

Revised Implementation Guidelines for Restrictions on Bottled Water

This document provides guidance to departments for the implementation of restrictions on bottled water, as directed in the Executive Order 02-08 issued by Mayor Greg Nickels on March 13, 2008.

Bottled Water Restrictions

As directed by Executive Order 02-08:

- Effective January 1, 2009, City of Seattle funds may not be used to purchase bottled water for City facilities or events;
- Departments are required to eliminate the use of single-serving and/or large-volume bottled water dispensers (i.e., water coolers);
- Departments that are responsible for managing specific City of Seattle facilities are required to conduct an assessment for phasing out the purchase and use of bottled water/dispensers with the most environmentally responsible alternative (see Appendix A) that addresses any water quality issues that may exist in some facilities;
- Departments that currently purchase bottled water or have a bottled water dispenser are required to phase out the purchase and use of bottled water/dispensers by December 31, 2008.

Exceptions to these restrictions include:

- Where there are no reasonable alternatives to access safe and drinkable water,
- When there are hydration requirements for employees working outside of City facilities (i.e., fieldwork),
- When legal or other contractual reasons are present, and/or
- For emergency supplies or in the event of emergencies that affect access to potable water.

The Executive Order:

- DOES NOT restrict City employees from privately purchasing bottled water for individual personal use; however, it does not allow private purchase of water service for the office, unless otherwise authorized. City employees are encouraged to take advantage of the City's high quality water.
- DOES NOT require departments to have bottled water removed from vending machines contracted by the department.

Implementation Guidelines

If the department has concerns about replacing existing bottled water use with an environmentally responsible alternative, the department should have its water tested to determine whether it is safe for drinking. If the water is safe for drinking, the department should inform employees and proceed with discontinuing bottled water use. If water is not safe for drinking the department will be responsible for incurring the cost of providing safe drinking water to staff, and must utilize an environmentally responsible alternative to bottled water (see alternatives on page 3, Appendix A). If an environmentally responsible alternative does not meet the needs of the department or the department's needs fall under one of the exceptions listed above, the department may request to be waived from restrictions outlined in Executive Order 02-08.

Below are the steps for departments to implement the restrictions on bottled water in City facilities:

1. *Assess existing bottled water purchasing and use practices.*
Please use the questionnaire in Appendix B to assess the department's existing use. Give a copy of the completed questionnaire to Fleets & Facilities and the property manager(s) of your building(s), if different.
2. *Where appropriate and needed, determine whether your facility's water is safe for drinking.*
Please contact Seattle Public Utilities' Water Quality Lab at 684-7834. The lab will determine whether your building's tap water needs to be tested or if it has been tested in the recent past and what the test results were.

3. *Eliminate bottled water, or, as necessary, determine an environmentally responsible alternative.*

- If the tap water is determined to be safe for drinking and there are no significant aesthetic issues (e.g., discoloration and/or unpleasant taste and odor), no further action is required of the department and the department should discontinue bottled water use.
- If tap water is determined to be unsafe for drinking, the department is responsible for providing safe drinking water to staff and incurring the cost. The department must choose an environmentally responsible alternative listed in Appendix A on page 3, unless alternatives do not meet the department's needs or needs fall under one of the exceptions listed on page 1. Departments should choose the alternative that addresses the contaminants identified by SPU's water quality test and is appropriate for their business operations or needs.
- If the tap water has significant aesthetic issues (e.g., discoloration or unpleasant taste or odor), departments may implement an environmentally responsible alternative listed in Appendix A on page 3. Use the exemption request form in Appendix B to report to Fleets & Facilities and to property management, if the property is not managed by Fleets & Facilities.

Bottled Water at City Events

Per Executive Order 02-08, City funds may not be used to purchase bottled water for any City events. It is recommended that departments utilize pitchers or jugs of tap water at events.

Bottled Water for Field Work

To avoid heat-related illnesses in the outdoor environment, departments may continue to purchase bottled water for employees working in the field where safe drinking water is not readily accessible. Washington Administrative Code 296-62-09540 requires employers to provide and make at least one quart per employee per hour of drinking water readily accessible when heat-related illness hazards are present. Jugs of tap water or other alternatives should be considered.

More Information

For more information on the effects of using bottled water and the quality of Seattle's tap water, see:

Water Quality: http://www.seattle.gov/util/About_SPU/Water_System/Water_Quality/SPU03_001885.asp

Impact of Bottled Water: http://www.seattle.gov/util/About_SPU/News/News_Releases/SPU01_003484.asp

Help

If you need assistance with complying with the Mayor's Executive Order, contact the Fleets & Facilities Department, Facility Operations Division, Scott Minnix, Director, at 684-0142.

Appendix A: Environmentally Responsible Alternatives

The table below lists the acceptable environmentally responsible alternatives to bottled water. Departments should choose the alternative that addresses the contaminants identified by the SPU's water quality test and is appropriate for their business operations or needs. Any filters should be replaced according to manufacturer directions/recommendations. For additional information regarding treatment methods and systems, please visit the National Sanitation Foundation drinking water treatment website at http://www.nsf.org/consumer/drinking_water/dw_treatment.asp?program=WaterTre or Green Guides article comparing treatment products at <http://thegreenguide.com/reports/product.mhtml?id=23>

Alternative (treatment system)	Treatment Method	Approximate Costs	Recommended for:
Carafe (e.g., Brita or PUR)	<p>Uses an adsorption filter (i.e., carbon, charcoal, KDF, or ceramic) to absorb contaminants or trap particles (greater than .2 microns) as water passes through.</p> <p>Carbon removes lead, chlorine byproduct, radon, solvents, and some pesticides, herbicides, and organic chemicals. In addition, absorbs odor and tastes. Does not remove heavy metals, arsenic, nitrates, bacteria, and/or microbes. Ceramic removes Bacteria, parasites, asbestos, and sediments.</p>	<p>Unit: \$15-35 Filter: \$7-15 each Installation: NA</p> <p>Filters typically need to be replaced after filtering 40 gallons of water.</p>	<p>This alternative/treatment system is appropriate for individuals and small groups that would like to address odor/taste issues or any of the contaminants listed under treatment methods. How often the filter needs to be changed will depend on how many staff use it, how many gallons of water are being filtered, and the amount of contaminants in water.</p>
Faucet Mount (e.g., PUR and GE SmartWater)	<p>Uses an adsorption filter (i.e., carbon, charcoal, KDF, or ceramic) to absorb contaminants or trap particles (greater than .2 microns) as water passes through.</p> <p>Carbon removes lead, chlorine byproduct, radon, solvents, and some pesticides, herbicides, and organic chemicals. In addition, absorbs odor and tastes. Does not remove heavy metals, arsenic, nitrates, bacteria, and/or microbes. Ceramic removes Bacteria, parasites, asbestos, and sediments.</p>	<p>Unit: \$25-85 Filter: \$15-25 each Installation: \$300/device Maintenance: \$225/filter change</p> <p>Filters typically need to be replaced after filtering 100 gallons of water.</p> <p>Maintenance costs represent the cost of having building maintenance staff replace the filter. Filters may be able to be changed by staff.</p>	<p>This alternative/treatment system is appropriate for larger groups that would like to address odor/taste issues or any of the contaminants listed under treatment methods. How often the filter needs to be changed will depend on how many staff use it, how many gallons of water are being filtered, and the amount of contaminants in water.</p>
Under Counter/Sink (e.g., Culligan, Aquasana, Pentek, etc.)	<p>Treatment method depends on model. Generally an adsorption filter or reverse osmosis is used. Models with adsorption absorb or trap contaminants. Models with reverse osmosis push water through a membrane and then flush away a</p>	<p>Unit: \$35-250 Filter: \$10-50 each Installation: \$300/device Maintenance: \$225/filter change</p>	<p>Reverse osmosis models are only recommended for departments that have nitrate and perchlorate present in their tap water. Reverse osmosis models are not recommended as a general alternative because of significant amount of water wasted and contaminants are flushed back into the water supply.</p>

	<p>few gallons of contaminant-containing water for every gallon purified.</p> <p>For adsorption models, carbon removes lead, chlorine byproduct, radon, solvents, and some pesticides, herbicides, and organic chemicals. In addition, absorbs odor and tastes. Does not remove heavy metals, arsenic, nitrates, bacteria, and/or microbes. Ceramic removes Bacteria, parasites, asbestos, and sediments.</p> <p>Reverse osmosis based models remove Nitrates, perchlorate, industrial chemicals, heavy metals, chlorine byproducts, arsenic, and asbestos.</p>	<p>For carbon based models, filters typically need to be replaced after filtering 500-1000 gallons of water, depending on model.</p> <p>For reverse osmosis models, filters typically are recommended to be replaced every 6-12 months depending on use and amount of contaminants.</p>	<p>This alternative/treatment system is appropriate for larger groups that would like to address odor/taste issues or any of the contaminants listed under treatment methods. How often the filter needs to be changed will depend on how many staff use it, how many gallons of water are being filtered, and the amount of contaminants in water.</p>
<p>Counter and Floor Dispensers (Bottleless)</p>	<p>These systems are generally plumbed in or connected to existing faucets to filter tap water. Treatment methods vary by model, but generally use a combination of methods including carbon, distillation, and/or reverse osmosis (see above options for info on carbon and reverse osmosis). Distillation boils water into steam and then condenses it back into water in a separate chamber.</p> <p>Carbon removes lead, chlorine byproduct, radon, solvents, and some pesticides, herbicides, and organic chemicals. In addition, absorbs odor and tastes. Does not remove heavy metals, arsenic, nitrates, bacteria, and/or microbes. Ceramic removes Bacteria, parasites, asbestos, and sediments.</p> <p>Distillation kills microbes and removes trivalent arsenic, fluoride, lead, and mercury.</p> <p>Reverse osmosis remove nitrates, perchlorate, industrial chemicals, heavy metals, chlorine byproducts, arsenic, and asbestos.</p>	<p>Rental: \$35-85/mo Installation: depends on vendor Maintenance: part of contract</p> <p>Generally, filters typically are recommended to be replaced every 3-6 months depending on use and amount of contaminants.</p>	<p>Because water is wasted and contaminants are flushed back into the water supply, reverse osmosis systems are only recommended for departments that have nitrates and perchlorate present in their tap water.</p> <p>Distillers require one kilowatt-hour to produce one liter of distilled water, which increases energy consumption. As such, systems utilizing distillation are only recommended for departments with bacteria and microbe contamination in their tap water.</p> <p>Generally, water dispensers, including bottleless, are discouraged because of the increased energy consumption to cool/heat filtered water. According to Energy Star, a standard hot & cold water cooler can use more energy than a large refrigerator. Increased energy consumption from water dispensers counteracts the City's efforts to become more energy efficient, conserve resources, and reduce the impact of climate change.</p> <p>This alternative/treatment system is appropriate for larger groups that would like to address odor/taste issues or any of the contaminants listed under treatment methods. How often the filter needs to be changed will depend on how many staff use it, how many gallons of water are being filtered, and the amount of contaminants in water.</p>

Appendix B: Bottled Water Assessment/Inventory

RETURN ONE COPY TO: FLEETS & FACILITIES DEPT

Facility Operations Division, SMT-52-01 or 700 Fifth Avenue, Suite 5200, P.O. Box 94689, Seattle, WA 98124-4689

Fill out the table below to complete the phase out assessment required for compliance with the Mayor’s Executive Order. Use additional forms as needed. Please return a copy of the completed form to Fleets & Facilities and to your facility property manager (if they are different).

Name of Department or Office: _____

#	Facility/Location	Type of Bottled Water (single serving, large volume)	Approx. Annual Amount (if serviced how often)	Approx. Annual Cost (\$)	Reason for Use/Purchase	Water Tested (Yes/No)	Test Results (safe/unsafe)
1							
2							
3							
4							
5							
6							
7							

If you would like to request a waiver from the Executive Order, list the number of the location(s) above and the reason for the request.

BY: DEPARTMENT DIRECTOR

PRINT Director Name & Phone

Signature

Date

FOR FLEETS & FACILITIES:

_____ APPROVED _____ DENIED

Signature & Contact Info: _____