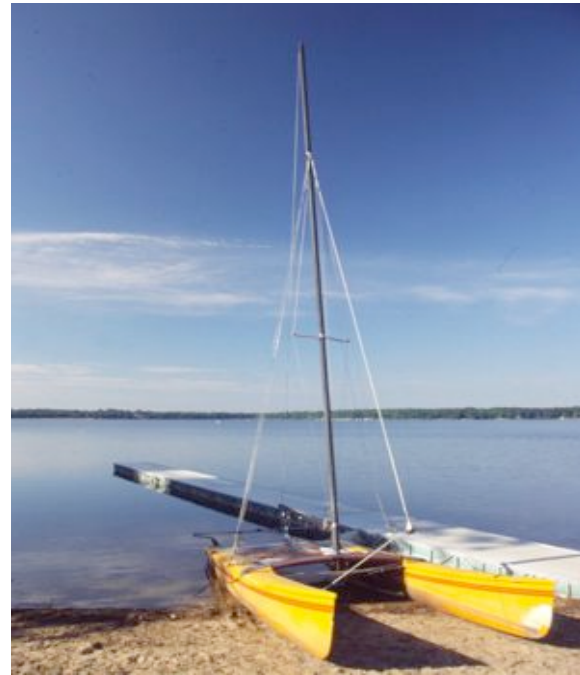




Sharon's Water Resources



Sharon's motto is "A better place to live because it's naturally beautiful." Sharon's natural beauty depends upon sufficient water in our local environment.



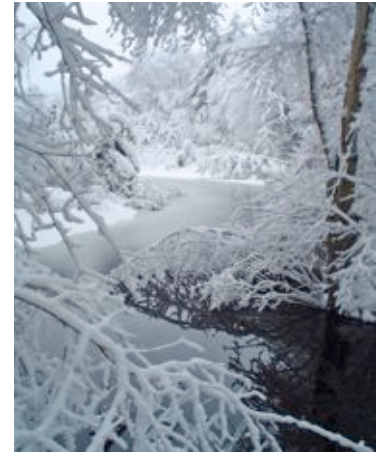
Lake Massapoag is Sharon's premiere natural feature. It provides swimming, sailing and fishing in its clear waters, and scenic vistas to passers-by. It is a natural reflector for Sharon's Fourth of July fireworks.



Sharon's many ponds, such as Mann's Pond and Gavins Pond, enhance the town's natural beauty and provide opportunities for family activities like fishing and canoeing.



A stream crossing is a highlight of any walk in the woods.



Clear waters flowing in Sharon's Beaver Brook, Billings Brook and Massapoag Brook and their tributaries refresh the soul in any season—and enhance property values.



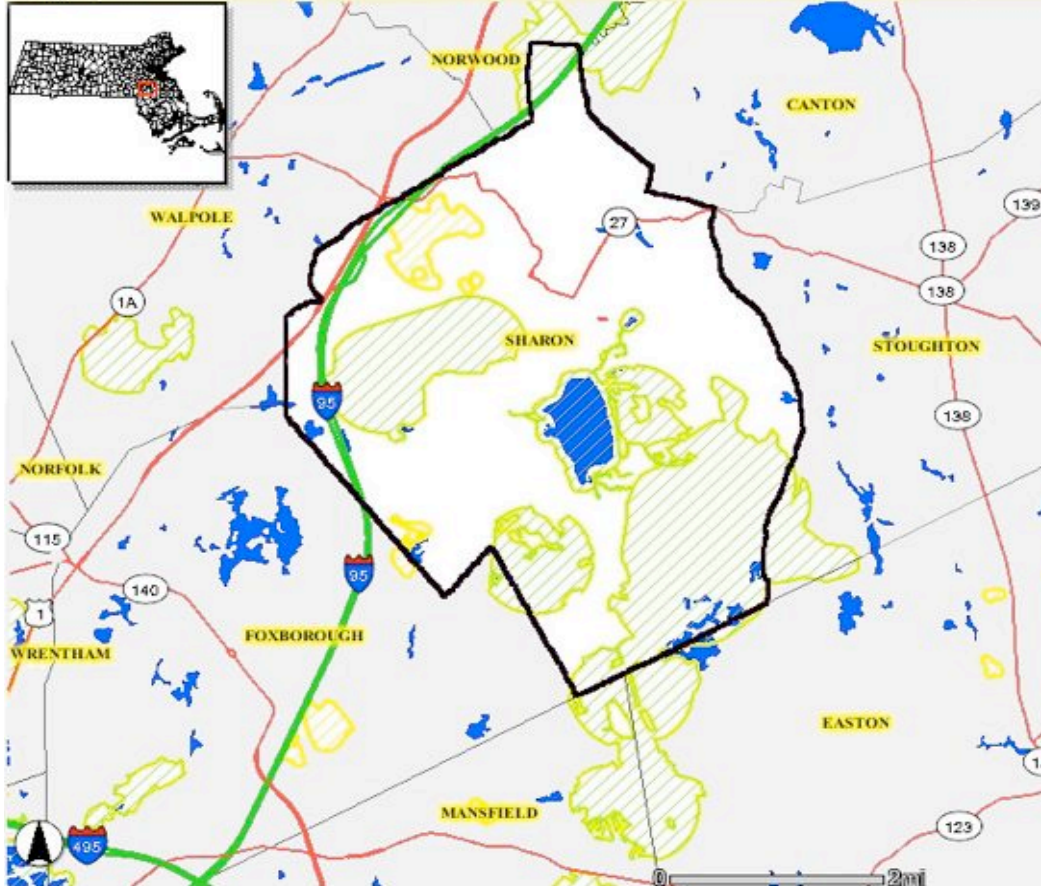


Natural Heritage
& Endangered Species
Program

Priority Habitat & Estimated Habitat

Legend

-  NHESP 2006 MA Estimated Habitats of Rare Wildlife
-  NHESP 2006 MA Priority Habitats of Rare Species



Scenic landscapes are not the only environmental benefit of water in Sharon.

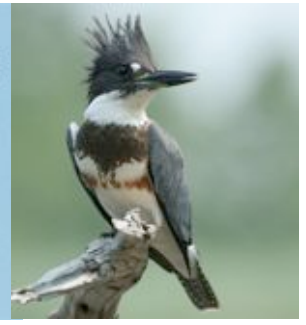
This map of the area's priority habitats of rare species shows that Sharon has much more natural wildlife habitat than more densely developed neighboring towns.

Wildlife habitats require life-sustaining water.



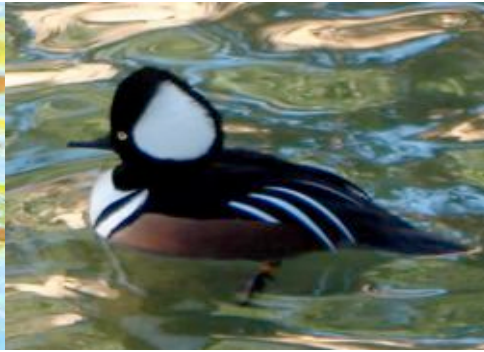
Sharon hosts 24 species of officially designated rare plants and animals. Some of Sharon's rare species, such as blue-spotted salamanders, eastern pondmussels and Blanding's turtles, live or breed in water. Spring-fed Lake Massapoag is inhabited by smallmouth bass and rainbow trout, which require clear, cool, oxygenated water.





Waterbirds such as great blue herons, marsh hawks, ospreys and kingfishers frequent Sharon's ponds and streams. Even majestic bald eagles are seen over the lake from time to time. Yellowthroats, northern waterthrushes, yellow warblers, and spotted sandpipers inhabit Sharon's wetlands and waterways.





Migratory waterfowl such as wood ducks, hooded mergansers, ring-necked ducks, and a variety of arctic geese pause on their journeys to rest and feed in Sharon.



Endangered Hessel's Hairstreak butterflies feed exclusively on Atlantic White Cedar fronds. Many of the Atlantic White Cedars in Sharon's 250-acre cedar swamp west of Lake Massapoag have died as a result of insufficient water, releasing greenhouse gases as they decay.





Every spring, large white suckers ascend Sharon's brooks to spawn. During the rest of the year, these bottom feeders help keep Lake Massapoag and Sharon's ponds clean. Their offspring provide forage for trout, bass and other game fish.



Suckers spawning



Culverts and low flow block fish passage.



Kids need a chance to experience nature on their own terms. Sharon's streams, ponds, wetlands and Lake Massapoag offer an abundance of natural features—and creatures—to stir young imaginations.



A growing body of research suggests that direct exposure to nature is essential for healthy childhood development. In his influential book *Last Child in the Woods*, child advocacy expert Richard Louv links disturbing childhood trends, such as obesity, attention disorders, and depression, to the absence of nature in the lives of today's electronic generation. He calls this Nature Deficit Disorder (NDD).

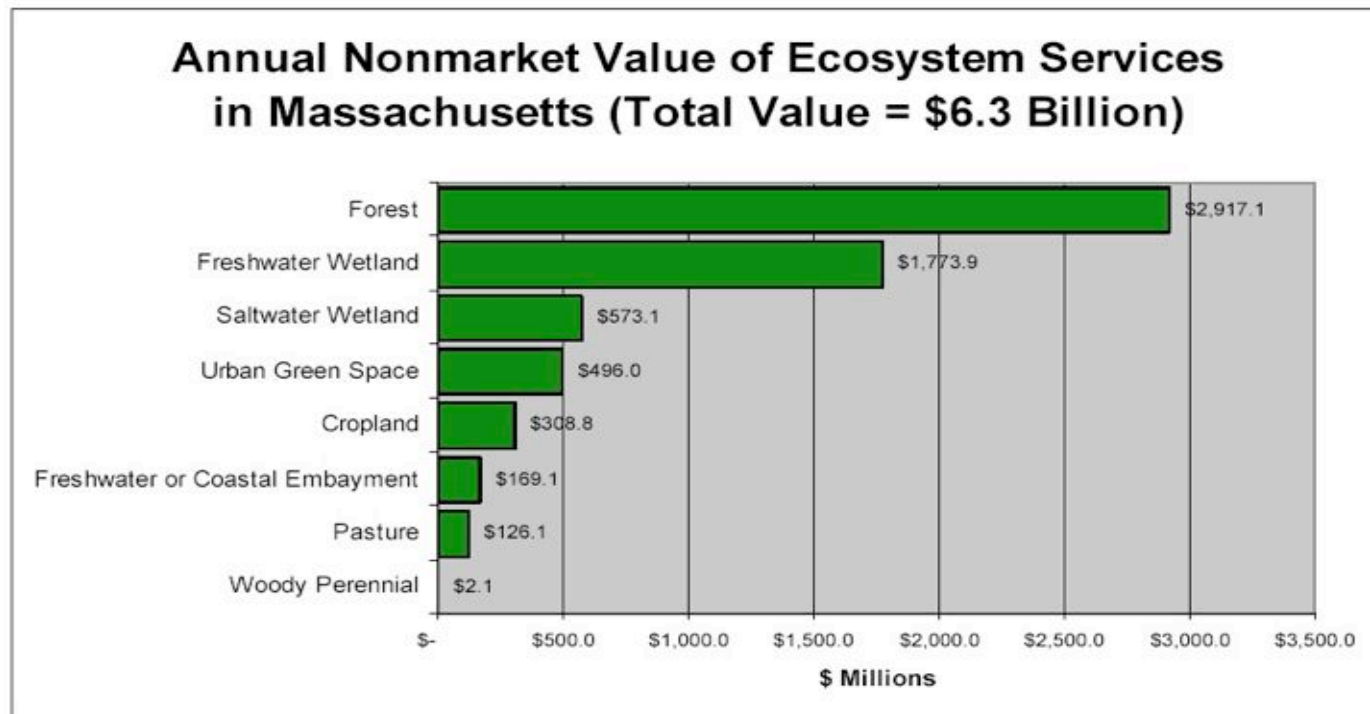


Figure 22: Total annual ecosystem service value based on 1999 land cover data. Source: analysis for Mass Audubon by Gund Institute, University of Vermont.

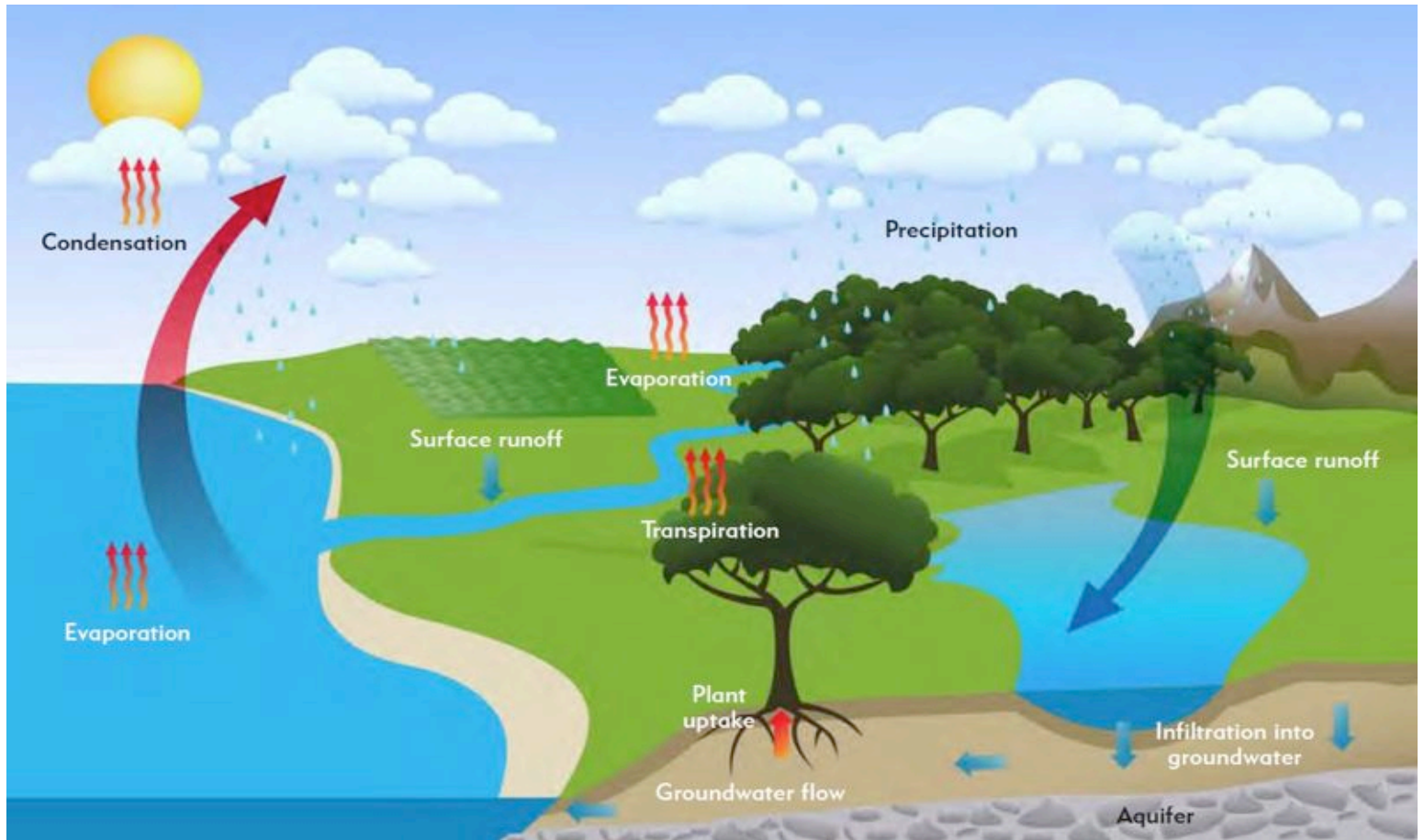
Freshwater wetlands in Massachusetts annually provide over \$1.7 billion in ecosystem services. For example, Sharon's 250-acre Atlantic White Cedar Swamp purifies and stores most of Sharon's drinking water.

Nonmarket Ecosystem Service Value Estimates by Land Cover Type

Land Use Type	Ecosystem Services Used in Valuation	# Data Sources	Mean Total \$acre/yr (2001 dollars)	Min value	Max value
Freshwater Wetland	Disturbance Prevention; Freshwater Regulation & Supply, Waste Assimilation, Aesthetic/Amenity, Soil Retention	13	\$15,452	\$7,684	\$31,772
Saltwater Wetland	Disturbance Prevention, Nutrient Regulation, Habitat, Recreation	10	\$12,580	\$9,991	\$24,457
Freshwater or Coastal Embayment	Freshwater Regulation and Supply, Habitat, Recreation, Aesthetic/Amenity	25	\$983	\$64	\$2,985
Forest	Climate and Atmosphere, Disturbance Prevention, Habitat Refugium, Recreation	8	\$984	\$407	\$1,998
Cropland	Aesthetic/Amenity, Soil Retention, Pollination	3	\$1,387	\$1,387	\$1,387
Pasture	Aesthetic/Amenity, Pollination	2	\$1,381	\$1,381	\$1,381
Woody Perennial	Pollination	1	\$49	\$49	\$49
Urban Green Space	Waste Assimilation, Recreation	3	\$3,430	\$2,692	\$4,167

Figure 21: Ecosystem service value by land cover type, and individual services used in calculation.

Freshwater wetlands provide 15 times more value per acre than forests. Without water, ecosystem service values drop dramatically.

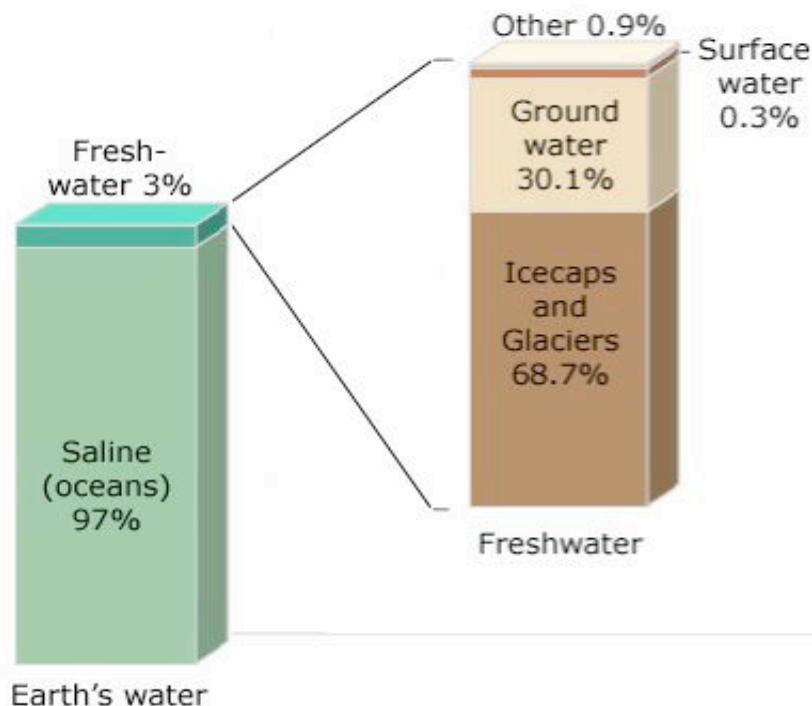


Land soaks up rainwater up like a giant sponge. This water is gradually released during dry spells, keeping streams flowing, and ponds and lakes from drying up.

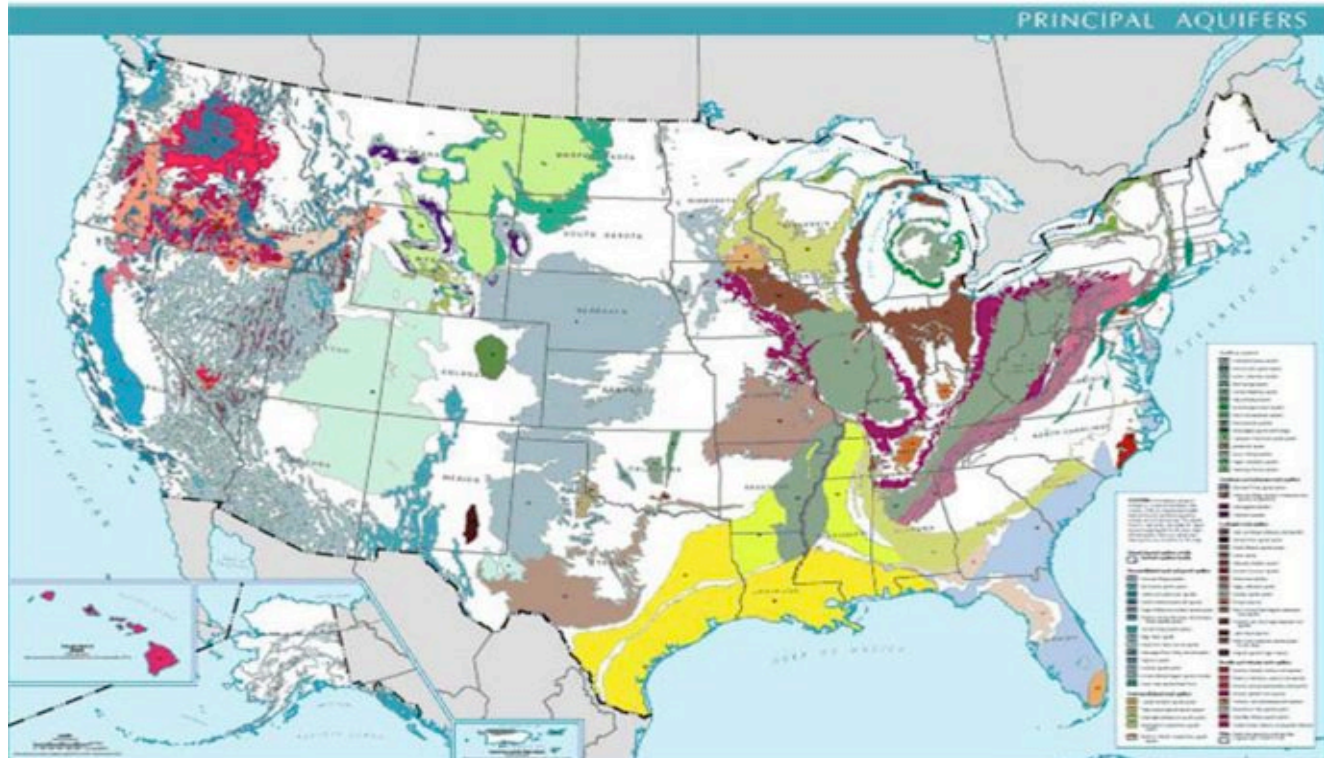
Only 3% of the earth's water is fresh water, and over two-thirds of that is tied up in polar ice caps and glaciers.

There is about 100 times more fresh water in the ground than in all the great lakes and rivers combined.

Distribution of Earth's Water



Principal Aquifers in the United States



The U.S. has many major aquifers that store massive amounts of water in the ground. However, except for the Connecticut River aquifer, New England does not. Water supply for many New England communities comes from shallow local aquifers.



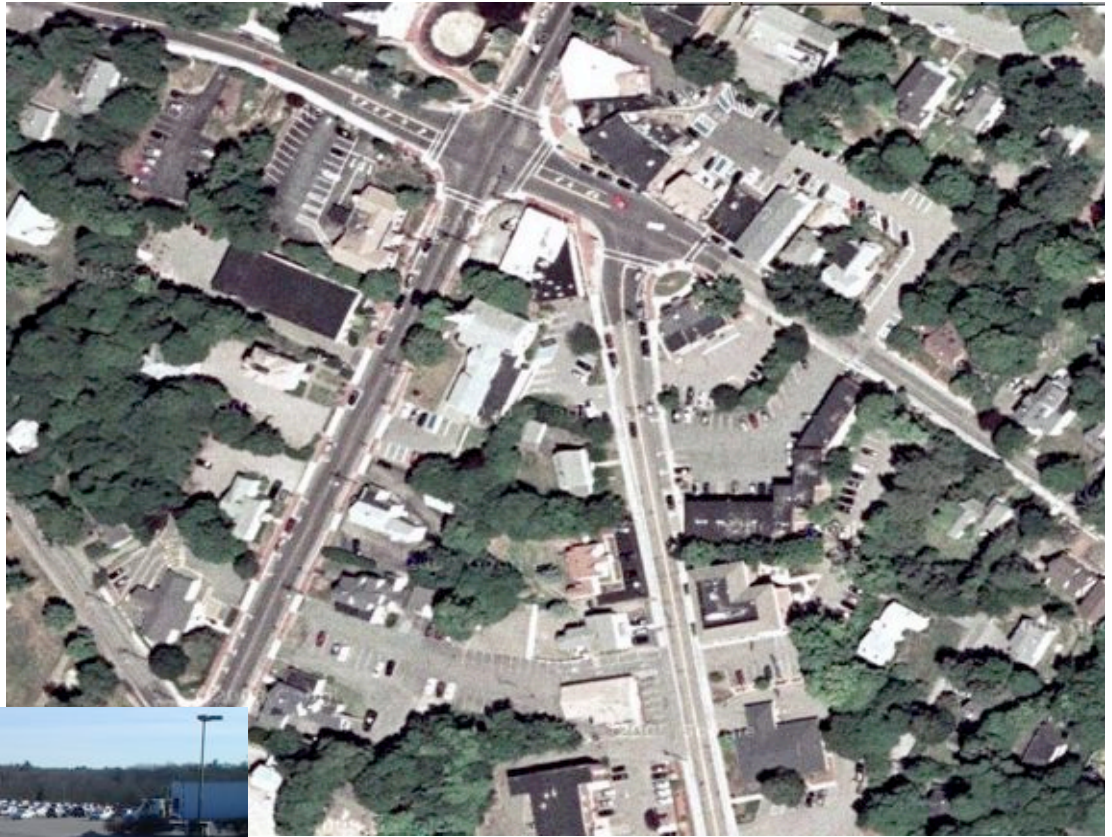
Although New England generally gets more rain than other parts of the country, there are only small aquifers east of the Connecticut River to store it. For this reason, New England should not be considered “water rich.”

The shallow aquifers of New England consist of porous sand and gravel that do not retain water very well.

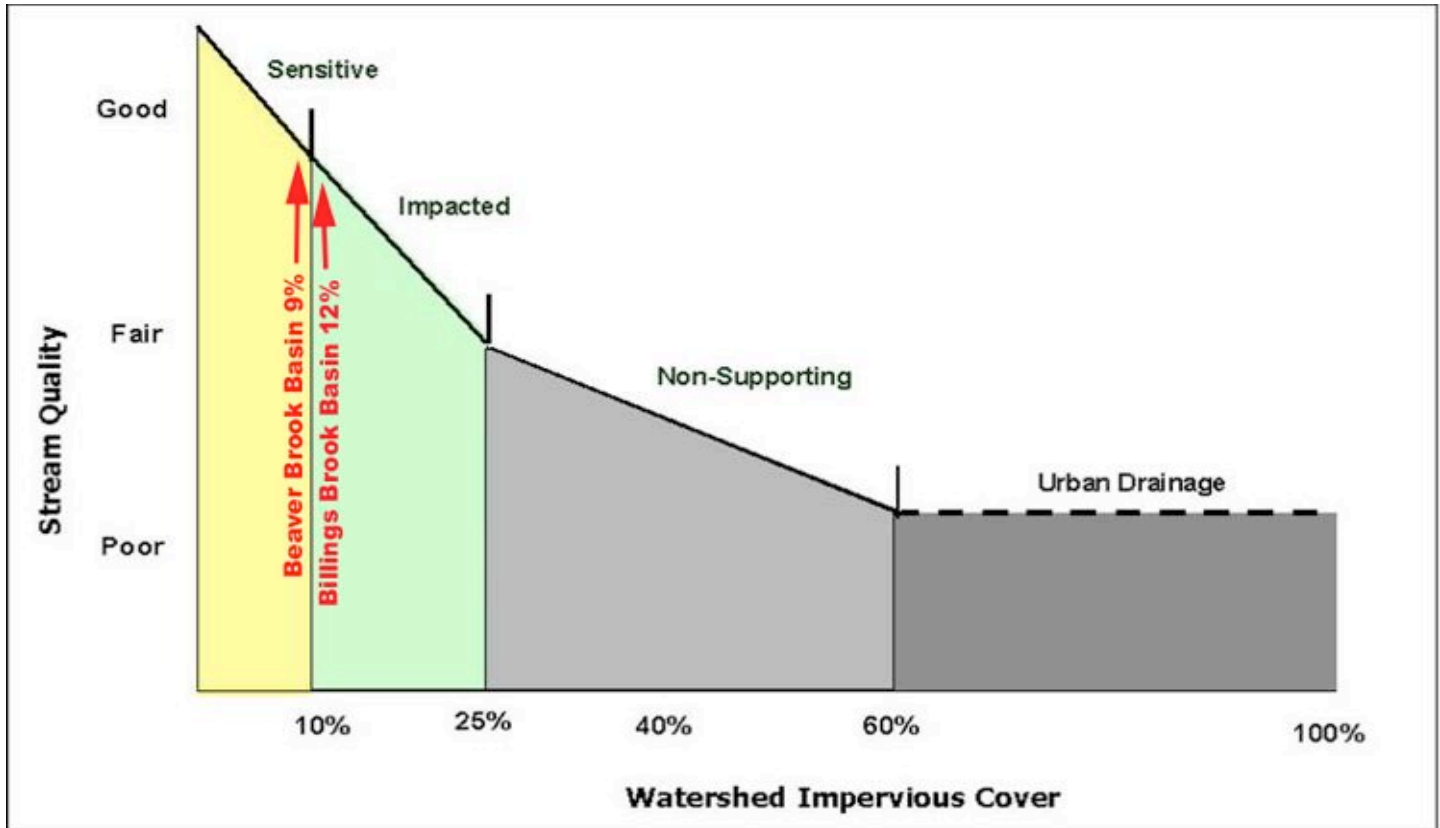
This map of Sharon's surficial geology shows large areas of sand and gravel.



Roofs, roads, and parking lots associated with developed areas compound the problem.

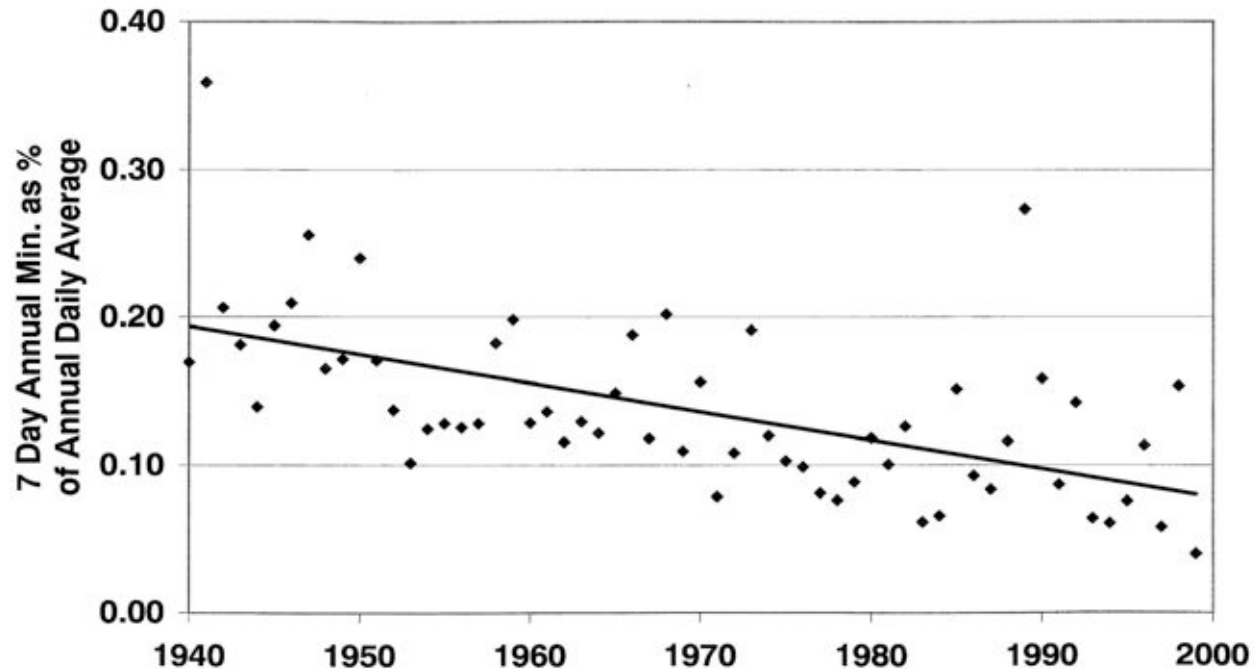


These surfaces prevent rainwater from soaking into the ground.



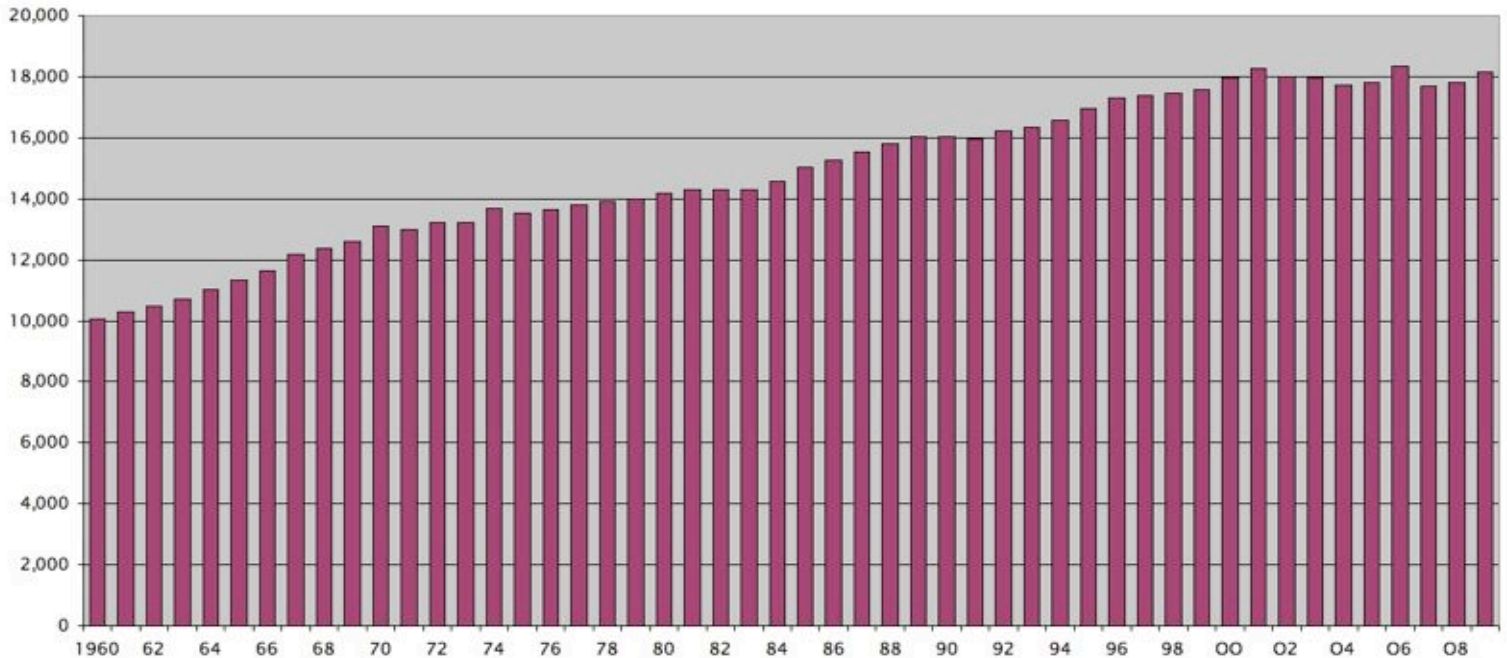
When more than 10% of the land is covered by roofs, roads and parking lots, streams begin to suffer noticeably. At present, roughly 10% of Sharon is covered by buildings and pavement.

Neponset River Base Flow at USGS Norwood Gauge:
1940 to 2000



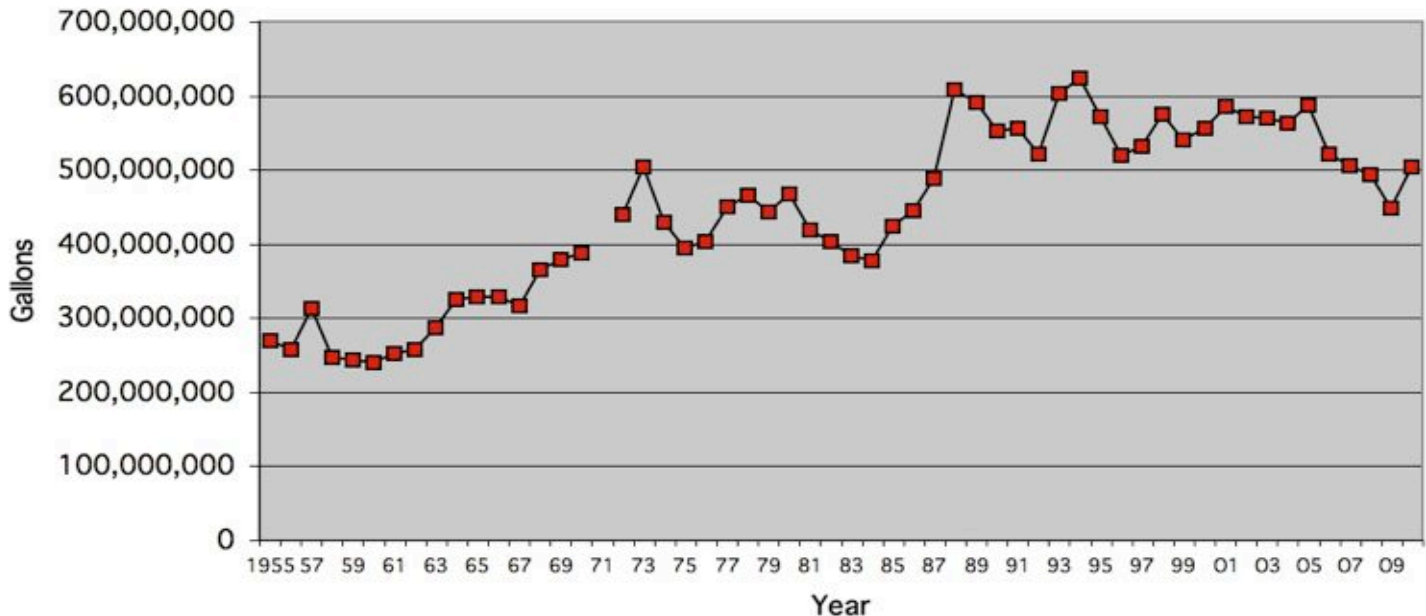
Alteration of flows in the Neponset River by development in Sharon and other towns over the past 60 years has compromised its ecological health.

Sharon Town Census - 1960 through 2009



Sharon's population has increased about 50% since the 1960's. The town is expected to grow rapidly in the next few years due to developments such as Avalon Bay, Bella Estates, Sharon Hills, Sharon Commons, Residences at Old Post, the Wilber School redevelopment, etc.

Sharon Annual Water Pumping - 1955 through 2010



As Sharon's population has increased, so has demand for water. Sharon's six town wells pump about half a billion gallons per year, not including pumping by 150 private wells. Conservation efforts have begun to make a difference, but significant new development is planned for Sharon.



Most of Sharon's wastewater goes to septic systems rather than municipal sewers, so much of the water Sharon uses is returned to the ground. However, as the town expands outward from the center, more and more water is discharged in more distant parts of town, depleting the source aquifers where it originated.



Automatic irrigation systems further deplete the town's aquifers when the environment needs water the most. Typically, over half the water used to irrigate lawns is lost to evaporation.

Groundwater is Sharon's most valuable natural resource.

Water levels in Lake Massapoag and local streams, ponds and wetlands depend on water stored in the ground. So does Sharon's drinking water supply, which comes from municipal wells that tap local groundwater aquifers.

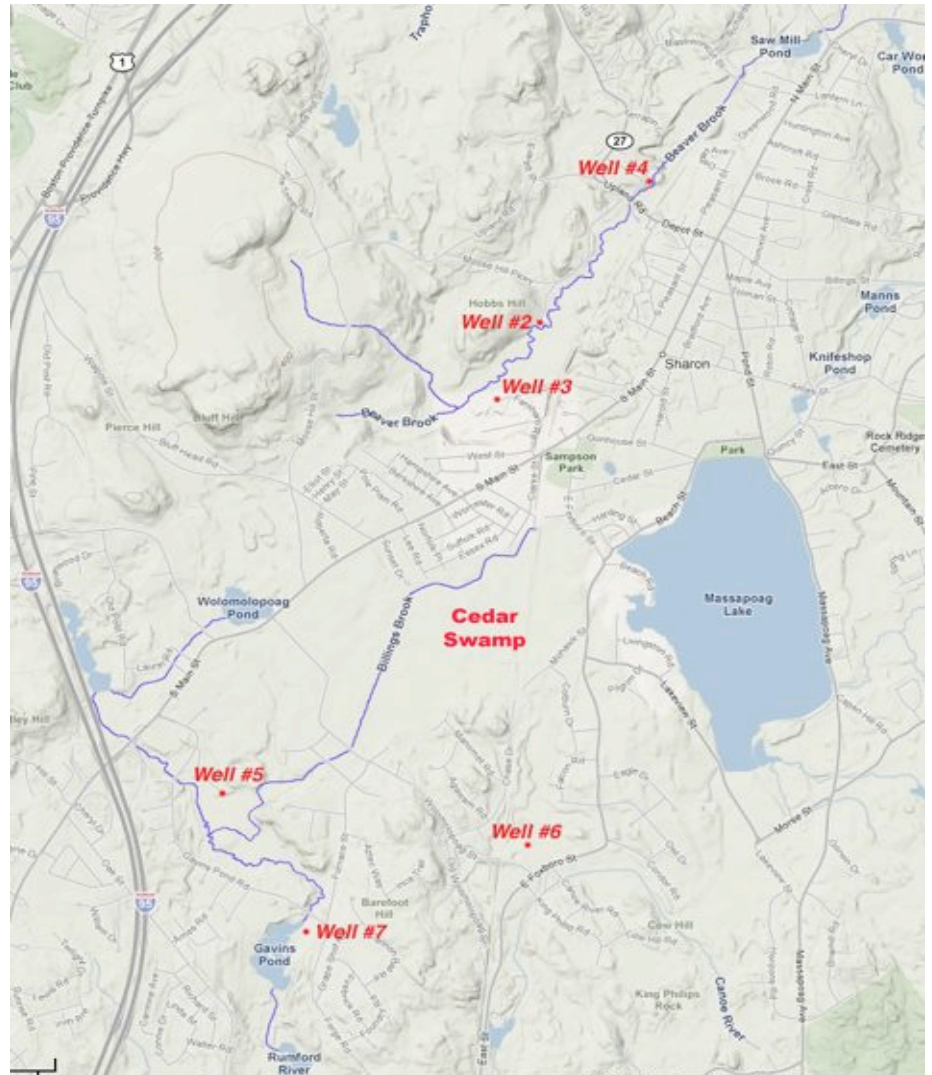


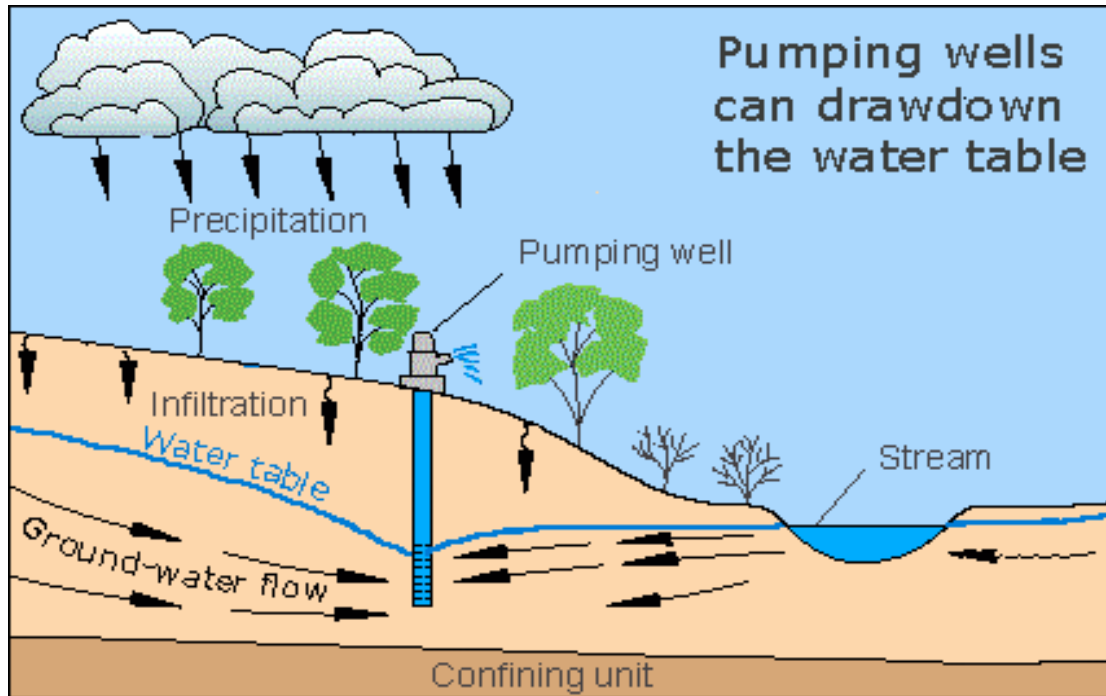
Sharon's Well #4 can pump a million gallons per day.

Three town wells are located along Beaver Brook, and two are located along Billings Brook. Pumping the wells reduces flow in these streams.

The only well not located near a stream, Well #6, is seldom used because it contains iron and manganese which, though safe to drink, can discolor the water and stain laundry.

[Note: Well #4, Sharon's biggest well, provides about 45% of the town's water. Well #1 is no longer in service.]

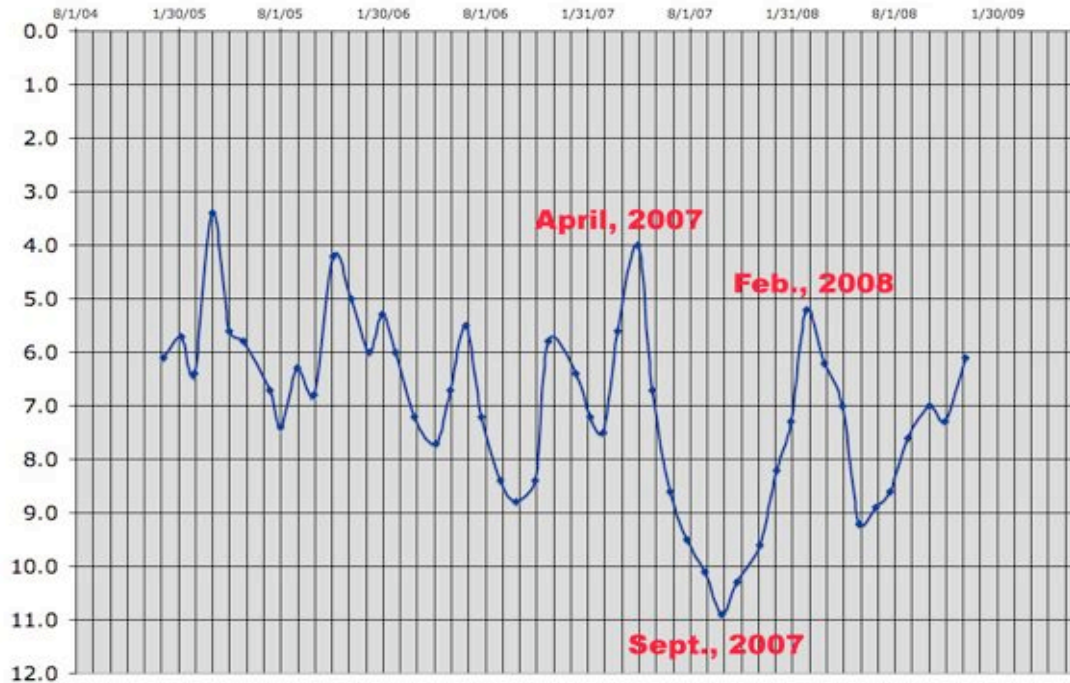




As this diagram shows, well pumping draws ground water away from nearby streams. Excessive pumping during hot, dry summer weather can lower the water table enough to cause nearby streams to dry up completely.

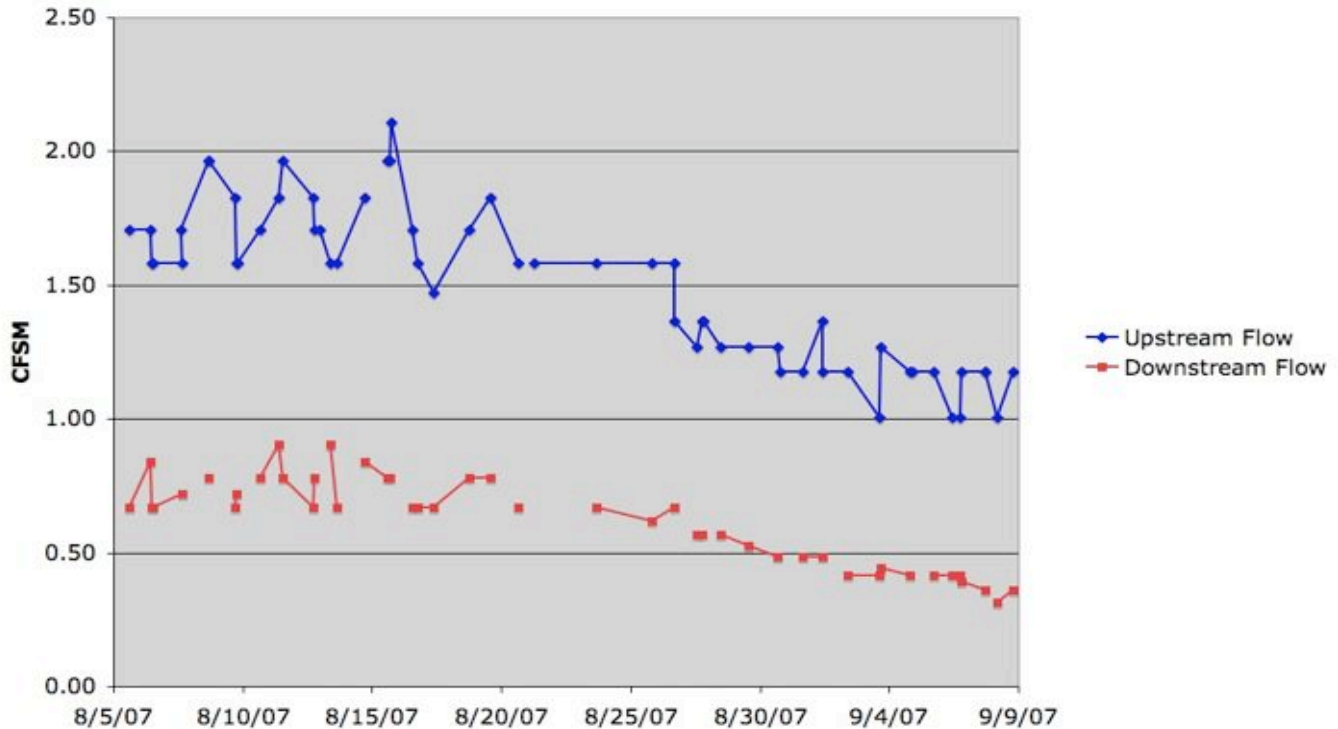
Depth to Groundwater - 2005-2008

Monitoring Well 7-6



In the summer of 2007, Sharon experienced a moderate drought. This graph of water table depth near Well #7 shows how the water table dropped seven feet as tree roots and well pumping sucked water out of the ground during the dry weather.

Beaver Brook Flows Upstream and Downstream of Well #4 Summer, 2007



Well #4 is located beside Beaver Brook. Pumping up to 1 million gallons per day from Well #4 significantly reduced flow in Beaver Brook during the moderate drought of 2007.



Gavins Pond Spillway - 8/7/07



Gavins Pond Spillway - 9/5/07

When the water table falls, so does flow in local streams. These two photos, taken less than a month apart at the Gavins Pond spillway, show how quickly flow ceased in Billings Brook in late summer, 2007.



*Billings Brook just
upstream
of Gavins Pond,
9/5/07*

Meanwhile, upstream of Gavins Pond, Billings Brook kept flowing into the pond through the drought. How could water flow continuously into Gavins Pond, but not flow out?

Sharon's second largest well, Well #7, is located beside Gavins Pond. As flow in Billings Brook was dwindling in late summer, Well #7 was pumping as much as 400,000 gallons per day to supply water for toilet flushing, laundry, showers, faucets, swimming pools and lawn irrigation.

Water flowing into Gavins Pond was sucked into the well, instead of continuing to flow down Billings Brook.



When Billings Brook stopped flowing, scum formed on the stagnant pool below the dam.



Fish gasped for oxygen on the surface.

Mussels were exposed by receding waters.



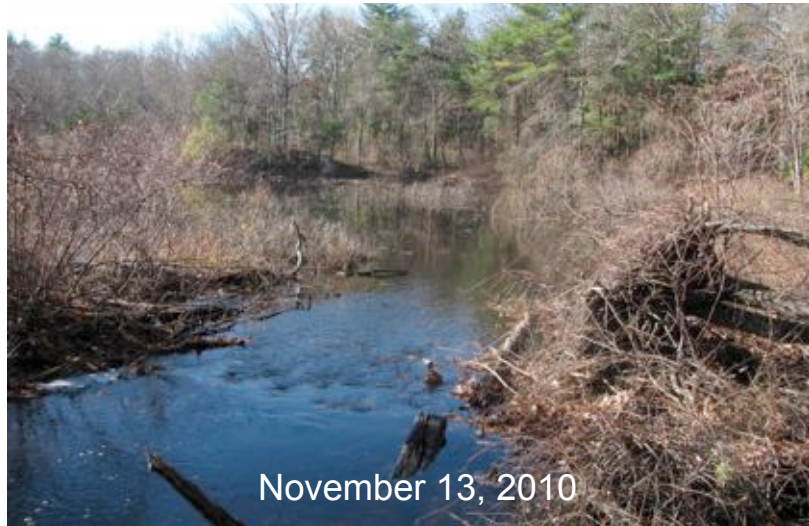
Crayfish became vulnerable to predation.





October 23, 2007

Downstream of Gavins Pond, ponds near Lamson Road in Foxboro dried up when Billings Brook stopped flowing, devastating the aquatic ecosystems they support.



November 13, 2010



In 1997 Sharon received 10" less rain than in 2007 and pumped an additional 68 million gallons of water from its municipal wells. Dry weather and well pumping completely dried up the pool below Gavins Pond, killing large freshwater mussels that had lived there for decades. Mussels are filter feeders that help cleanse the water.



Car Works Pond, No. Main St.



Sharon Fish & Game Pond, East St.

During the 1997 drought, ponds in other parts of town farther from the influence of municipal wells remained full of water. Streams continued to flow into and out of Car Works Pond and the Sharon Fish and Game Pond.

U.S. Drought Monitor

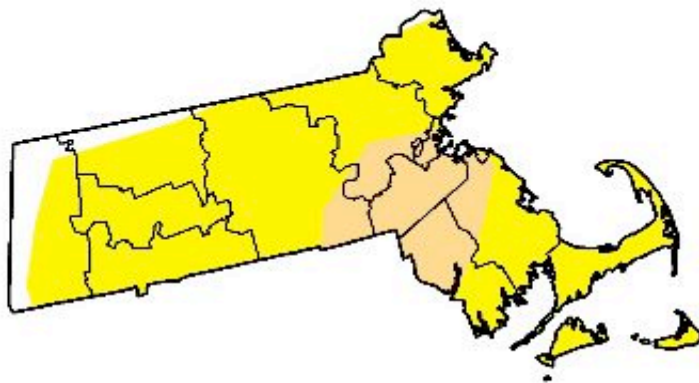
Massachusetts

September 4, 2007

Valid 7 a.m. EST

Drought Conditions (Percent Area)

	None	D0-D4	D1-D4	D2-D4	D3-D4	D4
Current	7.3	92.7	17.1	0.0	0.0	0.0
Last Week (08/28/2007 map)	28.2	71.8	0.0	0.0	0.0	0.0
3 Months Ago (06/12/2007 map)	100.0	0.0	0.0	0.0	0.0	0.0
Start of Calendar Year (01/02/2007 map)	100.0	0.0	0.0	0.0	0.0	0.0
Start of Water Year (10/03/2006 map)	100.0	0.0	0.0	0.0	0.0	0.0
One Year Ago (09/05/2006 map)	100.0	0.0	0.0	0.0	0.0	0.0



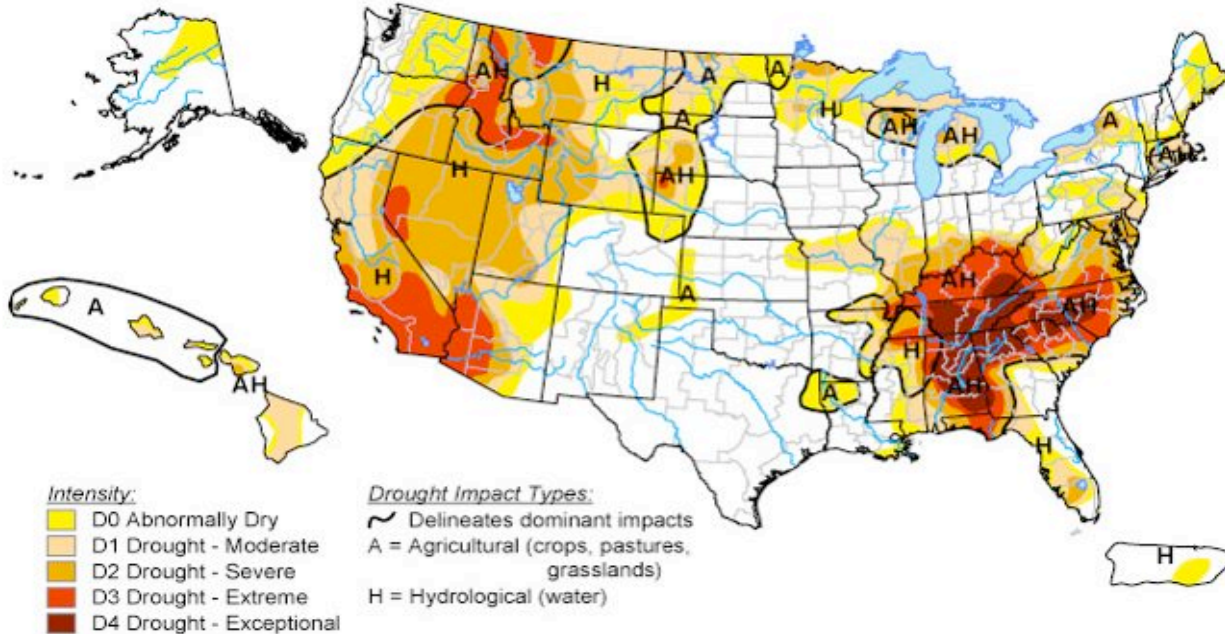
Intensity:



The U.S. Drought Monitor classified the drought of 2007 in southeastern Massachusetts as “Moderate.” There are three more stages of drought intensity: “Severe,” “Extreme” and “Exceptional.”

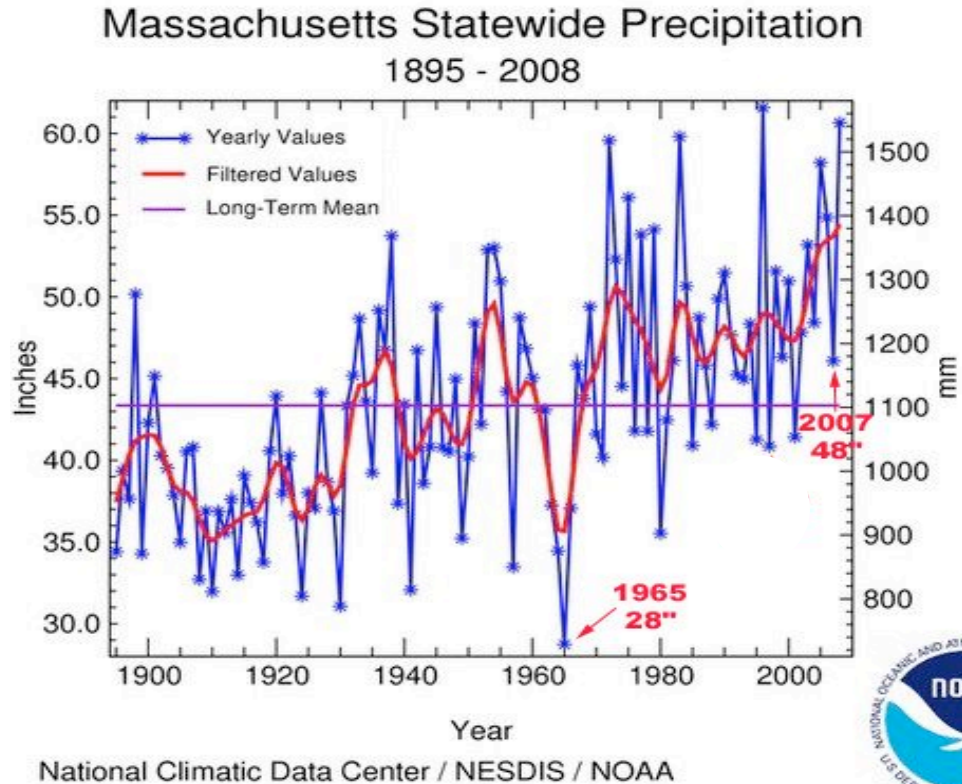
U.S. Drought Monitor

October 9, 2007
Valid 8 a.m. EDT

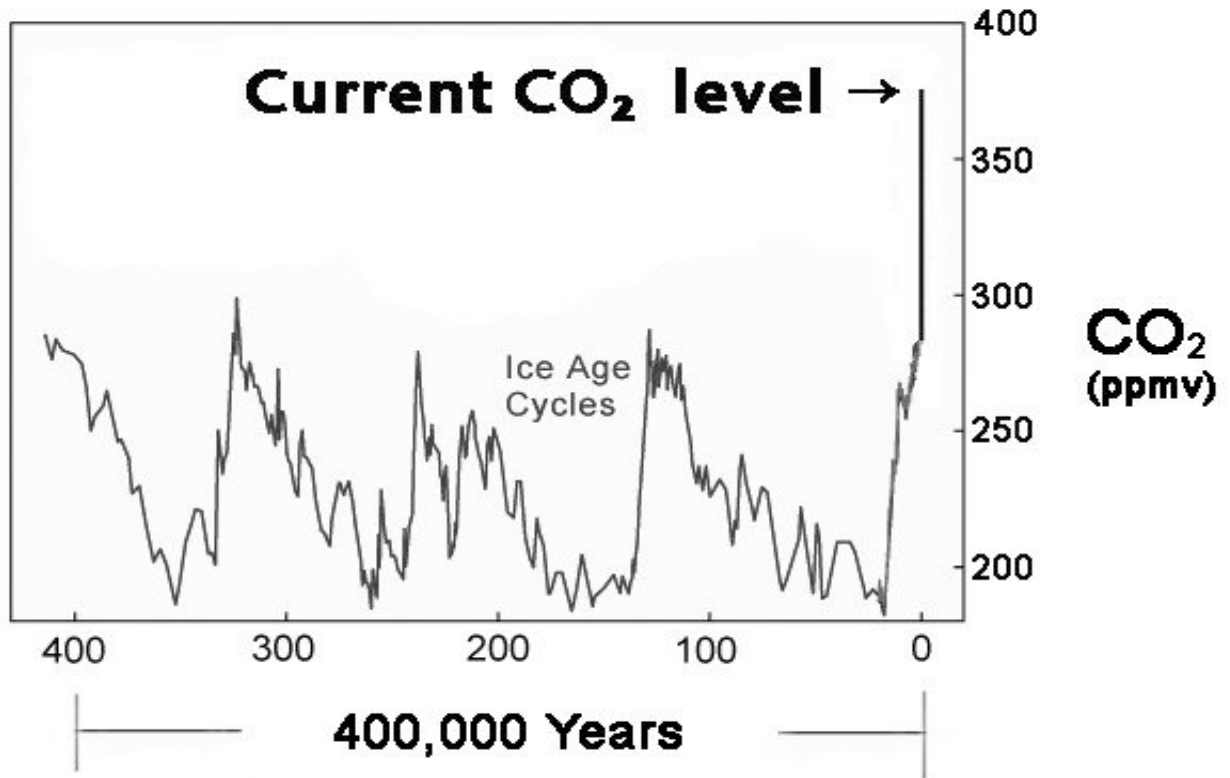


The southeastern states normally get as much rain as New England. However, in 2007 they experienced a drought which reached the “Exceptional” stage. The drought was so serious that a major city, Atlanta, was threatened with evacuation.

Sharon is totally dependent on rainfall for its water supply. Annual rainfall over the past few decades has trended upwards, masking the environmental impacts of well pumping. However, above-average rainfall may not continue forever.



Sharon is not immune to severe droughts. In 1965 Sharon received only 28" of rain. By contrast, in 2007 Sharon received 48" of rain, despite the summer drought. Sharon has grown and needs more water than it did in 1965, so a similar drought could be more problematic now.



Climate change is expected to bring bigger storms and hotter droughts. Using water more efficiently would help provide enough water during droughts, and reduce greenhouse gas emissions.

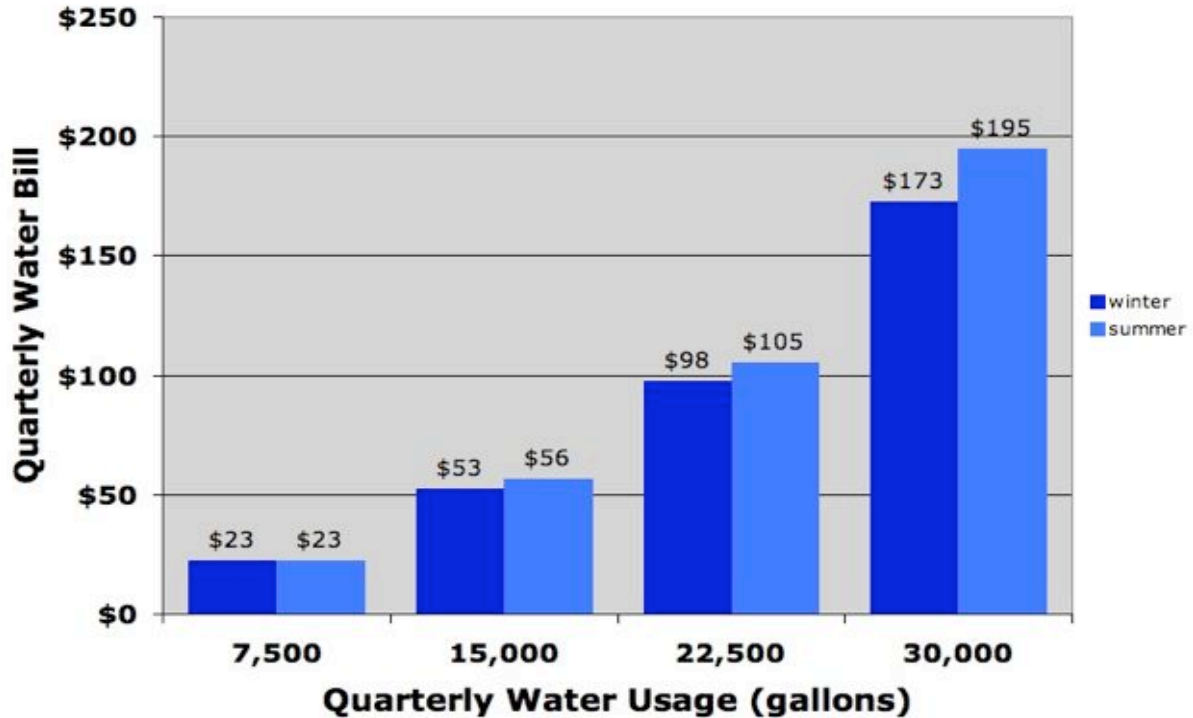
(See the animated history of atmospheric CO₂ at the NOAA web site, <http://www.esrl.noaa.gov/gmd/ccgg/trends/history.html>)

Sharon's four municipal water storage tanks have a combined usable capacity of about 1.5 million gallons—only enough for a day or two if all the wells were to stop pumping.

Water stored underground in Sharon's aquifers is what keeps our faucets flowing during dry weather. Efficient use of Sharon's finite water resources is critical to weathering a prolonged drought.

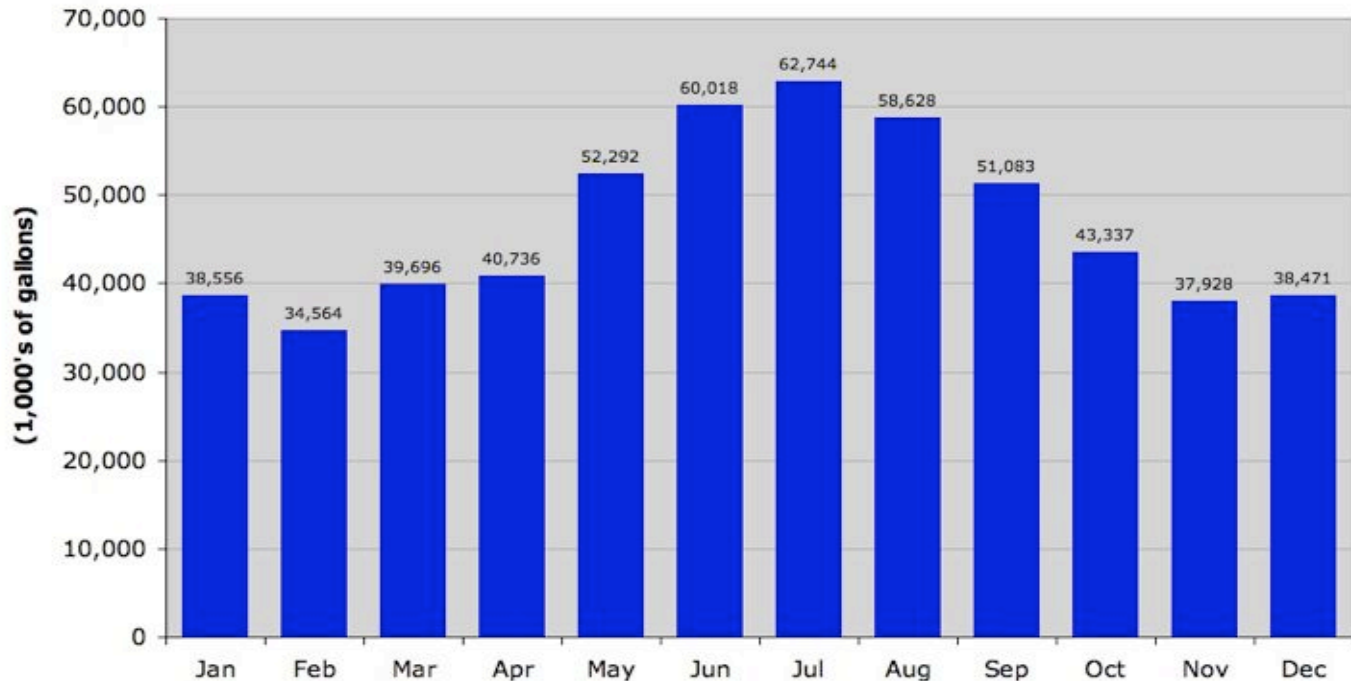


Heavy Water Usage Is Costly



The more water you use, the higher the rate you pay. Summer rates begin at \$3.00 per thousand gallons and rise to \$12.00 per thousand gallons. It pays to conserve.

Average Monthly Well Pumping in Sharon, 1995-08



Sharon's water usage increases dramatically in summer at the very time that water is most needed by the environment. Peak summer demand also drives up the cost of water supply. Reducing water use in summer is key to prudent management of our water resources.



Lawn irrigation is an obvious target for summertime water conservation. This non-essential use of drinking water is not necessary for a healthy lawn in New England's wet climate. By augmenting the organic content of the soil (don't remove the clippings after mowing) and using drought-tolerant native grass varieties, you can cultivate a beautiful "irrigation-free" lawn such as the one shown above.



Grass naturally goes dormant in summer, and revives in the fall.
Remember, tan is a popular color in summer!

Flexible Programming Options Include:

- Cycle+Soak™
- Programmable Valve Delay
- Sensor Override by Station
- Master Valve by Station
- Calendar Day Off
- Total Program and Valve Run Times

Contractor Default™ (Backup Program)

with restore timer lets you save a customized default program that can be recalled automatically up to 90 days later. This allows a temporary schedule for new seed or a fast fix if someone accidentally changes the settings.

Seasonal Adjustment by Program or Month

enables automatic cutbacks in water amounts during cool weather or increases during hot weather.

Four Programs Slide Switch

allows for easy program selection and reduces programming errors.

Large Display and Extra Simple Programming

with self-prompting display in multiple languages makes programming fast and easy; Program Review lets you easily confirm program information.

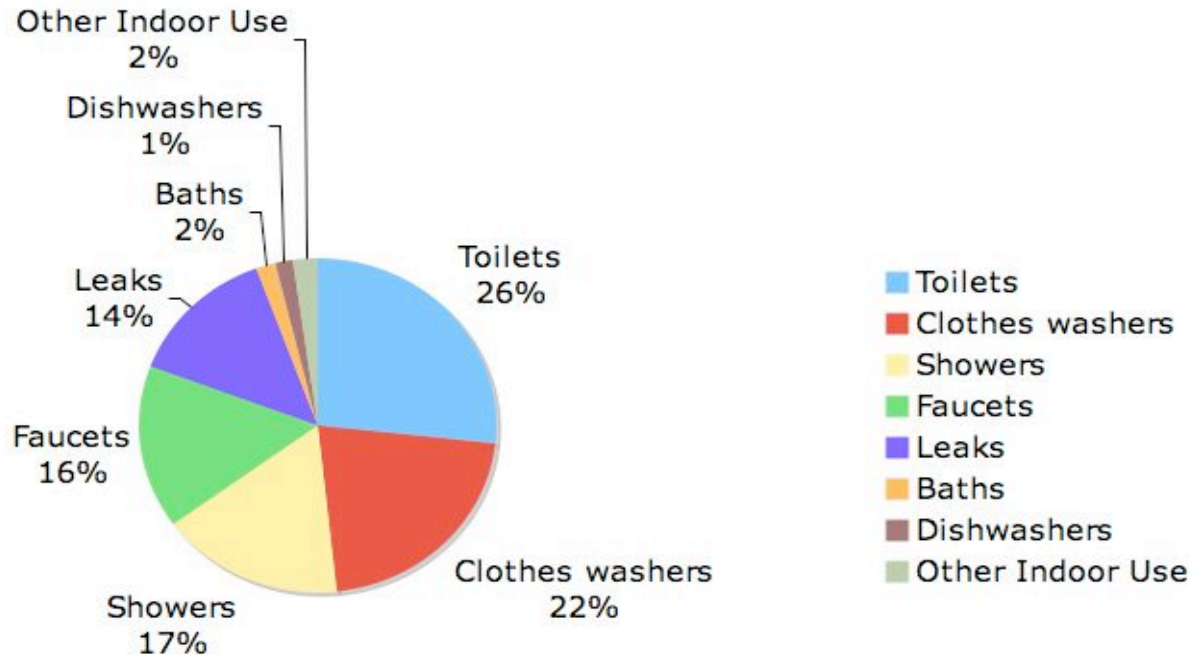


Enhanced Diagnostic Feedback™

with externally visible light and message on the display alerts users of conditions that may prevent an irrigation schedule from running; RASTER™ Wiring Test quickly diagnoses field wiring and solenoid problems.

For those who insist on a perfect lawn even in hot, dry August weather, sophisticated irrigation system controllers can minimize water bills by turning the irrigation system off when natural rainfall has already provided enough moisture.

Indoor Water Use



from Mayer et. al., 1999

Summertime water conservation is not just about lawn irrigation. At least two-thirds of summer water usage is indoors. Toilet flushing is the #1 indoor water use, followed by laundry, showers and faucets.

Average indoor water use in nonconserving and conserving North American single-family homes

Water Use Type	Nonconserving Home*	Conserving Home - 2001*	Conserving Home - 2005**
<i>Units</i>	<i>Average gpcd</i>	<i>Average gpcd</i>	<i>Average gpcd</i>
Dishwasher	1	0.7	0.7
Baths	1.2	1.2	1.2
Leaks	9.5	4	4.0
Faucets	10.9	10.8	10.8
Showers	11.6	8.8	7.0
Clothes Washer	15	10	5.6
Toilets	18.5	8.2	5.6
Other Domestic	1.6	1.6	1.6
TOTAL	69.3 gpcd	45.2 gpcd	36.5 gpcd

**Source: Vickers, 2001 (Adapted from Mayer et al, 1999)*

***Substituting 1.1 gpf High Efficiency Toilets, a 15 gpl front-load washing machine, and 2.0 gpm showerheads for Vickers' 2001 assumptions of 1.6 gpf toilets, 27 gpl washing machine and 2.5 gpm showerheads*

gpcd = gallons per capita daily, gpf=gallons per flush, gpl=gallons per load, and gpm=gallons per minute

Occupants of a non-conserving home average about 69 gallons per capita daily indoors. A home equipped with modern high-efficiency toilets, washing machines, and low-flow showerheads and faucets can cut that in half, saving almost 1,000 gallons per person per month.

If you have an old 3.5 gallon-per-flush toilet, replace it with a High-Efficiency Toilet (HET) and take advantage of the Water Department rebate of up to \$200. The latest models are powerful, but they use only a fraction of the water, and never overflow. The tanks of some HETs do not sweat, so mold does not grow on the wall behind the tank.

When selecting a HET, look for the EPA WaterSense logo.



1.1 gallon-per-flush HET



Three out of four flushes are for liquid waste. Dual-flush conversion kits costing only about \$20 can cut the water used for flushing liquid waste in half.

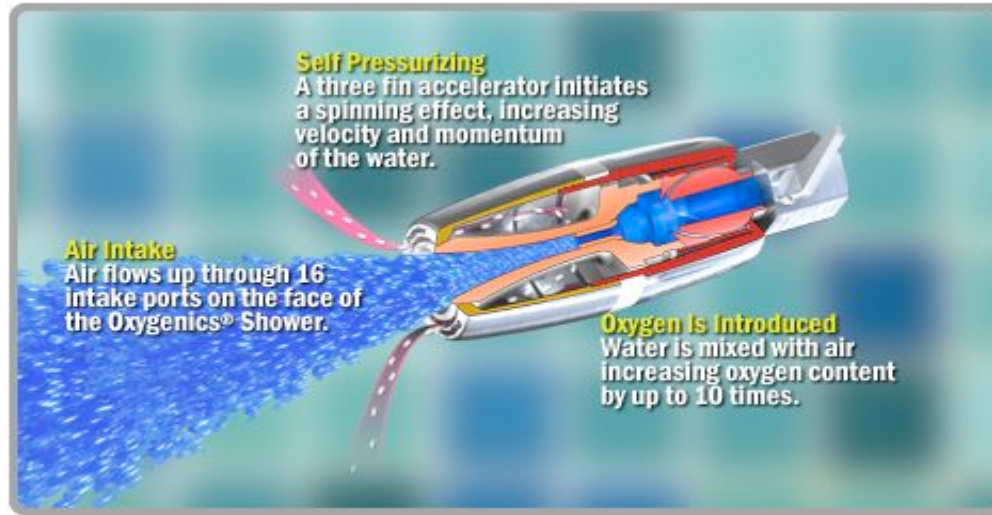
Installation usually takes less than half an hour, and requires no tools. Replacement of the fill valve may be necessary if the toilet tank has a float ball.

Modern washing machines use under 13 gallons of water per load, far less than older top-load models that may use up to 45 gallons per load. They also save energy by using less hot water and reducing drying time, and cause less wear on fabrics.

When the time comes for a new washing machine, check with the Water Department for a rebate on a water-efficient model.



This washer uses under 13 gallons per load.



With new showerhead technology, low flow feels like normal flow. Saving heated water also reduces energy bills. Low-flow shower heads that use as little as 1.5 gallons per minute (gpm) are easy to install, and can pay for themselves in a matter of months.



Get a shower timer, and challenge your family to limit their showers to 5 minutes, saving water and energy, and leaving enough hot water for the next person.



Temperature-sensing valves reduce flow to a trickle when the shower reaches 95°. When you are ready to step in, just tug the pull cord.

This saves water and energy, and avoids filling the bathroom with steam that can cause mold.



Installing low-flow faucet aerators is a cheap and easy way to save water (up to 3,000 gallons per year!) and energy.

Sink Faucet Aerator 0.5 GPM



0.5 gpm is enough
for bathroom sinks.

Sink Faucet Aerator 1.5 GPM



Use 1.5 gpm for
kitchen sinks.

If you have a designer faucet, unscrew the outer metal fitting, and replace the aerator inside with a low-flow aerator.



Evaporation losses from pools can be greatly reduced with a solar pool cover, which also warms the water and extends the season. An automatic reel makes it easy to manage a solar pool cover.

Small leaks running around the clock can waste huge amounts of water and lead to expensive water bills.



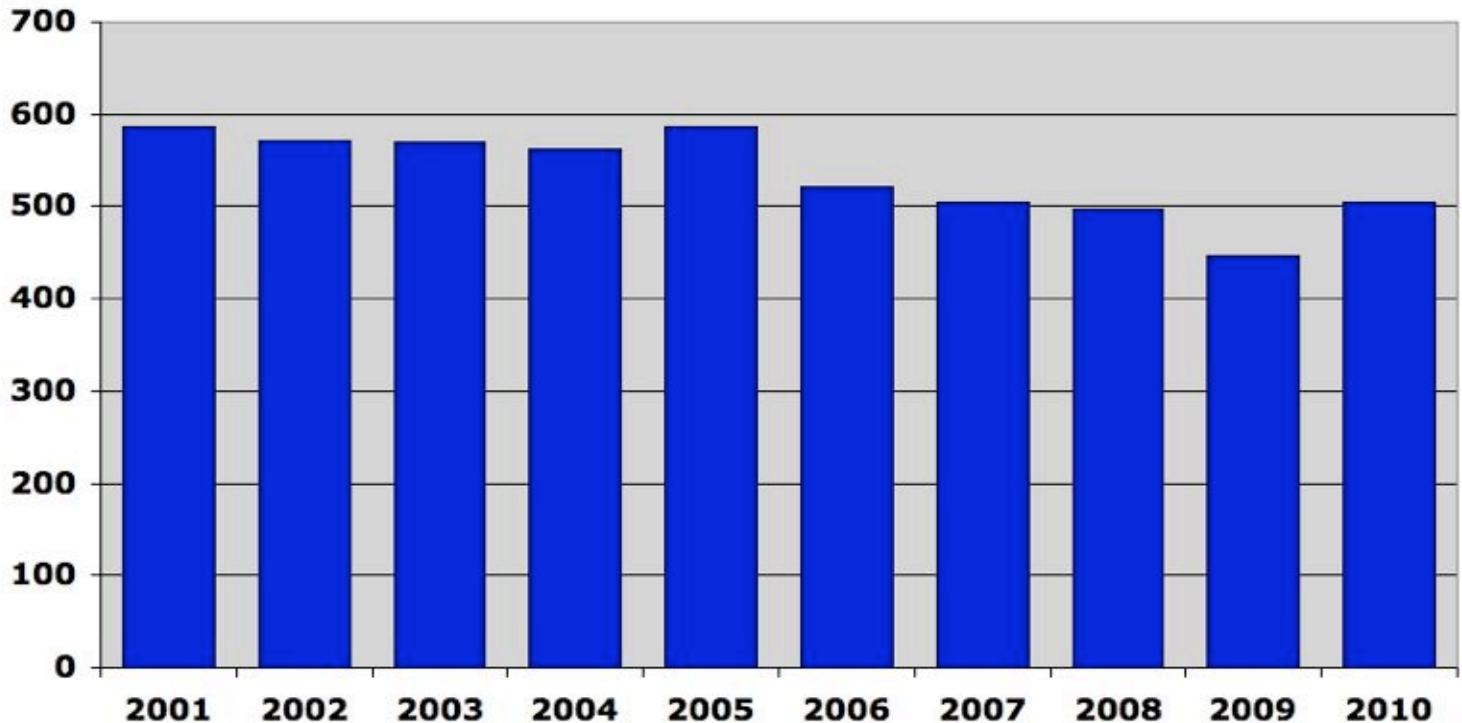
Hole	Gals/min*	Gals/yr*	\$/yr**
.027"	0.12	60,000	\$600
.035"	0.19	100,000	\$1,000
.056"	0.48	250,000	\$2,500
.080"	0.96	500,000	\$5,000
.113"	1.92	1,000,000	\$10,000

**assuming 40 psi of water pressure*

***assuming \$10 per thousand gallons*

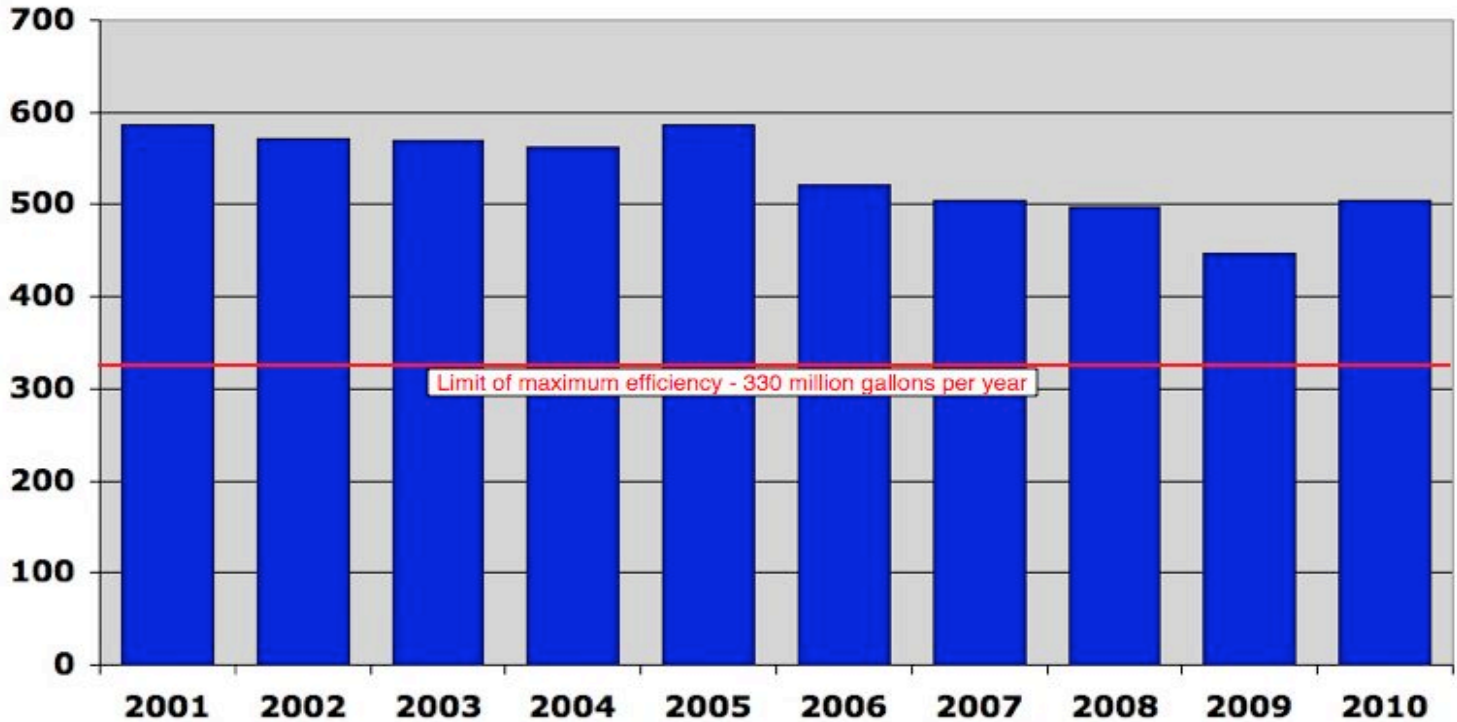
The Sharon Water Department replaced all the water meters in town with modern radio meters. The new meters have a leak detection feature.

Sharon's Annual Well Pumping (millions of gallons)



Sharon's well pumping has been trending downwards, reducing the cost of energy for pumping the wells and heating water, as well as mitigating the rising cost of treatment chemicals.

Sharon's Annual Well Pumping (millions of gallons)



If every home in Sharon were equipped with the latest water-saving fixtures and appliances, and lawn irrigation ceased, Sharon's water use could be reduced to about 330 million gallons per year.

**Is your water use less than
65 Gallons Per Capita Daily (GPCD)?**

NO. OF HOUSEHOLD OCCUPANTS

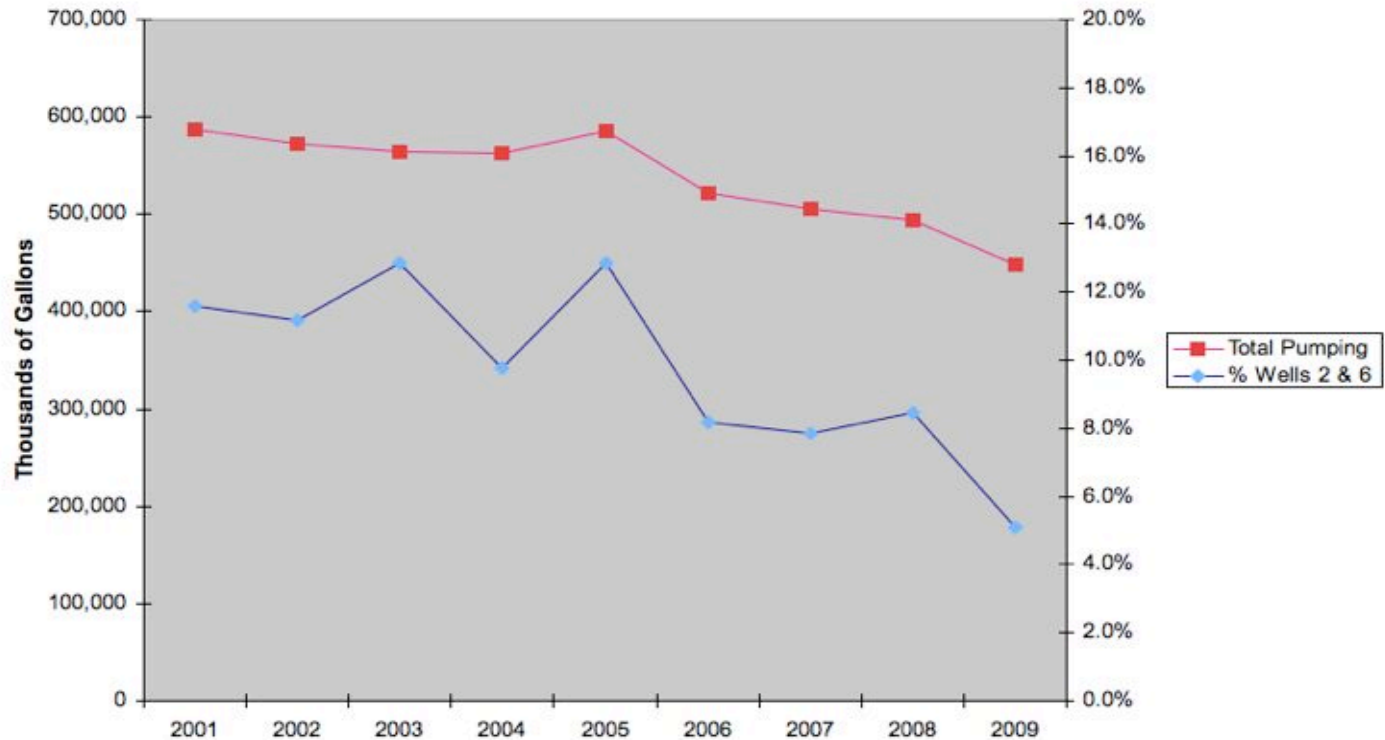
	NO. OF HOUSEHOLD OCCUPANTS							
	1	2	3	4	5	6	7	8
2,000	22	11	7	5	4	4	3	3
3,000	33	16	11	8	7	5	5	4
4,000	44	22	15	11	9	7	6	5
5,000	55	27	18	14	11	9	8	7
6,000	66	33	22	16	13	11	9	8
7,000	77	38	26	19	15	13	11	10
8,000	88	44	29	22	18	15	13	11
9,000	99	49	33	25	20	16	14	12
10,000	110	55	37	27	22	18	16	14
11,000	121	60	40	30	24	20	17	15
12,000	132	66	44	33	26	22	18	16
13,000	142	71	47	36	28	24	20	18
14,000	152	77	51	38	31	26	22	19
15,000	164	82	55	41	33	27	23	21
16,000	175	88	58	44	35	29	25	22
17,000	186	93	62	47	37	31	27	23
18,000	197	99	66	49	39	33	28	25
19,000	208	104	69	52	42	35	30	26
20,000	219	110	73	55	44	37	31	27
21,000	230	115	77	58	46	38	33	29
22,000	241	121	80	60	48	40	34	30
23,000	252	126	84	63	50	42	36	32
24,000	263	132	88	66	53	44	38	33
25,000	274	137	91	68	55	46	39	34
26,000	285	142	95	71	57	47	41	36
27,000	296	148	99	74	59	49	42	37
28,000	307	153	102	77	61	51	44	38
29,000	318	159	106	79	64	53	45	40
30,000	329	164	110	82	66	55	47	41
31,000	340	170	113	85	68	57	49	42
32,000	351	175	117	88	70	58	50	44
33,000	362	181	121	90	72	60	52	45
34,000	373	186	124	93	75	62	53	47
35,000	384	192	128	96	77	64	55	48
36,000	395	197	132	99	79	66	56	49
38,000	418	209	139	104	84	70	60	52
40,000	438	219	146	110	88	73	63	55
42,000	462	231	154	115	92	77	66	58
44,000	484	242	161	121	97	81	69	60
46,000	505	253	168	126	101	84	72	63
48,000	527	264	176	132	105	88	75	66
50,000	548	274	183	137	110	91	78	68

The state conservation standard is 65 gallons per person per day (gpcd). Sharon averaged 64.5 gpcd for the five years 2004 through 2008.

If your home is water-efficient, it is easy to get under 40 gpcd. Some families use less than 30 gpcd.

Find out how efficiently your household is using water by using the handy lookup table in the insert that comes with your water bill.

Pumping of Wells #2 and #6 as a Percent of Total Annual Pumping



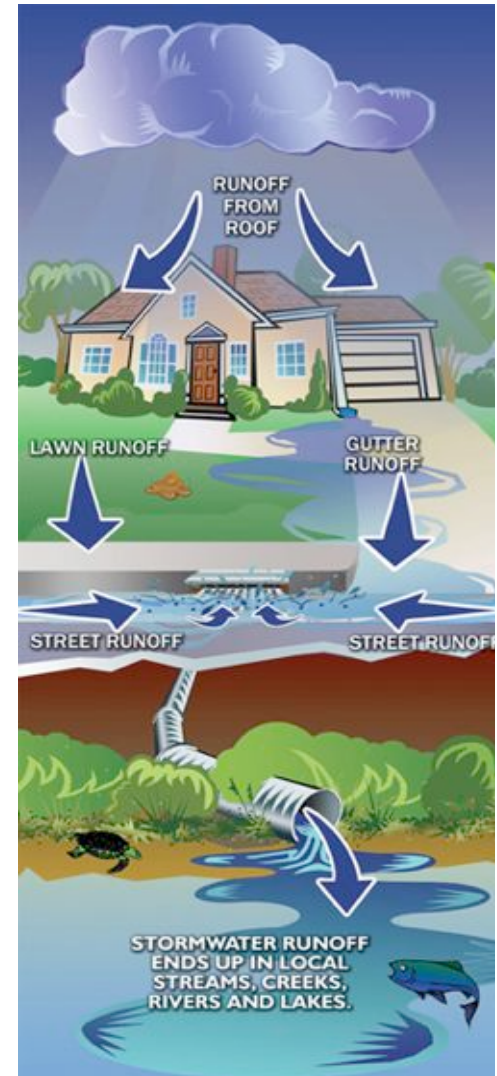
Although it is safe to drink, the water from Wells #2 and #6 is not as good as the town's other wells. The less water the town needs, the less it pumps from those two wells, and water quality improves.

Using less water is not the only way to improve the balance between human needs and environmental needs. A tremendous amount of water rushes out of Sharon every time it rains. Some of it could be captured and stored in the ground for use later during dry spells.



Traditionally, stormwater has been treated like trash, something to be gotten rid of as fast as possible.

Sharon has a network of storm drains to divert stormwater quickly out of town.

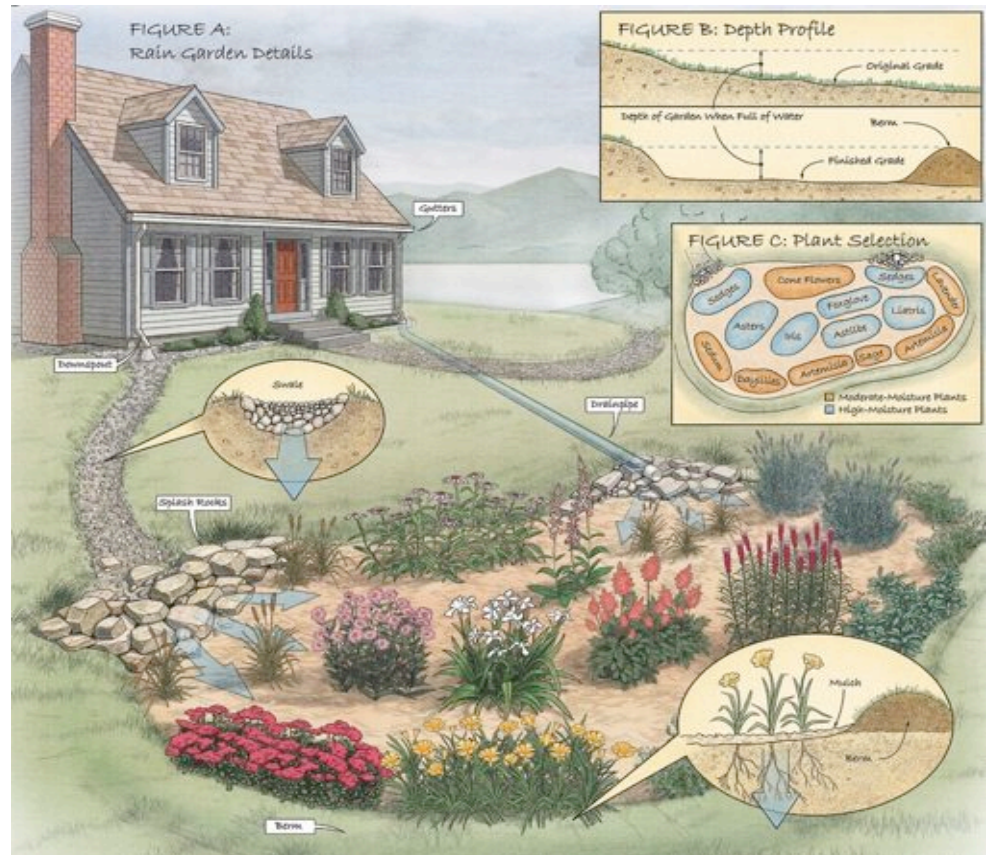


Untreated storm water rushing off pavement and down storm drains causes erosion, and pollutes nearby streams with contaminants such as fertilizers, pesticides, herbicides, auto fluids, pet waste, silt, etc.



Rain gardens capture runoff. They filter and purify storm water as it soaks into the ground, and help recharge underground aquifers.

A rain garden is simply a man-made depression in the ground, located to intercept runoff from a roof, driveway or street, filled with layers of sand and organic loam, and planted with decorative or other useful plants such as blueberries that are adapted to periodic wet conditions.



Rain gardens mimic natural forest habitat, in which spongy leaf litter soaks up stormwater and allows it to infiltrate slowly into the ground.

In addition to replenishing groundwater, rain gardens filter out contaminants instead of allowing them to pollute streams and rivers. They also beautify the neighborhood.



Rain barrels can be used to capture clean roof runoff and store it for watering flowers and gardens during dry spells.





New developments coming to Sharon will add significantly to demand for water. If we as a community wish to avoid the high cost of importing supplementary MWRA water, and preserve Sharon's natural, verdant character for our families, we must use water more efficiently, and capture storm runoff more effectively.

Conserving water pays back by lowering your water bill. Contact the Sharon Water Department at 781-784-1525 to find out how you can do your part to conserve water, Sharon's most valuable resource. Helpful links are provided in the next frame.



And get involved! Volunteer to serve on Sharon's Water Management Advisory Committee. Become a member of the Neponset River Watershed Association and the Sharon Friends of Conservation. Join other concerned citizens in protecting, enjoying and learning about Sharon's precious water resources.

Helpful Links for Conserving Water*

1. High Efficiency Toilets (HETs average 0.8 to 1.28 gallons per flush)**

- A. Flushing power of High Efficiency Toilets: <http://www.cuwcc.org/MaPTesting.aspx>
- B. Dual-flush conversion kit: <http://www.gomjsi.com/products/overview/hydroright>
- C. 0.8 gpf toilet: <http://www.greenbuildingadvisor.com/blogs/dept/water/niagara-s-innovative-08-gpf-vacuum-assist-stealth-toilet>

2. Washing machines (EnergyStar water factor of 5.0 or less)**

http://www.energystar.gov/index.cfm?fuseaction=find_a_product.showProductGroup&pgw_code=CW

3. Shower heads (1.5 to 1.75 gpm)

- Overview video: <http://www.youtube.com/watch?v=6467uwBeNhE&NR=1>
- How to change a shower head: <http://www.youtube.com/watch?v=DW80eaRbeBs&feature=related>
- EPA WaterSense: <http://www.epa.gov/WaterSense/products/showerheads.html>
- Heat sensing shutoff valve: <http://e3living.com/newest-technology-evolve-ladybug-showerhead-adapter>
- 5-minute shower timer: <http://www.usalandlord.com/washsati.html>

4. Faucet aerators (0.5 gpm in the bathroom to 1.5 gpm in the kitchen)

- How to change a faucet aerator: <http://www.youtube.com/watch?v=xNQ1auGtSyY>
- Source for faucet aerators of various flow rates: <http://e3living.com/5-gallons-minute-aerator>

5. Household leaks

- Overview: http://www.allianceforwaterefficiency.org/Household_Leaks.aspx

6. Rain-only lawns

- Overview: <http://www.wikihow.com/Save-Water-with-a-Sleeping-Lawn>
- Rain-only lawn presentation: http://www.businessevision.info/parker_river/MakeADiff.html
- Drought-tolerant grass seed: <http://www.greenscapes.org/Page-593.html>

**DISCLAIMER: The Sharon Friends of Conservation does not endorse or recommend any products mentioned in the Virtual Tour, either implicitly or explicitly.*

***To find out about rebates on HETs and efficient washing machines, visit the Sharon Water Department web page at: http://www.townofsharon.net/Public_Documents/SharonMA_DPW/water, or call the Water Department at 781-784-1525.*