



ANNUAL WATER QUALITY REPORT

Lynn Water & Sewer Commission

Public Water Supply ID # MA 3163000

Dear Customer:

The Lynn Water & Sewer Commission is pleased to send you this annual report on the quality of Lynn's drinking water. This report contains results of your drinking water tested during 2004 and other important information about your drinking water. The Commission has an extensive water testing and monitoring program which is explained in this report.

Test results show that Lynn's drinking water is in full compliance with all standards established by the federal and state agencies that regulate public water supplies. The Lynn Water & Sewer Commission has great confidence in the water that is delivered to the residents of Lynn. The LWSC has received the 2005 Public Water System Award from the Massachusetts Department of Environmental Protection Agency for outstanding performance and achievement in 2004, ranking among the top 5% of all community public water systems.

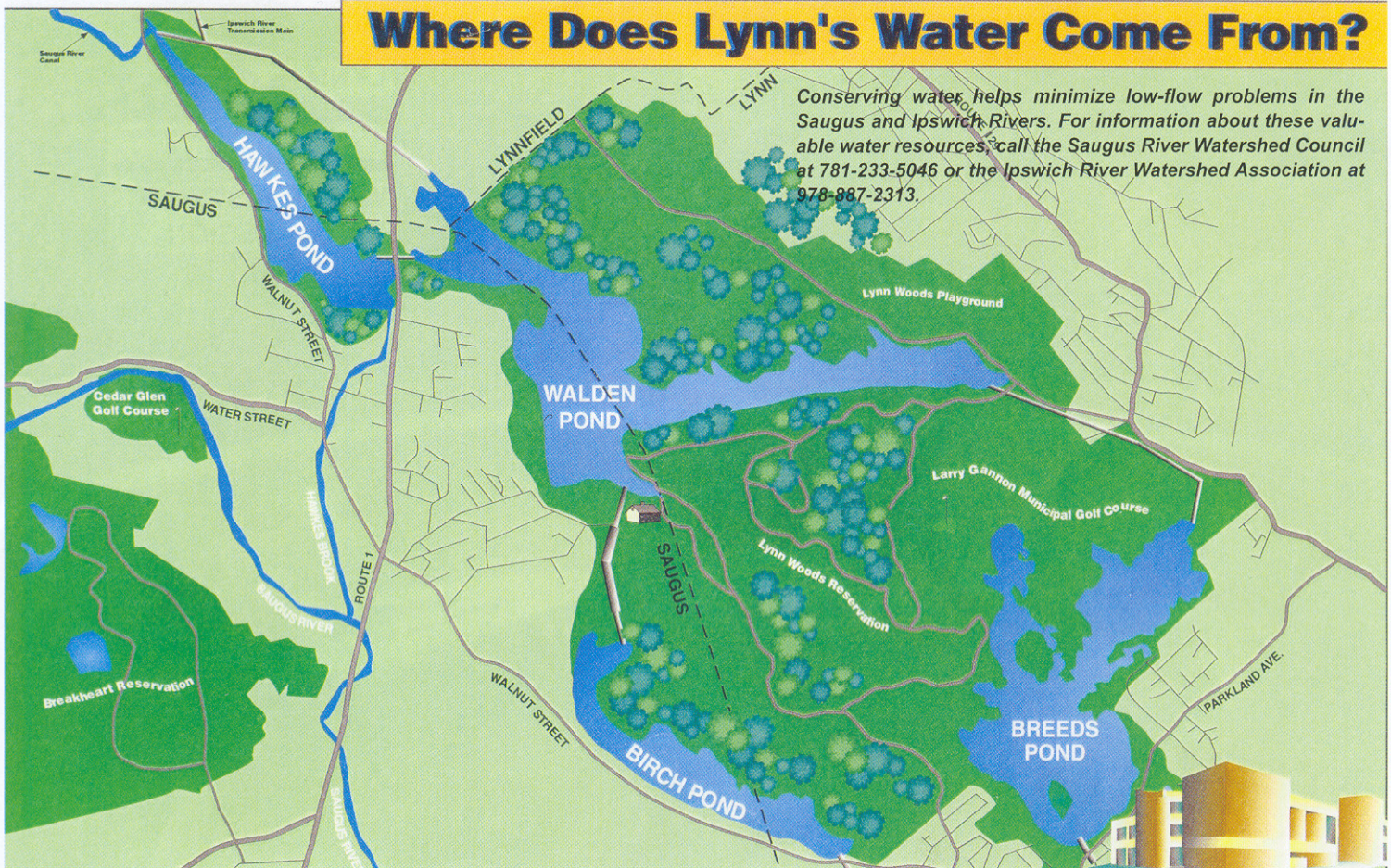
I hope that you take the time to read this important report. Please contact us if you have any questions or comments about the report or your water quality.

Sincerely,

Daniel F. O'Neill
Executive Director

Board of Commissioners
William R. Trahant, Chairman
Wayne Lozzi, Vice Chairman
Jeffrey J. Hayward
Walter V. Proodian
Frank Zipper, Jr.

Where Does Lynn's Water Come From?



Information about Lynn's Source Water Assessment Program

Where does Lynn's Water come from?

Lynn operates six public surface water supply sources. The reservoirs are located in four separate water supply protection areas, with Breed's Pond being entirely in Lynn, Hawkes Pond in Lynnfield and Saugus, Birch Pond in Lynn and Saugus and Walden Pond in Lynn, Lynnfield and Saugus. The intake and pump station for the Ipswich River and the intake and canal for the Saugus River are both in Lynnfield. The water is treated at Lynn's Reardon Water Treatment Plant and then pumped to the low service reservoir, the distribution system and distribution storage tanks. Lynn also uses Massachusetts Water Resources Authority surface water to serve General Electric and as an emergency source for customers.

How are these sources protected?

The Department of Environmental Protection (DEP) has prepared a Source Water Assessment Program (SWAP) report for the water supply sources serving Lynn's water system. The SWAP report notes key issues of activities in Zone A and Emergency Planning Zone; chemical and hazardous materials manufacture, storage and use; residential land uses; transportation corridors; road and maintenance depots; golf courses; oil or hazardous material contamination sites and comprehensive surface water protection planning.

What can be done to improve protection?

The SWAP Report recommends protecting Zone A by removing all activities as to comply with DEP's Zone A requirements; use Best Management Practices for storage, use and disposal of hazardous materials; storage of pesticides, fertilizers or road salt within Zone A should be covered and contained; keep new prohibited activities out of Zone A, and identify stormwater drains and the drainage system along transportation corridors. Lynn plans to address the protection recommendations by implementing the strategies established in its Surface Water Supply Protection Plan and by coordinating its efforts through Lynn's Watershed Protection Team. Residents can help protect Lynn's sources by reporting any dumping activity within Lynn's watershed; properly disposing of pet wastes; practicing good septic system maintenance; supporting local water supply protection initiatives; properly disposing of hazardous household chemicals, and limiting pesticide and fertilizer use.

Where can I see the SWAP report?

The complete SWAP report is available at the Lynn Water & Sewer Commission offices and on line at www.state.ma.us/dep/brp/dws. For more information please call Richard Dawe at (781) 595-5491.

How to Save Water Outdoors and Inside

-  **Don't waste water on the driveway or street.** Place your sprinkler so it only waters lawns and gardens. Avoid watering on windy or rainy days.
-  **Don't clean paved areas with water.** Hosing off your driveway or walk is like cleaning with liquid money. Use a broom.
-  **Water during the early morning to slow evaporation.** Avoid watering in the evening. It encourages fungus growth.
-  **Mulch around trees and shrubs.** Mulch or grass clippings will slow evaporation as well as keep down weeds.
-  **Use low flow shower heads and faucet aerators.** Easy to install, they save both water and energy costs.
-  **Find and repair leaks.** Hidden leaks in the toilet or behind a washing machine can waste a lot of water and cause substantial damage to your home.
-  **Install a low-flush toilet.** Toilets use more than a third of all water in most homes. Using a new ultra low-flush toilet could save you thousands of gallons of water a year.
-  **Shut off the water while shaving and brushing your teeth.** This simple habit alone will save you 6 to 12 gallons of water a day, every day of the year.

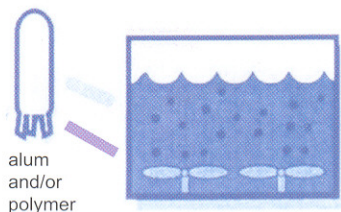
The Massachusetts Water Resources Authority offers free water efficient retro kits to residents and property management companies. Call MWRA at (617) 242-7283 and complete a simple form. The kit includes a low flow showerhead, 2 faucet aerators, toilet dam, dye tablets to check for silent toilet leaks, and instructions.

How is your water treated?

The Lynn Water & Sewer Commission operates a direct filtration water treatment plant to purify your water. Raw water from the reservoir system is treated using chemicals and filtration to remove small particles and organisms that may cause water to take on unpleasant odors and tastes and sometimes make it unhealthy to drink. This process consists of several steps as outlined below.

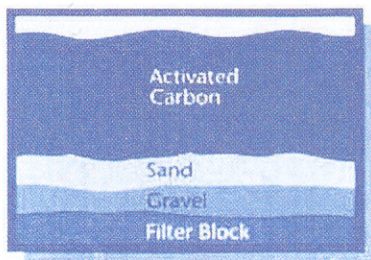
Chemical additions

The process begins with alum being added to the water at specified dosages. This prompts small particles to stick together and settle for removal.



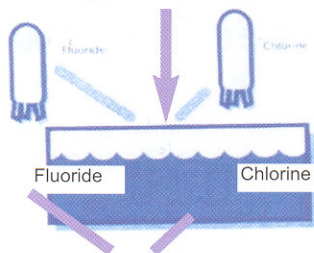
Filtration

The chemically treated water then flows through a filter bed. The filters are comprised of several layers of material including activated carbon, sand, and coarse gravel which trap the particles, thus removing them from the water. In order to assure effective treatment, each filter is cleaned using a high-flow backwash process at least once per day.



Disinfection

Chlorine dioxide and chlorine are added to the water at several stages of the treatment process to inactivate or kill disease-causing pathogens that may be present in the water.



Final steps

Several chemicals are added to the water to protect your health. Fluoride is added to the water to prevent the formation of cavities and tooth decay. Zinc orthophosphate and caustic soda are added to the water for corrosion control.

Information about Cross Connection Control

What is a cross connection? A cross connection occurs whenever a potable (safe to drink) water line is directly or indirectly connected to a nonpotable piece of equipment in your home or business. Examples of nonpotable equipment in your home or business may include lawn irrigation systems, fire sprinklers or boilers.

Why should I be concerned about cross connections? An unprotected cross connection on your premise could contaminate the drinking water not only in your home, but in neighboring businesses and homes. Severe illnesses – even death – have been caused by cross contamination events that could have been prevented.

Where can I go for more information? Please contact the DEP, Division of Water Supply, at 617-292-5770; or the Lynn Water and Sewer Commission, Engineering Department, at 781-956-2400.



How is my water protected?

Lynn Water & Sewer Commission personnel patrol Lynn's water supply and treatment facilities every day. The water is tested daily for many contaminants and, in addition, tests for many more contaminants are made on a scheduled periodic basis. Licensed operators insure that Lynn receives high quality water 24 hours a day.



Should I worry about by-products from disinfecting the water?

The use of disinfectants such as chlorine and chlorine dioxide to kill germs create by-products as the disinfectants react with natural matter in the water. The EPA's new standards require that the running average of all samples be below 80 parts per billion (ppb) for trihalomethanes and below 60 ppb for haloacetic acids. Your water meets these strict standards.

Water Quality Results

Contaminant	MRDL or Unit	MRDLG or MCL	MCLG	Detected	Range	Major sources in Drinking water
Microbiological Contaminants						
Turbidity	NTU	TT = 1	0	0.19	0.05 to 0.19	Soil runoff
Turbidity	NTU	(1)	100%	100%	100%	Soil runoff
Total Coliform	Percent (%)	5% (2)	0	2%	0 to 2%	Naturally present in the environment
Inorganic Contaminants						
Lead	ppb	AL=15	0	8 (11) (3)	0 to 40 (4)	Corrosion of household plumbing; erosion of natural deposits.
Copper	ppm	AL=1.3	0	0.23 (11) (3)	0.03 to 0.4 (5)	Corrosion of household plumbing; erosion of natural deposits. Leaching from wood preservatives.
Barium	ppm	2.0	2.0	0.01	N/A	Erosion of natural deposits
Fluoride	ppm	2.0 (6)	N/A	1.3	0.8 to 1.3	Water additives which promote strong teeth
Nitrate	ppm	10	10	0.2	N/A	Runoff from fertilizer use; leaching from septic tanks
Sodium	ppm	N/A	N/A	60	N/A	Salting of roadways
Nitrite	ppm	1	1	0.2 (12)	N/A	Runoff from fertilizer use; leaching from septic tanks
Volatile Organic Contaminants						
TTHMs (Total Trihalomethanes)	ppb	80	0	34 (7)	12 to 60 (8)	By-product of drinking water disinfection
HAA5 (Haloacetic Acids)	ppb	60	0	12 (7)	0 to 22 (8)	By-product of drinking water disinfection
Chlorite	ppm	1	0.8	0.4	0 to 0.4	By-product of drinking water disinfection
Chlorine	ppm	4	4	0.8	0 to 0.8	Water additive to control microbes
Chlorine Dioxide	ppb	800	800	310	40 to 310	Water additive to control microbes
Radionuclides						
Radium-228	pCi/l	5 (9)	0	1.7+/-1.2 (12)	N/A	Erosion of natural deposits
Gross Beta Activity	pCi/l	50 (10)	0	4.3+/-1.7 (12)	N/A	Erosion of natural deposits

NO VIOLATIONS OCCURRED DURING THE TESTING OF THE ABOVE CONTAMINANTS

- Notes:
- (1) TT = less than or equal to 0.3 NTU in 95% of all monthly samples taken.
 - (2) Present in 5% of all monthly samples taken.
 - (3) Sampled during 2002. The MADEP has reduced monitoring requirements for these parameters to less often than once per year because the source is not likely to be at risk of contamination.
 - (4) Two of the 30 samples taken exceeded the AL for lead.
 - (5) Zero of the 30 samples taken exceeded the AL for copper.
 - (6) EPA's MCL for fluoride is 4 ppm. However, MADEP has set a lower MCL to better protect human health.
 - (7) Highest annual running average of all samples taken.
 - (8) Range of all individual sampling results.
 - (9) MCL is for combined levels of Radium-226 and Radium-228.
 - (10) The MCL for Beta Particles is 4m rem/year. EPA considers 50-pCi/l to be the level of concern for Beta Particles.
 - (11) 90% percentile. Out of every 10 homes, 9 were at or below this level.
 - (12) Sampled during 2003. The MADEP has reduced monitoring requirements for these parameters to less often than once per year because the source is not likely to be at risk of contamination.

Unregulated Inorganic Contaminants (a)

Sulfate	ppm	N/A	N/A	19	N/A	Erosion of natural deposits
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(a) Unregulated contaminants are those for which the EPA has not established drinking water standards. The purpose of unregulated contaminant monitoring is to assist the EPA in determining their occurrence in drinking water and whether future regulation is warranted.

The data presented in this report is based on tests that were conducted during **2004** except where noted. Although the Commission performs numerous tests during the year, only the regulated contaminants that were detected are listed above. If you are interested in a more detailed report, please contact Water Superintendent Richard Dawe at (781) 595-5491.

Key to reading the table: MADEP=Mass. Dept. of Environmental Protection; mrem/year=millirems per year (measure of radiation absorbed by the body); N/A=Not Applicable; NTU=Nephelometric Turbidity Units; pCi/l=picocuries per liter (measure of radioactivity); ppb=parts per billion; ppm=parts per million; TT=treatment technique. **Action Level (AL):** the concentration of a contaminant which, if exceeded, triggers treatment or other requirements that a water system must follow. **Maximum Contaminant Level (MCL):** the highest level of a contaminant that is allowed in drinking water. MCLs are set as close to MCLGs as feasible using the best available treatment technology. **Maximum Contaminant Level Goal (MCLG):** the level of contaminant in drinking water below which there is no known or expected risk to health. MCLGs allow for a margin of safety. **Maximum Residual Disinfectant Level (MRDL):** the highest level of disinfectant (Chlorine, Chloramines, Chlorine Dioxide) allowed in drinking water. There is convincing evidence that the addition of a disinfectant is necessary for control of microbial contaminants. **Maximum Residual Disinfectant Level Goal (MRDLG):** the level of drinking water disinfectant (Chlorine, Chloramines, Chlorine Dioxide) below which there is no expected risk to health. MRDLG's do not reflect the benefits of the use of disinfectants to control microbial contaminants. **Treatment Technique (TT):** A required process to reduce the level of a contaminant in drinking water. **Turbidity:** A measure of the cloudiness of water, monitored as a good indicator of the effectiveness of the filtration system. Unregulated contaminant monitoring is to assist the EPA in determining their occurrence in drinking water and whether future regulation is warranted.

Important information from EPA and DEP

To ensure that tap water is safe to drink, the U.S. Environmental Protection Agency (EPA) prescribes limits on the amounts of certain contaminants in water provided by public water systems. Federal Drug Administration regulations establish limits for contaminants in bottled water which must provide the same protection for public health.

Drinking water and people with weakened immune systems

Some people may be more vulnerable to contaminants in drinking water than the general population. Immuno-compromised persons

such as persons with cancer undergoing chemotherapy, persons who have undergone organ transplants, people with HIV/AIDS or other immune system disorders, some elderly, and infants can be particularly at

risk from infections. These people should seek advice about drinking water from their health care providers. EPA/CDC guidelines on appropriate means to lessen the risk of infection by *Cryptosporidium* and other microbial contaminants are available from the EPA Safe Drinking Hotline at 1-800-426-4791.

Why are there contaminants in my drinking water?

Drinking water, including bottled water, may reasonably be expected to contain at least small amounts of some contamination. The presence of contaminants does not necessarily indicate that water poses a health risk. More information about contaminants and potential health effects can be obtained by calling the EPA's Safe Drinking Water Hot Line. (800-426-4791). General information about water quality is also available at the EPA's web site, www.epa.gov/safewater.

The sources of drinking water (both tap water and bottled water) include rivers, lakes, streams, ponds, reservoirs, springs and wells. As water travels over the surface of the land or through the ground, it dissolves naturally-occurring minerals and radioactive material, and can pick up substances resulting from the presence of animals or from human activity. Contaminants that may be present in source water include:

> Microbial contaminants such as viruses and

bacteria, which may come from sewage treatment plants, septic systems, agricultural livestock operations and wildlife;

> Inorganic contaminants, such as salts and metals, which can be naturally-occurring or result from urban storm runoff, industrial or domestic wastewater discharges, oil and gas production, mining and farming;

> Pesticides and herbicides, which may come from a variety of sources such as agriculture, stormwater runoff and residential uses;

> Organic chemical contaminants, including synthetic and volatile organics which are by-products of industrial processes and petroleum production, and can also come from gas stations, urban storm water runoff and septic systems;

> Radioactive contaminants which can be naturally-occurring or the result of oil and gas production and mining activities.

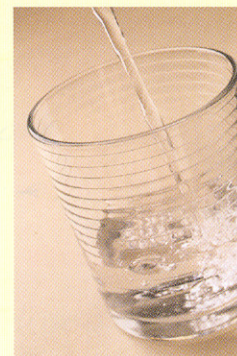
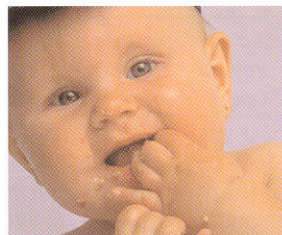


How is my water tested?

Water quality testing by the Lynn Water & Sewer Commission is conducted daily at the Reardon Memorial Water Treatment Plant and weekly at more than 20 different sites in the distribution system. Quality testing is done both internally and by an independent state-certified laboratory.

Important information about lead in the water

Infants and young children are typically more vulnerable to lead in drinking water than the general population. It is possible that lead levels in your home may be higher than in other homes in the community as a result of materials used in your home's plumbing. If you are concerned about elevated lead levels in your home's water, you may wish to have your water tested. Flush (run) your tap water for 30 seconds to two minutes before using tap water to reduce the lead level content. Additional information is available from the Safe Drinking Water Hot Line at 1-800-426-4791.



*My water is
discolored or
cloudy once in
a while. Is it
safe to drink?*

Water is piped under pressure throughout the system. At times air can become trapped in the water, causing cloudiness. This is only temporary and the water clears up in a short time.

Rust from old iron pipes can cause a red, brown or yellow color in water.

Changes in water speed or direction in your local pipes cause rust to be carried along with it. This can happen when the valves are being repaired, the system is being flushed or tested, or fire hydrants are in use. Wait until the water is clear before doing laundry to avoid staining clothes.



Lynn Water & Sewer Commission
400 Parkland Ave.
Lynn, MA 01905

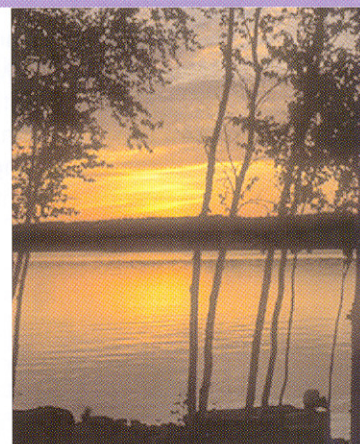
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How can I get involved?

Information about the Lynn Water & Sewer Commission is available on the internet at: www.lynnwatersewer.org. Commission Water Superintendent Richard Dawe may be reached by phone at (781) 595-5491, by fax at (781) 596-0850 or by e-mail at: rdawe@lynnwatersewer.org

Notices of Commission Board meetings are posted at its main office, 400 Parkland Avenue, Lynn, MA. 01905 (781-596-2400) and at the City Clerk's office in Lynn City Hall.

The Commission is a member of the New England Water Works Association (www.newwa.org) and the Massachusetts Water Works Association (www.masswaterworks.org). Additional information is available at both websites.



IMPORTANT -- IMPORTANTE

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ΔΙΑ ΝΑ ΣΑΣ ΤΗΝ ΠΕΤΑΦΡΑΣΙ.

Este informe contiene informacion muy importante
sobre la calidad de su agua beber. Traduscalo o
hable con alguien que lo entienda bien.

Ce rapport contient des informations importantes
sur votre eau potable. Traduisez-le ou parlez avec
quelqu'un qui le comprend bien.

This is a "right-to-know" report required to be sent to you by U.S. Environmental Protection laws. It contains important information about the quality of your drinking water.