

Saugus River Watershed Council
2016 Water Quality Monitoring Results

Report last revised: 1/6/2017

Site Code	Site Name / Description	Town	Water Quality Designation	BACTERIA, Enterococcus: cfu / 100 mL						Geometric Mean	% Meeting Swim Standard	% Meeting Boat Standard
				28-Apr-16 Dry Weather	24-May-16 Wet Weather	28-Jun-16 Wet Weather	12-Jul-16 Dry Weather	13-Sep-16 Dry Weather	11-Oct-16 Dry (Rain 48 HR)			
LQ1	Lake Quannapowitt	Wakefield	B	10	521	134	121	10	10	45	50%	83%
SR1	Saugus River upstream of LWSC Dam	Wakefield/Lynnfield	B	20	31	74	128	131	84	63	33%	100%
MR1	Mill River @ Farm Street	Wakefield	B	20	135	323	145	131	465	141	17%	83%
SR2	Saugus River @ Breakheart	Saugus	B	20	63	437	110	328	464	145	17%	67%
SR3	Saugus River @ Route 1	Saugus	B	10	10	187	63	52	341	52	50%	100%
SR4	Saugus River @ Bridge Street	Saugus	B	20	278	3,650	41	20	408	138	50%	50%
SHB1	Shute Brook downstream of Central St.	Saugus	B	86	10,500	4,610	789	199	262	745	17%	50%
SR5	Saugus River @ Boston St. / Lincoln Ave.	Lynn/Saugus	SB/CSO, ORW, SH	10	1,900	650	10	10	573	94	50%	50%
STB1	Strawberry Brook Outlet	Lynn	SB/CSO, ORW, SH	86	14,100	292	331	85	836	450	33%	33%
PR1	Pines / Saugus River @ Gibson Park	Revere	SB, ORW, SH	10	41	10	10	20	10	14	100%	100%
PR2	Pines River @ Route 1A	Revere	SB, ORW, SH	10	10	20	10	30	10	13	100%	100%
TRB1	Trifone Brook	Revere	SA	109	24,200	2,760	932	3,780	24,200	2,921	0%	17%
TLB1	Town Line Brook @ Cemeteries	Malden	SA	74	6,870	1,020	743	132	ns	551	20%	40%

Water Quality Standards for Enterococci

Swimming: Geometric mean of $\leq 33/100$ mL or $\leq 61/100$ mL for a single sample

Swimming: Geometric mean of < 35 , or $\leq 104/100$ mL for a single sample

Boating: Geometric mean $\leq 175/100$ mL, and 10% of samples $\leq 350/100$ mL

Bacterial pollution exceeds recommended levels for swimming and boating

The following sites are coastal: PR1, PR2

The following sites are tidally influenced: SHSB, SR5, STB1

The following sites may be tidally influenced depending upon tide gate settings: TRB1, TLB1

*For purposes of analysis, sample results <10 are listed as 10 / sample results $>24,200$ are shown as 24,200

**Saugus River Watershed Council
2016 Water Quality Monitoring Results**

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Site Code	Site Name / Description	Town	Water Quality Designation	BACTERIA, E. coli: MPN / 100 mL						Geometric Mean	% Meeting Swim Standard	% Meeting Boat Standard
				28-Apr-16 Dry Weather	24-May-16 Wet Weather	28-Jun-16 Wet Weather	12-Jul-16 Dry Weather	13-Sep-16 Dry Weather	11-Oct-16 Dry (Rain 48 HR)			
LQ1	Lake Quannapowitt	Wakefield	B	20	253	1,260	226	213	158	191	67%	83%
SR1	Saugus River upstream of LWSC Dam	Wakefield/Lynnfield	B	63	203	134	52	84	2,720	165	83%	83%
MR1	Mill River @ Farm Street	Wakefield	B	110	393	323	246	408	3,650	415	17%	83%
SR2	Saugus River @ Breakheart	Saugus	B	74	121	432	350	933	1,350	346	33%	67%
SR3	Saugus River @ Route 1	Saugus	B	171	146	253	134	173	2,280	263	67%	83%
SR4	Saugus River @ Bridge Street	Saugus	B	110	638	5,790	110	63	2,910	449	50%	50%
SHB1	Shute Brook downstream of Central St.	Saugus	B	906	8,660	2,600	1,240	798	836	1,602	0%	0%
SR5	Saugus River @ Boston St. / Lincoln Ave.	Lynn/Saugus	SB/CSO, ORW, SH	148	1,860	142	84	97	3,280	319	67%	67%
STB1	Strawberry Brook Outlet	Lynn	SB/CSO, ORW, SH	4,610	24,200	134	480	223	19,900	1,780	33%	50%
PR1	Pines / Saugus River @ Gibson Park	Revere	SB, ORW, SH	10	10	20	20	86	292	32	83%	100%
PR2	Pines River @ Route 1A	Revere	SB, ORW, SH	41	74	10	10	20	201	33	100%	100%
TRB1	Trifone Brook	Revere	SA	350	24,200	2,910	2,190	5,170	24,200	4,348	17%	17%
TLB1	Town Line Brook @ Cemeteries	Malden	SA	2,600	10,100	677	839	13,000	NS	2,868	0%	0%

Water Quality Standards for E. coli

Swimming: E. coli geometric mean of ≤ 126 / 100 ml, or ≤ 235 /100 mL for a single sample

Boating: E. Coli geometric mean of ≤ 630 / 100 mL, and 10% of samples 1260 / 100 mL

Bacterial pollution exceeds recommended levels for swimming and boating

The following sites are coastal: PR1, PR2

The following sites are tidally influenced: SHSB, SR5, STB1

The following sites may be tidally influenced depending upon tide gate settings: TRB1, TLB1

*For purposes of analysis, sample results <10 are listed as 10 / sample results $>24,200$ are shown as 24,200

**Saugus River Watershed Council
2016 Water Quality Monitoring Results**

Report last revised: 1/6/2017

Site Code	Site Name / Description	Town	Water Quality Designation	TSS: mg/L						Geometric Mean
				28-Apr-16 Dry Weather	24-May-16 Wet Weather	28-Jun-16 Wet Weather	12-Jul-16 Dry Weather	13-Sep-16 Dry Weather	11-Oct-16 Dry (Rain 48 HR)	
LQ1	Lake Quannapowitt	Wakefield	B	11.5	13	14	15	23	15.5	14.96
SR1	Saugus River upstream of LWSC Dam	Wakefield/Lynnfield	B	126	14	10.5	11.5	37	20.5	23.34
MR1	Mill River @ Farm Street	Wakefield	B	5	11.2	7.5	5	6.5	5	6.39
SR2	Saugus River @ Breakheart	Saugus	B	5	11	6	84.5	75.5	5	14.80
SR3	Saugus River @ Route 1	Saugus	B	5	6.57	10	9.5	5	5	6.54
SR4	Saugus River @ Bridge Street	Saugus	B	5	20	11	5	5	5	7.18
SHB1	Shute Brook downstream of Central St.	Saugus	B	5	99	9	5	5	5	9.07
SR5	Saugus River @ Boston St. / Lincoln Ave.	Lynn/Saugus	SB/CSO, ORW, SH	16	106	56	18	34.5	15.5	31.15
STB1	Strawberry Brook Outlet	Lynn	SB/CSO, ORW, SH	6	44	15.5	7	15.5	12	13.22
PR1	Pines / Saugus River @ Gibson Park	Revere	SB, ORW, SH	32.5	200	42	44.5	31	10.5	39.77
PR2	Pines River @ Route 1A	Revere	SB, ORW, SH	41.5	84.5	43.5	29.5	18.5	19.5	34.28
TRB1	Trifone Brook	Revere	SA	7	67	5	5	5	6.5	8.51
TLB1	Town Line Brook @ Cemeteries	Malden	SA	7	200	18	11	12	ns	20.16

Water Quality Standards

Massachusetts does not have numeric water quality standards for total suspended solids.

Elevated levels of TSS or turbidity degrade water quality and habitat for fish.

For purposes of analysis, results <5.00 are shown as 5

**Saugus River Watershed Council
2016 Water Quality Monitoring Results**

Report last revised: 1/6/2017

Site Code	Site Name / Description	Town	Water Quality Designation	Total Nitrogen: mg/L						Geometric Mean
				28-Apr-16 Dry Weather	24-May-16 Wet Weather	28-Jun-16 Wet Weather	12-Jul-16 Dry Weather	13-Sep-16 Dry Weather	11-Oct-16 Dry (Rain 48 HR)	
LQ1	Lake Quannapowitt	Wakefield	B	0.892348	0.773844	1.10316	1.0114	1.692512	1.002676	1.045700
SR1	Saugus River upstream of LWSC Dam	Wakefield/Lynnfield	B	2.255896	0.845412	0.94152	1.194268	1.477412	1.829716	1.340296
MR1	Mill River @ Farm Street	Wakefield	B	0.930076	0.945924	0.849792	0.819664	0.621164	0.729028	0.807630
SR2	Saugus River @ Breakheart	Saugus	B	0.698284	0.934908	0.84792	1.437448	1.084148	0.683764	0.915779
SR3	Saugus River @ Route 1	Saugus	B	0.576868	0.839508	0.883296	0.80764	0.644204	0.631564	0.721070
SR4	Saugus River @ Bridge Street	Saugus	B	0.654628	1.06434	1.21476	0.9064	0.943748	0.720916	0.897300
SHB1	Shute Brook downstream of Central St.	Saugus	B	1.511896	2.0238	2.29728	1.634548	1.537172	1.488076	1.724281
SR5	Saugus River @ Boston St. / Lincoln Ave.	Lynn/Saugus	SB/CSO, ORW, SH	0.697516	1.38348	0.592416	0.468316	0.74378	0.684484	0.717381
STB1	Strawberry Brook Outlet	Lynn	SB/CSO, ORW, SH	1.084096	2.34036	1.45968	0.976936	0.95018	1.009012	1.230352
PR1	Pines / Saugus River @ Gibson Park	Revere	SB, ORW, SH	0.355384	0.793092	0.240744	0.227308	0.421616	0.50128	0.385063
PR2	Pines River @ Route 1A	Revere	SB, ORW, SH	0.2743	0.55626	0.227004	0.261748	0.555836	0.47314	0.365505
TRB1	Trifone Brook	Revere	SA	3.604756	4.17402	3.5778	3.505648	4.783772	5.771956	4.163751
TLB1	Town Line Brook @ Cemeteries	Malden	SA	1.082956	5.10846	1.00452	1.229608	1.154552	ns	1.511499

Water Quality Standards

Numerical water quality standards for phosphorus and nitrogen are currently under development in Massachusetts. Elevated nutrient levels (nitrogen and phosphorus) can lead to excessive algal growth.

**Saugus River Watershed Council
2016 Water Quality Monitoring Results**

Report last revised: 1/6/2017

Site Code	Site Name / Description	Town	Water Quality Designation	Total Phosphorus: mg/L						Geometric Mean
				28-Apr-16 Dry Weather	24-May-16 Wet Weather	28-Jun-16 Wet Weather	12-Jul-16 Dry Weather	13-Sep-16 Dry Weather	11-Oct-16 Dry (Rain 48 HR)	
LQ1	Lake Quannapowitt	Wakefield	B	0.051068	0.042728	0.05136	0.059888	0.07744	0.072628	0.057918
SR1	Saugus River upstream of LWSC Dam	Wakefield/Lynnfield	B	0.397256	0.100472	0.125544	0.131888	0.122524	0.160132	0.153274
MR1	Mill River @ Farm Street	Wakefield	B	0.036056	0.067916	0.09492	0.052484	0.058792	0.06706	0.060305
SR2	Saugus River @ Breakheart	Saugus	B	0.039704	0.079736	0.076944	0.23096	0.166948	0.067	0.092571
SR3	Saugus River @ Route 1	Saugus	B	0.028208	0.060308	0.08124	0.063236	0.05716	0.065416	0.056543
SR4	Saugus River @ Bridge Street	Saugus	B	0.024224	0.091052	0.084552	0.047084	0.045616	0.054304	0.052834
SHB1	Shute Brook downstream of Central St.	Saugus	B	0.034628	0.3011	0.153444	0.031532	0.041248	0.035692	0.064834
SR5	Saugus River @ Boston St. / Lincoln Ave.	Lynn/Saugus	SB/CSO, ORW, SH	0.03398	0.234236	0.108408	0.077348	0.143536	0.086152	0.096851
STB1	Strawberry Brook Outlet	Lynn	SB/CSO, ORW, SH	0.037448	0.353324	0.103212	0.05222	0.157096	0.108916	0.103372
PR1	Pines / Saugus River @ Gibson Park	Revere	SB, ORW, SH	0.02846	0.23402	0.048708	0.045932	0.082444	0.067204	0.065987
PR2	Pines River @ Route 1A	Revere	SB, ORW, SH	0.024548	0.150152	0.04716	0.047492	0.085948	0.075076	0.061340
TRB1	Trifone Brook	Revere	SA	0.052148	0.481748	0.068712	0.055784	0.069928	0.25804	0.109645
TLB1	Town Line Brook @ Cemeteries	Malden	SA	0.04082	0.712016	0.078048	0.073244	0.095164	ns	0.109596

Water Quality Standards

Numerical water quality standards for phosphorus and nitrogen are currently under development in Massachusetts. Elevated nutrient levels (nitrogen and phosphorus) can lead to excessive algal growth.

**Saugus River Watershed Council
2016 Water Quality Monitoring Results**

Report last revised: 1/6/2017

Site Code	Site Name / Description	Town	Water Quality Designation	Dissolved Oxygen: mg/L						Geometric Mean
				28-Apr-16 Dry Weather	24-May-16 Wet Weather	28-Jun-16 Wet Weather	12-Jul-16 Dry Weather	13-Sep-16 Dry Weather	11-Oct-16 Dry (Rain 48 HR)	
LQ1	Lake Quannapowitt	Wakefield	B	7.4	7.1	5.7	4.3	6.8	8.8	6.52
SR1	Saugus River upstream of LWSC Dam	Wakefield/Lynnfield	B	8.5	4.9	2.7	1.8	0.5	5.7	2.89
MR1	Mill River @ Farm Street	Wakefield	B	7.1	3.6	1.7	2.6	3.8	4.7	3.55
SR2	Saugus River @ Breakheart	Saugus	B	8.6	6.1	2.8	3.4	4.5	8	5.12
SR3	Saugus River @ Route 1	Saugus	B	8.2	5.1	3.3	4.7	4.4	5.8	5.05
SR4	Saugus River @ Bridge Street	Saugus	B	9.14	7.2	6.9	8.3	8.3	8.6	8.03
SHB1	Shute Brook downstream of Central St.	Saugus	B	10.4	8.46	6.9	8.05	6.49	9.83	8.23
SR5	Saugus River @ Boston St. / Lincoln Ave.	Lynn/Saugus	SB/CSO, ORW, SH	9.74	7.13	4.34	4.81	3.18	6.78	5.61
STB1	Strawberry Brook Outlet	Lynn	SB/CSO, ORW, SH	10.1	7.16	5.81	4.19	2.55	5.83	5.45
PR1	Pines / Saugus River @ Gibson Park	Revere	SB, ORW, SH	9.8	6.12	6.37	6.2	4.18	7.62	6.50
PR2	Pines River @ Route 1A	Revere	SB, ORW, SH	9.74	5.97	5.92	6	3.61	6.85	6.09
TRB1	Trifone Brook	Revere	SA	9.62	5.38	6.27	7.21	5.22	6.3	6.52
TLB1	Town Line Brook @ Cemeteries	Malden	SA	7.2	7.09	1.91	2.12	4.1	ns	3.85

Water Quality Standards

(warm water fishery), > or = 5.0 mg/L unless background conditions are lower

Dissolved oxygen levels do not meet water quality standards

Dissolved oxygen levels may pose risk for fish and wildlife habitat

**Saugus River Watershed Council
2016 Water Quality Monitoring Results**

Report last revised: 1/6/2017

Site Code	Site Name / Description	Town	Water Quality Designation	Temperature: Degrees Celcius						Geometric Mean
				28-Apr-16 Dry Weather	24-May-16 Wet Weather	28-Jun-16 Wet Weather	12-Jul-16 Dry Weather	13-Sep-16 Dry Weather	11-Oct-16 Dry (Rain 48 HR)	
LQ1	Lake Quannapowitt	Wakefield	B	11.9	18	22.8	21.9	19.2	12	17.06
SR1	Saugus River upstream of LWSC Dam	Wakefield/Lynnfield	B	11.5	17.6	22.2	20.5	18.4	12.2	16.57
MR1	Mill River @ Farm Street	Wakefield	B	8.5	15.8	20.6	17	15.6	8.2	13.49
SR2	Saugus River @ Breakheart	Saugus	B	9.6	16.5	21	17.9	16.6	9.2	14.45
SR3	Saugus River @ Route 1	Saugus	B	10.9	17.5	21.3	19.3	18.1	10.8	15.76
SR4	Saugus River @ Bridge Street	Saugus	B	10.2	16.5	19.9	17.5	16.7	10.9	14.84
SHB1	Shute Brook downstream of Central St.	Saugus	B	8.6	14.3	18.5	16.4	16	10.1	13.49
SR5	Saugus River @ Boston St. / Lincoln Ave.	Lynn/Saugus	SB/CSO, ORW, SH	10.8	16.8	23.4	20.7	22.5	13.9	17.37
STB1	Strawberry Brook Outlet	Lynn	SB/CSO, ORW, SH	11.6	16.4	20.6	20.4	21.6	14.8	17.16
PR1	Pines / Saugus River @ Gibson Park	Revere	SB, ORW, SH	8.9	16	19.2	17.5	20.1	11.6	14.95
PR2	Pines River @ Route 1A	Revere	SB, ORW, SH	9	15.5	20	18.5	20.8	13	15.52
TRB1	Trifone Brook	Revere	SA	8.9	14.4	18.8	17	16.9	12	14.23
TLB1	Town Line Brook @ Cemeteries	Malden	SA	10.2	15.1	20.5	17.5	16.9	ns	15.63

Water Quality Standards

Class A/B: < 28.3°C for warm water fisheries

Class SA/SB: < 29.4°C

All samples meet water quality standards for temperature (warm water fisheries)

**Saugus River Watershed Council
2016 Water Quality Monitoring Results**

Report last revised: 1/6/2017

Site Code	Site Name / Description	Town	Water Quality Designation	Specific Conductance: uS/cm						Geometric Mean
				28-Apr-16 Dry Weather	24-May-16 Wet Weather	28-Jun-16 Wet Weather	12-Jul-16 Dry Weather	13-Sep-16 Dry Weather	11-Oct-16 Dry (Rain 48 HR)	
LQ1	Lake Quannapowitt	Wakefield	B	609	644	683	698	753	732	685
SR1	Saugus River upstream of LWSC Dam	Wakefield/Lynnfield	B	860	844	960	975	1,435	1,037	1,002
MR1	Mill River @ Farm Street	Wakefield	B	1,061	1,246	1,125	1,055	696	890	995
SR2	Saugus River @ Breakheart	Saugus	B	890	981	1,095	804	921	742	898
SR3	Saugus River @ Route 1	Saugus	B	889	972	1,106	1,036	949	711	935
SR4	Saugus River @ Bridge Street	Saugus	B	912	987	1,063	1,028	918	710	929
SHB1	Shute Brook downstream of Central St.	Saugus	B	1,255	362	1,266	1,314	1,216	1,250	1,023
SR5	Saugus River @ Boston St. / Lincoln Ave.	Lynn/Saugus	SB/CSO, ORW, SH	18,240	9,010	43,960	43,040	45,330	33,290	27,876
STB1	Strawberry Brook Outlet	Lynn	SB/CSO, ORW, SH	3,662	4,283	15,020	24,130	43,800	34,690	14,324
PR1	Pines / Saugus River @ Gibson Park	Revere	SB, ORW, SH	44,150	44,220	46,180	45,490	45,690	40,120	44,261
PR2	Pines River @ Route 1A	Revere	SB, ORW, SH	43,870	43,270	46,330	45,540	46,110	42,770	44,626
TRB1	Trifone Brook	Revere	SA	1,305	720	1,072	1,121	1,368	1,276	1,120
TLB1	Town Line Brook @ Cemeteries	Malden	SA	15,110	736	18,700	12,370	14,730	ns	8,236

Water Quality Standards

There are currently no formal water quality standards for specific conductance

Elevated conductivity at freshwater sites may indicate potential long term impact from use of road salt

The following sites are coastal: PR1, PR2

The following sites are tidally influenced: SHSB, SR5, STB1

The following sites may be tidally influenced depending upon tide gate settings: TRB1, TLB1

Saugus River Watershed Council
2015 Water Quality Monitoring Results

Site Code	Site Name / Description	Town	Water Quality Designation	BACTERIA, Enterococcus: cfu / 100 mL						Geometric Mean	% of Samples Meeting Swimming Standard	% of Samples Meet Boating Stand
				28-Apr-15 Light Rain (24Hr)	26-May-15 Dry Weather	23-Jun-15 Dry Weather	28-Jul-15 Dry Weather	22-Sep-15 Dry Weather	27-Oct-15 Dry Weather			
LQ1	Lake Quannapowitt	Wakefield	B	10	269	52	63	<10	146	66	50%	8
SR1	Saugus River upstream of LWSC Dam	Wakefield/Lynnfield	B	<10	52	134	30	63	61	60	67%	10
MR1	Mill River @ Farm Street	Wakefield	B	199	435	816	173	132	41	201	17%	5
SR2	Saugus River @ Breakheart	Saugus	B	20	63	1,330	382	31	10	76	50%	6
SR3	Saugus River @ Route 1	Saugus	B	10	97	933	909	187	<10	173	33%	5
SR4	Saugus River @ Bridge Street	Saugus	B	10	183	311	1,010	10	20	70	50%	5
SHB1	Shute Brook downstream of Central St.	Saugus	B	185	1,150	1,350	4,610	256	213	645	0%	
SR5	Saugus River @ Boston St. / Lincoln Ave.	Lynn/Saugus	SB/CSO, ORW, SH	20	<10	323	1,460	<10	63	156	50%	6
STB1	Strawberry Brook Outlet	Lynn	SB/CSO, ORW, SH	52	20	1,720	5,790	85	3,870	388	33%	5
PR1	Pines / Saugus River @ Gibson Park	Revere	SB, ORW, SH	20	20	<10	631	<10	<10	63	83%	8
PR2	Pines River @ Route 1A	Revere	SB, ORW, SH	<10	<10	10	85	<10	31	30	83%	10
TRB1	Trifone Brook	Revere	SA	84	1,720	1,380	616	97	359	403	0%	3
TLB1	Town Line Brook @ Cemeteries	Malden	SA	132	886	1,540	1,950	246	231	521	0%	1

Water Quality Standards for Enterococci

Swimming Freshwater:	Geometric mean of $\leq 33/100$ mL or $\leq 61/100$ mL for a single sample
Swimming Marine:	Geometric mean of < 35 , or $\leq 104/100$ mL for a single sample
Boating:	Geometric mean $\leq 175 / 100$ mL, and 10% of samples $\leq 350 / 100$ mL

Bacterial pollution exceeds recommended levels for swimming and boating

The following sites are coastal: PR1, PR2

The following sites are tidally influenced: SHSB, SR5, STB1

The following sites may be tidally influenced depending upon tide gate settings: TRB1, TLB1

Saugus River Watershed Council
2015 Water Quality Monitoring Results

Site Code	Site Name / Description	Town	Water Quality Designation	BACTERIA, E. coli: MPN / 100 mL							Geometric Mean	% of Samples Meeting Swimming Standard	% of Samples Boating Standard
				28-Apr-15 Light Rain (24Hr)	26-May-15 Dry Weather	23-Jun-15 Dry Weather	28-Jul-15 Dry Weather	22-Sep-15 Dry Weather	27-Oct-15 Dry Weather				
LQ1	Lake Quannapowitt	Wakefield	B	<10	771	496	98	41	520	240	50%	83%	
SR1	Saugus River upstream of LWSC Dam	Wakefield/Lynnfield	B	10	10	240	20	41	<10	29	83%	100%	
MR1	Mill River @ Farm Street	Wakefield	B	740	388	1,250	197	712	63	383	33%	50%	
SR2	Saugus River @ Breakheart	Saugus	B	41	135	1,210	374	282	30	166	50%	83%	
SR3	Saugus River @ Route 1	Saugus	B	31	134	1,080	983	121	20	148	67%	67%	
SR4	Saugus River @ Bridge Street	Saugus	B	41	74	1,090	886	161	31	156	67%	67%	
SHB1	Shute Brook downstream of Central St.	Saugus	B	448	789	1,140	9,800	987	1,260	1,304	0%	17%	
SR5	Saugus River @ Boston St. / Lincoln Ave.	Lynn/Saugus	SB/CSO, ORW, SH	121	10	683	5,170	63	1,400	269	50%	50%	
STB1	Strawberry Brook Outlet	Lynn	SB/CSO, ORW, SH	109	816	1,400	15,500	145	19,900	1,331	17%	50%	
PR1	Pines / Saugus River @ Gibson Park	Revere	SB, ORW, SH	310	20	20	1,940	62	41	92	83%	83%	
PR2	Pines River @ Route 1A	Revere	SB, ORW, SH	<10	<10	20	85	63	10	32	100%	100%	
TRB1	Trifone Brook	Revere	SA	211	7,270	3,080	6,870	1,260	2,380	2,145	17%	17%	
TLB1	Town Line Brook @ Cemeteries	Malden	SA	1,120	1,850	1,150	2,360	1,050	404	1,156	0%	17%	

Water Quality Standards for E. coli

Swimming: E. coli geometric mean of ≤126 / 100 ml, or ≤235/100 mL for a single sample

Boating: E. Coli geometric mean of ≤ 630 / 100 mL, and 10% of samples 1260 / 100 mL

Bacterial pollution exceeds recommended levels for swimming and boating

The following sites are coastal: PR1, PR2

The following sites are tidally influenced: SHSB, SR5, STB1

The following sites may be tidally influenced depending upon tide gate settings: TRB1, TLB1

Saugus River Watershed Council
2015 Water Quality Monitoring Results

Site Code	Site Name / Description	Town	Water Quality Designation	TSS: mg/L						Geometric Mean
				28-Apr-15 Light Rain (24Hr)	26-May-15 Dry Weather	23-Jun-15 Dry Weather	28-Jul-15 Dry Weather	22-Sep-15 Dry Weather	27-Oct-15 Dry Weather	
LQ1	Lake Quannapowitt	Wakefield	B	17.00	21.50	6.50	37.50	15.00	7.50	14.68
SR1	Saugus River upstream of LWSC Dam	Wakefield/Lynnfield	B	<5.00	15.00	5.00	<5.00	78.50	11.00	15.95
MR1	Mill River @ Farm Street	Wakefield	B	<5.00	6.50	<5.00	<5.00	7.50	<5.00	6.98
SR2	Saugus River @ Breakheart	Saugus	B	5.00	8.50	5.50	<5.00	<5.00	<5.00	6.16
SR3	Saugus River @ Route 1	Saugus	B	<5.00	7.50	5.50	7.50	15.50	<5.00	8.32
SR4	Saugus River @ Bridge Street	Saugus	B	<5.00	9.00	8.50	6.00	<5.00	<5.00	7.71
SHB1	Shute Brook downstream of Central St.	Saugus	B	<5.00	9.50	<5.00	<5.00	<5.00	<5.00	9.50
SR5	Saugus River @ Boston St. / Lincoln Ave.	Lynn/Saugus	SB/CSO, ORW, SH	13.00	49.50	17.50	16.50	9.50	24.50	18.74
STB1	Strawberry Brook Outlet	Lynn	SB/CSO, ORW, SH	12.50	11.50	<5.00	20.50	9.50	<5.00	12.94
PR1	Pines / Saugus River @ Gibson Park	Revere	SB, ORW, SH	17.50	83.50	27.00	30.50	18.00	23.00	28.16
PR2	Pines River @ Route 1A	Revere	SB, ORW, SH	14.00	56.50	17.50	22.50	12.00	84.50	26.10
TRB1	Trifone Brook	Revere	SA	<5.00	<5.00	<5.00	<5.00	<5.00	5.00	5.00
TLB1	Town Line Brook @ Cemeteries	Malden	SA	6.00	7.50	8.00	10.00	12.00	<5.00	8.45

Water Quality Standards

Massachusetts does not have numeric water quality standards for total suspended solids.
Elevated levels of TSS or turbidity degrade water quality and habitat for fish.

Saugus River Watershed Council
2015 Water Quality Monitoring Results

Site Code	Site Name / Description	Town	Water Quality Designation	Total Nitrogen: mg/L						Geometric Mean
				28-Apr-15 Light Rain (24Hr)	26-May-15 Dry Weather	23-Jun-15 Dry Weather	28-Jul-15 Dry Weather	22-Sep-15 Dry Weather	27-Oct-15 Dry Weather	
LQ1	Lake Quannapowitt	Wakefield	B	0.926124	1.221396	1.210476	1.845992	0.840996	0.633552	1.050868
SR1	Saugus River upstream of LWSC Dam	Wakefield/Lynnfield	B	0.520296	0.912336	0.892716	0.701024	1.719816	1.115376	0.910526
MR1	Mill River @ Farm Street	Wakefield	B	1.192032	1.430196	0.731868	1.014332	1.017336	1.030368	1.048235
SR2	Saugus River @ Breakheart	Saugus	B	0.920508	1.192296	0.836916	0.845528	0.664668	0.459096	0.786662
SR3	Saugus River @ Route 1	Saugus	B	0.776484	0.951984	0.766884	0.804296	0.585636	0.503916	0.715839
SR4	Saugus River @ Bridge Street	Saugus	B	0.867012	1.076136	0.851652	0.988832	0.814620	0.671184	0.868652
SHB1	Shute Brook downstream of Central St.	Saugus	B	1.552932	1.967196	1.516776	1.613852	1.744536	1.526568	1.646381
SR5	Saugus River @ Boston St. / Lincoln Ave.	Lynn/Saugus	SB/CSO, ORW, SH	0.628284	0.502224	0.701364	0.847904	0.587652	0.552408	0.627269
STB1	Strawberry Brook Outlet	Lynn	SB/CSO, ORW, SH	0.951396	1.184556	0.740724	1.326692	1.181376	1.076988	1.058824
PR1	Pines / Saugus River @ Gibson Park	Revere	SB, ORW, SH	0.243420	0.180144	0.321132	0.549248	0.263340	0.486960	0.315796
PR2	Pines River @ Route 1A	Revere	SB, ORW, SH	0.293556	0.209820	0.289836	0.519992	0.347520	0.751128	0.366491
TRB1	Trifone Brook	Revere	SA	2.470812	3.441696	3.445596	3.506312	3.720756	1.217088	2.783642
TLB1	Town Line Brook @ Cemeteries	Malden	SA	1.500972	1.588356	1.561416	1.690652	1.151556	3.986328	1.751695

Water Quality Standards

Numerical water quality standards for phosphorus and nitrogen are currently under development in Massachusetts. Elevated nutrient levels (nitrogen and phosphorus) can lead to excessive algal growth.

Saugus River Watershed Council
2015 Water Quality Monitoring Results

Site Code	Site Name / Description	Town	Water Quality Designation	Total Phosphorus: mg/L						Geometric Mean
				28-Apr-15 Light Rain (24Hr)	26-May-15 Dry Weather	23-Jun-15 Dry Weather	28-Jul-15 Dry Weather	22-Sep-15 Dry Weather	27-Oct-15 Dry Weather	
LQ1	Lake Quannapowitt	Wakefield	B	0.064752	0.083524	0.053484	0.183212	0.060840	0.039952	0.071066
SR1	Saugus River upstream of LWSC Dam	Wakefield/Lynnfield	B	0.027672	0.103096	0.151980	0.070052	0.245256	0.113044	0.097176
MR1	Mill River @ Farm Street	Wakefield	B	0.064956	0.068980	0.076224	0.060728	0.071388	0.060352	0.066864
SR2	Saugus River @ Breakheart	Saugus	B	0.052680	0.080788	0.093240	0.079124	0.064068	0.050812	0.068378
SR3	Saugus River @ Route 1	Saugus	B	0.044616	0.062152	0.080460	0.081944	0.077340	0.044584	0.063087
SR4	Saugus River @ Bridge Street	Saugus	B	0.051708	0.061744	0.079572	0.073016	0.046848	0.033376	0.055430
SHB1	Shute Brook downstream of Central St.	Saugus	B	0.049128	0.063880	0.043728	0.054548	0.039696	0.040240	0.047820
SR5	Saugus River @ Boston St. / Lincoln Ave.	Lynn/Saugus	SB/CSO, ORW, SH	0.052260	0.064288	0.081348	0.142568	0.098928	0.106084	0.086153
STB1	Strawberry Brook Outlet	Lynn	SB/CSO, ORW, SH	0.053304	0.046876	0.031212	0.142880	0.108684	0.062260	0.064997
PR1	Pines / Saugus River @ Gibson Park	Revere	SB, ORW, SH	0.035184	0.032464	0.051216	0.122756	0.055452	0.076072	0.055833
PR2	Pines River @ Route 1A	Revere	SB, ORW, SH	0.037200	0.041620	0.047040	0.113372	0.064332	0.182308	0.067765
TRB1	Trifone Brook	Revere	SA	0.079860	0.057244	0.110184	0.049736	0.050784	0.083296	0.068791
TLB1	Town Line Brook @ Cemeteries	Malden	SA	0.081336	0.087520	0.066792	0.126344	0.082380	0.046144	0.078181

Water Quality Standards

Numerical water quality standards for phosphorus and nitrogen are currently under development in Massachusetts. Elevated nutrient levels (nitrogen and phosphorus) can lead to excessive algal growth.

Saugus River Watershed Council
2015 Water Quality Monitoring Results

Site Code	Site Name / Description	Town	Water Quality Designation	Dissolved Oxygen: mg/L						Geometric Mean
				28-Apr-15 Light Rain (24Hr)	26-May-15 Dry Weather	23-Jun-15 Dry Weather	28-Jul-15 Dry Weather	22-Sep-15 Dry Weather	27-Oct-15 Dry Weather	
LQ1	Lake Quannapowitt	Wakefield	B	10.60	6.50	6.80	6.65	5.90	9.70	7.50
SR1	Saugus River upstream of LWSC Dam	Wakefield/Lynnfield	B	8.70	6.60	6.60	3.60	3.60	7.90	5.82
MR1	Mill River @ Farm Street	Wakefield	B	7.10	2.60	2.60	1.43	6.30	4.90	3.58
SR2	Saugus River @ Breakheart	Saugus	B	9.20	5.40	5.60	6.20	7.55	9.90	7.11
SR3	Saugus River @ Route 1	Saugus	B	9.20	5.30	5.80	5.50	5.70	7.80	6.41
SR4	Saugus River @ Bridge Street	Saugus	B	10.30	8.30	7.90	7.80	9.10	11.10	9.00
SHB1	Shute Brook downstream of Central St.	Saugus	B	9.83	7.39	8.39	6.44	6.66	5.93	7.33
SR5	Saugus River @ Boston St. / Lincoln Ave.	Lynn/Saugus	SB/CSO, ORW, SH	8.36	5.78	4.26	3.83	3.86	4.51	4.89
STB1	Strawberry Brook Outlet	Lynn	SB/CSO, ORW, SH	9.10	6.36	5.70	2.00	3.33	4.55	4.64
PR1	Pines / Saugus River @ Gibson Park	Revere	SB, ORW, SH	9.56	7.68	7.58	2.44	4.52	4.53	5.50
PR2	Pines River @ Route 1A	Revere	SB, ORW, SH	9.45	7.39	6.96	2.35	4.39	4.30	5.28
TRB1	Trifone Brook	Revere	SA	9.26	7.74	7.43	3.89	5.75	4.98	6.24
TLB1	Town Line Brook @ Cemeteries	Malden	SA	6.88	3.56	3.35	1.75	3.28	6.43	3.80

Water Quality Standards

(warm water fishery), > or = 5.0 mg/L unless background conditions are lower

Dissolved oxygen levels do not meet water quality standards

Dissolved oxygen levels may pose risk for fish and wildlife habitat

Saugus River Watershed Council
2015 Water Quality Monitoring Results

Site Code	Site Name / Description	Town	Water Quality Designation	Temperature: Degrees Celcius						Geomet Me
				28-Apr-15 Light Rain (24Hr)	26-May-15 Dry Weather	23-Jun-15 Dry Weather	28-Jul-15 Dry Weather	22-Sep-15 Dry Weather	27-Oct-15 Dry Weather	
LQ1	Lake Quannapowitt	Wakefield	B	10.9	18.5	23.1	24.1	19.5	7.8	16.0
SR1	Saugus River upstream of LWSC Dam	Wakefield/Lynnfield	B	9.6	20.6	23.4	23.9	18.7	9.1	16.3
MR1	Mill River @ Farm Street	Wakefield	B	8.9	16.9	19.2	21.1	16.0	7.1	13.8
SR2	Saugus River @ Breakheart	Saugus	B	9.3	17.9	19.5	21.3	15.7	6.1	13.7
SR3	Saugus River @ Route 1	Saugus	B	9.4	18.5	20.2	22.1	16.5	8.1	14.7
SR4	Saugus River @ Bridge Street	Saugus	B	9.4	17.9	19.8	21.5	15.5	7.4	14.2
SHB1	Shute Brook downstream of Central St.	Saugus	B	8.6	15.6	16.7	19.8	14.7	7.5	13.0
SR5	Saugus River @ Boston St. / Lincoln Ave.	Lynn/Saugus	SB/CSO, ORW, SH	8.2	18.3	21.4	24.4	20.7	10.3	15.9
STB1	Strawberry Brook Outlet	Lynn	SB/CSO, ORW, SH	8.6	17.0	21.7	24.3	20.6	9.9	15.8
PR1	Pines / Saugus River @ Gibson Park	Revere	SB, ORW, SH	7.8	14.1	18.0	23.1	17.4	7.6	13.5
PR2	Pines River @ Route 1A	Revere	SB, ORW, SH	8.2	15.0	18.7	23.3	18.3	8.2	14.1
TRB1	Trifone Brook	Revere	SA	9.3	15.3	16.7	18.8	16.1	9.3	13.7
TLB1	Town Line Brook @ Cemeteries	Malden	SA	8.6	14.3	18.2	19.7	16.2	7.0	13.0

Water Quality Standards

Class A/B: < 28.3°C for warm water fisheries

Class SA/SB: < 29.4°C

All samples meet water quality standards for temperature (warm water fisheries)

Saugus River Watershed Council
2015 Water Quality Monitoring Results

Site Code	Site Name / Description	Town	Water Quality Designation	Specific Conductance: uS/cm						Geometric Mean
				28-Apr-15 Light Rain (24Hr)	26-May-15 Dry Weather	23-Jun-15 Dry Weather	28-Jul-15 Dry Weather	22-Sep-15 Dry Weather	27-Oct-15 Dry Weather	
LQ1	Lake Quannapowitt	Wakefield	B	539	587	598	615	650	617	600
SR1	Saugus River upstream of LWSC Dam	Wakefield/Lynnfield	B	698	847	676	837	920	802	792
MR1	Mill River @ Farm Street	Wakefield	B	1,057	1,360	593	1,142	1,083	1,243	1,046
SR2	Saugus River @ Breakheart	Saugus	B	840	1,104	542	1,001	1,085	1,158	926
SR3	Saugus River @ Route 1	Saugus	B	815	1,038	548	894	973	902	845
SR4	Saugus River @ Bridge Street	Saugus	B	852	1,069	588	961	1,044	987	900
SHB1	Shute Brook downstream of Central St.	Saugus	B	984	1,473	1,398	1,233	1,388	1,487	1,314
SR5	Saugus River @ Boston St. / Lincoln Ave.	Lynn/Saugus	SB/CSO, ORW, SH	5,345	41,310	24,810	35,580	43,400	42,930	26,710
STB1	Strawberry Brook Outlet	Lynn	SB/CSO, ORW, SH	1,865	19,710	6,150	38,660	42,420	38,050	15,544
PR1	Pines / Saugus River @ Gibson Park	Revere	SB, ORW, SH	43,660	46,620	44,040	44,300	45,510	45,350	44,902
PR2	Pines River @ Route 1A	Revere	SB, ORW, SH	43,820	46,390	43,270	44,420	45,380	45,600	44,800
TRB1	Trifone Brook	Revere	SA	1,193	1,146	1,100	1,427	946	1,128	1,148
TLB1	Town Line Brook @ Cemeteries	Malden	SA	476	907	7,950	3,266	18,530	5,560	3,239

Water Quality Standards

There are currently no formal water quality standards for specific conductance

Elevated conductivity at freshwater sites may indicate potential long term impact from use of road salt

The following sites are coastal: PR1, PR2

The following sites are tidally influenced: SHSB, SR5, STB1

The following sites may be tidally influenced depending upon tide gate settings: TRB1, TLB1

Saugus River Watershed Council
2014 Water Quality Monitoring Results

Site Code	Site Name / Description	Town	Water Quality Designation	BACTERIA, Enterococcus: cfu / 100 mL						Geometric Mean	% of Samples Meeting Swimming Standard	% of Samples Meeting Boating Standard
				Light rain 29-Apr-14	Dry weather 13-May-14	Light rain (24 hr) 10-Jun-14	Heavy Rain (24 hr) 29-Jul-14	Light Rain 30-Sep-14	Dry weather 28-Oct-14			
LQ1	Lake Quannapowitt	Wakefield	B	10	10	74	233	20	121	40	50%	100%
SR1	Saugus River upstream of LWSC Dam	Wakefield/Lynnfield	B	10	30	85	197	93	41	52	50%	100%
MR1	Mill River @ Farm Street	Wakefield	B	173	109	256	6,870	63	85	237	0%	83%
SR2	Saugus River @ Breakheart	Saugus	B	52	41	122	13,000	143	122	197	33%	83%
SR3	Saugus River @ Route 1	Saugus	B	31	63	156	13,000	231	110	216	17%	83%
SR4	Saugus River @ Bridge Street	Saugus	B	31	31	203	13,000	670	134	247	33%	67%
SHB1	Shute Brook downstream of Central St.	Saugus	B	169	259	441	2,050	428	256	404	0%	50%
SR5	Saugus River @ Boston St. / Lincoln Ave.	Lynn/Saugus	SB/CSO, ORW, SH	74	373	275	6,130	246	318	392	17%	67%
STB1	Strawberry Brook Outlet	Lynn	SB/CSO, ORW, SH	161	1,470	108	754	789	86	331	17%	50%
PR1	Pines / Saugus River @ Gibson Park	Revere	SB, ORW, SH	10	10	10	231	10	10	17	83%	100%
PR2	Pines River @ Route 1A	Revere	SB, ORW, SH	10	10	10	146	20	20	20	83%	100%
TRB1	Trifone Brook	Revere	SA	52	2,480	24,200	1,520	17,300	120	1,464	17%	33%
TLB1	Town Line Brook @ Cemeteries	Malden	SA	20	324	1,660	7,270	2,910	119	548	17%	50%

Water Quality Standards for Enterococci

Swimming Freshwater:	Geometric mean of $\leq 33/100$ mL or $\leq 61/100$ mL for a single sample
Swimming Marine:	Geometric mean of < 35 , or $\leq 104/100$ mL for a single sample
Boating:	Geometric mean $\leq 175/100$ mL, and 10% of samples $\leq 350/100$ mL

Bacterial pollution exceeds recommended levels for swimming and boating

The following sites are coastal: PR1, PR2

The following sites are tidally influenced: SHSB, SR5, STB1

The following sites may be tidally influenced depending upon tide gate settings: TRB1, TLB1

Saugus River Watershed Council
2014 Water Quality Monitoring Results

Site Code	Site Name / Description	Town	Water Quality Designation	BACTERIA, E. coli: MPN / 100 mL						Geometric Mean	% of Samples Meeting Swimming Standard	% of Samples Meeting Boating Standard
				Light rain 29-Apr-14	Dry weather 13-May-14	Light rain (24 hr) 10-Jun-14	Heavy Rain (24 hr) 29-Jul-14	Light Rain 30-Sep-14	Dry Weather 28-Oct-14			
LQ1	Lake Quannapowitt	Wakefield	B	10	10	161	10	73	368	40	83%	100%
SR1	Saugus River upstream of LWSC Dam	Wakefield/Lynnfield	B	10	63	41	323	31	86	53	83%	100%
MR1	Mill River @ Farm Street	Wakefield	B	496	327	771	9,800	86	121	483	33%	67%
SR2	Saugus River @ Breakheart	Saugus	B	63	134	203	24,200	160	441	378	67%	83%
SR3	Saugus River @ Route 1	Saugus	B	193	134	275	19,900	231	209	436	67%	83%
SR4	Saugus River @ Bridge Street	Saugus	B	85	63	638	24,200	97	187	338	67%	67%
SHB1	Shute Brook downstream of Central St.	Saugus	B	74	379	909	4,610	1,530	959	746	17%	33%
SR5	Saugus River @ Boston St. / Lincoln Ave.	Lynn/Saugus	SB/CSO, ORW, SH	231	749	545	24,200	388	457	860	17%	67%
STB1	Strawberry Brook Outlet	Lynn	SB/CSO, ORW, SH	601	5,170	63	1,190	620	309	596	17%	67%
PR1	Pines / Saugus River @ Gibson Park	Revere	SB, ORW, SH	10	20	20	272	52	30	35	100%	100%
PR2	Pines River @ Route 1A	Revere	SB, ORW, SH	20	31	10	512	61	30	42	83%	100%
TRB1	Trifone Brook	Revere	SA	368	6,870	24,200	4,880	24,200	1,160	4,507	0%	17%
TLB1	Town Line Brook @ Cemeteries	Malden	SA	20	388	2,600	13,000	13,000	399	1,053	17%	50%

Water Quality Standards for E. coli

Swimming: E. coli geometric mean of ≤126 / 100 ml, or ≤235/100 mL for a single sample

Boating: E. Coli geometric mean of ≤ 630 / 100 mL, and 10% of samples 1260 / 100 mL

Bacterial pollution exceeds recommended levels for swimming and boating

The following sites are coastal: PR1, PR2

The following sites are tidally influenced: SHSB, SR5, STB1

The following sites may be tidally influenced depending upon tide gate settings: TRB1, TLB1

Saugus River Watershed Council
2014 Water Quality Monitoring Results

Site Code	Site Name / Description	Town	Water Quality Designation	TSS: mg/L						Geometric Mean
				Light rain 29-Apr-14	Dry weather 13-May-14	Light rain (24 hr) 10-Jun-14	Heavy Rain (24 hr) 29-Jul-14	Light Rain 30-Sep-14	Dry Weather 28-Oct-14	
LQ1	Lake Quannapowitt	Wakefield	B	16.5	7.5	21.3	45	33.5	45	23.7
SR1	Saugus River upstream of LWSC Dam	Wakefield/Lynnfield	B	5	5	7.5	5	42	5.5	7.7
MR1	Mill River @ Farm Street	Wakefield	B	5	6.5	18	5	9.5	10	8.1
SR2	Saugus River @ Breakheart	Saugus	B	5	6	11	5	112	5	9.9
SR3	Saugus River @ Route 1	Saugus	B	5	6.5	13.5	8.5	6.5	5	7.0
SR4	Saugus River @ Bridge Street	Saugus	B	5	8	13	11.5	5	5	7.3
SHB1	Shute Brook downstream of Central St.	Saugus	B	5	5	5	5	5	5	5.0
SR5	Saugus River @ Boston St. / Lincoln Ave.	Lynn/Saugus	SB/CSO, ORW, SH	8	14.5	24	25	26.5	16.5	17.7
STB1	Strawberry Brook Outlet	Lynn	SB/CSO, ORW, SH	5	5	5	5	13.5	5	5.9
PR1	Pines / Saugus River @ Gibson Park	Revere	SB, ORW, SH	33.5	16.5	20.5	30	27	49.5	27.7
PR2	Pines River @ Route 1A	Revere	SB, ORW, SH	30	24.5	29.5	38.5	38	12.5	27.1
TRB1	Trifone Brook	Revere	SA	5	11.5	12	5	5	5	6.6
TLB1	Town Line Brook @ Cemeteries	Malden	SA	5	5	5	5.5	8.5	6.5	5.8

Water Quality Standards

Massachusetts does not have numeric water quality standards for total suspended solids.

Elevated levels of TSS or turbidity degrade water quality and habitat for fish.

Saugus River Watershed Council
2014 Water Quality Monitoring Results

Site Code	Site Name / Description	Town	Water Quality Designation	Total Nitrogen: mg/L						Geometric Mean
				Light rain 29-Apr-14	Dry weather 13-May-14	Light rain (24 hr) 10-Jun-14	Heavy Rain (24 hr) 29-Jul-14	Light Rain 30-Sep-14	Dry Weather 28-Oct-14	
LQ1	Lake Quannapowitt	Wakefield	B	1.768868	1.469856	1.537108	1.7264	1.40436	2.062048	1.647272852
SR1	Saugus River upstream of LWSC Dam	Wakefield/Lynnfield	B	0.528116	0.599088	0.880108	0.763712	1.18182	0.921472	0.783645844
MR1	Mill River @ Farm Street	Wakefield	B	1.01552	1.111416	1.242508	0.967856	1.2444	1.262308	1.13448842
SR2	Saugus River @ Breakheart	Saugus	B	0.655184	0.766704	1.033156	0.86492	1.28244	0.784144	0.87584574
SR3	Saugus River @ Route 1	Saugus	B	0.565136	0.710976	1.015252	0.779	0.489444	0.63592	0.680044689
SR4	Saugus River @ Bridge Street	Saugus	B	0.656528	0.80568	1.153648	0.835808	0.782352	0.708592	0.810150467
SHB1	Shute Brook downstream of Central St.	Saugus	B	1.742168	1.714356	1.656388	1.38206	1.53588	1.720888	1.61993772
SR5	Saugus River @ Boston St. / Lincoln Ave.	Lynn/Saugus	SB/CSO, ORW, SH	0.73856	0.921816	0.742204	0.935768	0.547764	0.832192	0.774324655
STB1	Strawberry Brook Outlet	Lynn	SB/CSO, ORW, SH	1.063148	2.162256	0.835636	1.09232	1.27026	1.433908	1.250394234
PR1	Pines / Saugus River @ Gibson Park	Revere	SB, ORW, SH	0.255836	0.375912	0.36034	0.466736	0.267048	0.421192	0.349395127
PR2	Pines River @ Route 1A	Revere	SB, ORW, SH	0.251432	0.459984	0.393544	0.521756	0.442428	0.442444	0.408527055
TRB1	Trifone Brook	Revere	SA	3.894968	4.114296	3.892588	3.85616	4.17996	4.492768	4.065804621
TLB1	Town Line Brook @ Cemeteries	Malden	SA	1.924028	2.891376	1.737148	2.02598	1.20378	2.173408	1.927137577

Water Quality Standards

Numerical water quality standards for phosphorus and nitrogen are currently under development in Massachusetts
Elevated nutrient levels (nitrogen and phosphorus) can lead to excessive algal growth

Saugus River Watershed Council
2014 Water Quality Monitoring Results

Site Code	Site Name / Description	Town	Water Quality Designation	Total Phosphorus: mg/L						Geometric Mean
				Light rain 29-Apr-14	Dry weather 13-May-14	Light rain (24 hr) 10-Jun-14	Heavy Rain (24 hr) 29-Jul-14	Light Rain 30-Sep-14	Dry Weather 28-Oct-14	
LQ1	Lake Quannapowitt	Wakefield	B	0.0484	0.034424	0.071204	0.143928	0.130772	0.18636	0.086404688
SR1	Saugus River upstream of LWSC Dam	Wakefield/Lynnfield	B	0.022864	0.032324	0.089624	0.072372	0.155312	0.123432	0.067176519
MR1	Mill River @ Farm Street	Wakefield	B	0.039664	0.051884	0.065264	0.105576	0.094472	0.092388	0.070593479
SR2	Saugus River @ Breakheart	Saugus	B	0.027916	0.03992	0.071192	0.105876	0.218468	0.067908	0.070674629
SR3	Saugus River @ Route 1	Saugus	B	0.026584	0.034976	0.068696	0.089664	0.073388	0.064116	0.054754765
SR4	Saugus River @ Bridge Street	Saugus	B	0.02524	0.033572	0.064448	0.095436	0.058388	0.068568	0.052469334
SHB1	Shute Brook downstream of Central St.	Saugus	B	0.033712	0.034832	0.041192	0.071916	0.053084	0.054228	0.046426373
SR5	Saugus River @ Boston St. / Lincoln Ave.	Lynn/Saugus	SB/CSO, ORW, SH	0.039424	0.051548	0.089912	0.130344	0.094784	0.072312	0.07392723
STB1	Strawberry Brook Outlet	Lynn	SB/CSO, ORW, SH	0.034444	0.055772	0.031856	0.061032	0.122804	0.058452	0.054707696
PR1	Pines / Saugus River @ Gibson Park	Revere	SB, ORW, SH	0.038464	0.048044	0.05828	0.08916	0.053912	0.040272	0.052462056
PR2	Pines River @ Route 1A	Revere	SB, ORW, SH	0.036472	0.0617	0.060836	0.1047	0.098168	0.04194	0.062396238
TRB1	Trifone Brook	Revere	SA	0.074176	0.074684	0.067868	0.113772	0.07364	0.116064	0.084560418
TLB1	Town Line Brook @ Cemeteries	Malden	SA	0.062572	0.053576	0.042224	0.113016	0.080876	0.096336	0.070676709

Water Quality Standards

Numerical water quality standards for phosphorus and nitrogen are currently under development in Massachusetts
Elevated nutrient levels (nitrogen and phosphorus) can lead to excessive algal growth

Saugus River Watershed Council
2014 Water Quality Monitoring Results

Site Code	Site Name / Description	Town	Water Quality Designation	Dissolved Oxygen: mg/L						Geometric Mean
				Light rain 29-Apr-14	Dry weather 13-May-14	Light rain (24 hr) 10-Jun-14	Heavy Rain (24 hr) 29-Jul-14	Light Rain 30-Sep-14	Dry Weather 28-Oct-14	
LQ1	Lake Quannapowitt	Wakefield	B	11.35	6.91	7.82	6.13	7.2	8.96	7.90
SR1	Saugus River upstream of LWSC Dam	Wakefield/Lynnfield	B	9.45	6.02	6.7	6.2	3.32	3.44	5.48
MR1	Mill River @ Farm Street	Wakefield	B	8.65	4.93	3.4	2.47	4.23	5.49	4.50
SR2	Saugus River @ Breakheart	Saugus	B	9.35	6.07	5.6	4.37	6.14	7.5	6.32
SR3	Saugus River @ Route 1	Saugus	B	9.57	5.56	5.25	4.82	5.92	7.48	6.25
SR4	Saugus River @ Bridge Street	Saugus	B	10.47	7.5	8.23	6.42	8.61	9.19	8.31
SHB1	Shute Brook downstream of Central St.	Saugus	B	10.8	9.23	8.05	7.53	7.98	9.07	8.71
SR5	Saugus River @ Boston St. / Lincoln Ave.	Lynn/Saugus	SB/CSO, ORW, SH	9.08	6.18	5.89	5.55	4.53	8.19	6.39
STB1	Strawberry Brook Outlet	Lynn	SB/CSO, ORW, SH	9.21	5.3	6.74	3.76	3.6	7.57	5.68
PR1	Pines / Saugus River @ Gibson Park	Revere	SB, ORW, SH	8.5	6.25	5.18	5.38	6.28	7.33	6.39
PR2	Pines River @ Route 1A	Revere	SB, ORW, SH	8.3	5.87	5.38	4.79	5.65	6.95	6.06
TRB1	Trifone Brook	Revere	SA	9.35	8.04	7.57	6.85	7.01	6.5	7.50
TLB1	Town Line Brook @ Cemeteries	Malden	SA	7.51	5.53	3.98	4.23	3	5.19	4.71

Water Quality Standards

(warm water fishery), > or = 5.0 mg/L unless background conditions are lower

Dissolved oxygen levels do not meet water quality standards

Dissolved oxygen levels may pose risk for fish and wildlife habitat

Saugus River Watershed Council
2014 Water Quality Monitoring Results

Site Code	Site Name / Description	Town	Water Quality Designation	Temperature: Degrees Celcius						Geometric Mean
				Light rain 29-Apr-14	Dry weather 13-May-14	Light rain (24 hr) 10-Jun-14	Heavy Rain (24 hr) 29-Jul-14	Light Rain 30-Sep-14	Dry Weather 28-Oct-14	
LQ1	Lake Quannapowitt	Wakefield	B	10.4	16.7	21.7	23.3	18.4	11.3	16.2
SR1	Saugus River upstream of LWSC Dam	Wakefield/Lynnfield	B	9.4	20	22.6	22.4	17.5	9.4	15.8
MR1	Mill River @ Farm Street	Wakefield	B	8.9	15	18.1	20.1	15.8	9.3	13.9
SR2	Saugus River @ Breakheart	Saugus	B	9.5	17.8	19.9	20.4	16.3	9.7	14.9
SR3	Saugus River @ Route 1	Saugus	B	9.2	17	19.7	20.6	17	9.8	14.8
SR4	Saugus River @ Bridge Street	Saugus	B	9.2	16.7	19.1	20.5	16.2	10	14.6
SHB1	Shute Brook downstream of Central St.	Saugus	B	8.7	12.6	15.9	18.8	15.3	11.1	13.3
SR5	Saugus River @ Boston St. / Lincoln Ave.	Lynn/Saugus	SB/CSO, ORW, SH	9.2	17	20.8	20.7	19.1	10	15.3
STB1	Strawberry Brook Outlet	Lynn	SB/CSO, ORW, SH	10.7	14.6	20.8	22	19.5	13.1	16.2
PR1	Pines / Saugus River @ Gibson Park	Revere	SB, ORW, SH	7.8	15	19.7	20.2	17	11.1	14.4
PR2	Pines River @ Route 1A	Revere	SB, ORW, SH	7.6	14.1	19.9	20.2	17.6	10.9	14.2
TRB1	Trifone Brook	Revere	SA	8.8	12	15.8	18.3	16	11.6	13.4
TLB1	Town Line Brook @ Cemeteries	Malden	SA	8.2	10.9	15.3	18.5	16.3	10.4	12.7

Water Quality Standards

Class A/B: < 28.3°C for warm water fisheries

Class SA/SB: < 29.4°C

All samples meet water quality standards for temperature (warm water fisheries)

Saugus River Watershed Council
2014 Water Quality Monitoring Results

Site Code	Site Name / Description	Town	Water Quality Designation	Specific Conductance: uS/cm						Geometric Mean
				Light rain 29-Apr-14	Dry weather 13-May-14	Light rain (24 hr) 10-Jun-14	Heavy Rain (24 hr) 29-Jul-14	Light Rain 30-Sep-14	Dry Weather 28-Oct-14	
LQ1	Lake Quannapowitt	Wakefield	B	487	526	514	505	525	498	509
SR1	Saugus River upstream of LWSC Dam	Wakefield/Lynnfield	B	657	755	713	602	707	455	640
MR1	Mill River @ Farm Street	Wakefield	B	880	901	943	336.1	1,185	789	786
SR2	Saugus River @ Breakheart	Saugus	B	708	769	779	281.7	952	478	615
SR3	Saugus River @ Route 1	Saugus	B	707	772	784	281.1	863	478	606
SR4	Saugus River @ Bridge Street	Saugus	B	728	795	852	318.5	894	498	642
SHB1	Shute Brook downstream of Central St.	Saugus	B	1,182	1,176	1,194	888	1,109	1,122	1,106
SR5	Saugus River @ Boston St. / Lincoln Ave.	Lynn/Saugus	SB/CSO, ORW, SH	5,650	5,860	32,310	1520	40,660	2,040	7,161
STB1	Strawberry Brook Outlet	Lynn	SB/CSO, ORW, SH	975	3,153	1,826	7220	39,900	2,345	3,949
PR1	Pines / Saugus River @ Gibson Park	Revere	SB, ORW, SH	40,450	40,270	40,550	40640	44,630	41,710	41,348
PR2	Pines River @ Route 1A	Revere	SB, ORW, SH	41,560	32,610	40,460	40590	44,760	41,170	40,009
TRB1	Trifone Brook	Revere	SA	1,276	1,281	1,228	1005	979	1,126	1,142
TLB1	Town Line Brook @ Cemeteries	Malden	SA	639	689	754	921	6,140	829	1,076

Water Quality Standards

There are currently no formal water quality standards for specific conductance

Elevated conductivity at freshwater sites may indicate potential long term impact from use of road salt

The following sites are coastal: PR1, PR2

The following sites are tidally influenced: SHSB, SR5, STB1

The following sites may be tidally influenced depending upon tide gate settings: TRB1, TLB1