

## **Appendix B**

### **Water Pricing in Other U.S. States**

On average, an individual in the U.S. consumes nearly 100 gpd. Medalie and Horn (2010) estimate individuals in Vermont consume 25 fewer gallons per day for an average consumption of 75 gpd. The average American pays between \$0.0023 and \$0.0032 a gallon or slightly over \$400 a year (Barnett 2007, Fishman 2012A). In most cases that price only reflects the cost of “getting the water to us, the pumps, the electricity, the staff to monitor water pressure and water safety and to be on standby for water-main breaks” (Fishman 2012A). In other words, “the water itself costs nothing” (Fishman 2012A). Pricing of water, or lack thereof, is often identified as the reason for overuse and waste of water throughout the country.

Based on a summary compiled by ANR (2013A and Appendix H) 13 states charge volumetrically for groundwater withdrawals (Table 1). Volumes and rates vary substantially from state to state. The summary additionally finds that 12 states issue a charge for water unrelated to volume withdrawn (most often in the form of a flat permit fee or well construction fee). ANR found that 5 states have no withdrawal fee.

State	Description	Amount (\$)	Notes
<b>Volume Related Groundwater Extraction Fee</b>			
Alaska	General withdrawal fee	200 ( $\leq 5,000$ ), 450 ( $\geq 5,000$ ), 550 ( $\geq 30,000$ ), 900 ( $\geq 100,000$ )	
Arizona	Active Management Area, Municipal water supply permit	1.00-3.00 per acre foot, 0.0055 per gallon	
California	Flat fee, volumetric fee	100.00, 0.030 per acre foot ( $> 10$ acre feet)	
Connecticut*	Large water withdrawal fee	2,050 ( $\geq 50,000$ gpd), 4,000 ( $\geq 500,000$ gpd), 6,250 ( $\geq 2$ million gpd)	
Kansas	Water Appropriation Act permit (non-domestic uses), public water supply fee, clean water protection fee	200.00 ( $\leq 100$ acre feet), 300.00 ( $\leq 320$ acre feet), 300.00 ( $\leq 320$ acre feet), 0.03 per 1000 gallons, 0.03 per 1000 gallons	
Maine*	Base withdrawal fee	250 + 50 per million gallons	Proposed fee for bottled water groundwater extraction (\$0.01) Existing municipal contracts (\$0.005)
Massachusetts*	Safe Drinking Water Act Assessment Charge	8.50 per million gallons	
Missouri	Public Water System Fee	1.08 - 3.24 (domestic), 7.44 - 82.44 (commercial)	
Texas	Groundwater withdrawal fee	1.00 per acre foot (agricultural uses), 10.00 per acre foot (non-agricultural uses)	
Rhode Island*	Water supplier surcharge	0.0292 per 100 gallons	
Vermont*	Public Community Drinking Water Supply Fee	0.0439 per 1,000 gallons	Proposed fee for bottled water groundwater extraction (0.01 per gallon)
Washington	Application fee, appropriation fee	50, 1 per one hundredth cubic foot per second	
<b>Flat Groundwater Extraction Fee</b>			
Arkansas	Non-domestic well ( $> 35$ gallons per minute)	10	
Florida	Well construction fee and Consumptive Use Permit	2,700.00 - 11,500.00	

Hawaii	One time permit, public notice fee	25.00, 400.00
Iowa	Water Use Permit (>25,000 gpd)	350
Michigan	Large water withdrawal reporting (>100,000 gpd), fee (> 1.5 million gallons)	200
Minnesota	Large water withdrawal permit (> 10,000 gpd or 1 million gallons per year)	150
Mississippi	Groundwater withdrawal permit	10
Montana	Large water withdrawal fee (35 gallon per minute, 10 acre feet a year)	125
Nebraska	Well registration fee	70.00 (< 50 gallons per minute), 110 (> 50 gallons per minute)
New Jersey	Large water withdrawal fee	200-8,000
North Carolina	One time large water withdrawal fee	50
Virginia	Groundwater withdrawal permit (ten year lifespan)	6,000 - 12,000
<b>No Groundwater Extraction Fee</b>		
Georgia	Large water withdrawal permit	Free
Indiana	Significant water withdrawal facility (>100,000 gpd) registration	N/A
Kentucky	Large water withdrawal permit	Free
Maryland	Large water withdrawal permit	Free
New Hampshire*	Large water withdrawal permit (57,600)	Free

- New England states, described in text below.

*Table 1. Groundwater tax/fee by state and country (ANR 2013, Flomenhoft and Kelly 2011, NCSL 2012)*

Although most, if not all, states do not charge specially for bottled water withdrawals, 18 states charge a water-licensing fee, including an annual renewal fee, for bottled water facilities (Table 2).

<b>State (excluding New England States)</b>	<b>Fee (\$)</b>	<b>Renewal Fee (\$)</b>
Arkansas	50.00	50.00
California	473.00 - 1335.00	473.00 - 1335.00
Connecticut	300.00	150.00
Illinois	150.00	150.00
Louisiana	20.00	20.00
Maine *	150.00	150.00
Massachusetts	300.00	300.00
Michigan	25.00	25.00
Mississippi	200.00	200.00
Nevada *	83.00	175.00
New Hampshire	400.00	400.00
New Jersey	1,000.00	650.00
North Dakota	65.00	65.00
Oklahoma	350.00	250.00
Rhode Island	550.00	550.00
Vermont	1,390.00	1,390.00

\* Maine and Nevada have additional fees related to bottled water. Maine has a beverage container regulation fee of \$500.00 and Nevada has a label fee of \$83.00

*Table 2. States that charge a bottled water licensing fee (adapted from ANR 2013)*

Economists have long suggested an economically efficient pricing scheme that would include marginal costs of supplying water, not historical average costs (often what is used) (Howe 2002, Rogers 2002, Tietenburg 2009). Based on this advice, some states have proposed changing their water pricing schemes by adding an extraction tax, fee, or royalty. Michigan, Washington, and Maryland are all currently considering water withdrawal fees (Flomenhoft and Kelly 2011). The Santa Clara Water District in California proposed an extraction fee that was eventually overturned through referendum (Flomenhoft and Kelly 2011). Florida proposed a \$0.06 a gallon fee in 2009 but ultimately implemented a bottled water tax instead, as has the city of Chicago (Flomenhoft and Kelly 2011).

The following is a summary of groundwater withdrawal extraction and licensing fees in New England:

#### Vermont

Vermont charges public community drinking water suppliers \$0.0439 per 1,000 gallons produced annually. The State also charges a \$1,390 license fee for bottled water facilities and requires a large groundwater withdrawal permit for withdrawals of greater than 56,700 gpd.

Vermont legislature proposed a royalty for groundwater extracted for resale in 2010. This royalty amounted to \$0.01 a gallon and was not codified.

### Maine

Maine maintains a base fee of \$250 for groundwater withdrawal with an additional fee of \$50 per million gallons for water withdrawn in excess of 50,000 gpd (or 75,000 gallons per week) within 500 feet of “a coastal or freshwater wetland, great pond, and significant vernal pool habitat, water supply well not owned or controlled by the applicant or a river, stream or brook” (ANR 2013A). Outside of 500 feet from water a body of concern the extraction amount charges changes to 144,000 gpd (or 216,000 gallons per week). Additionally, Maine charges a \$150 license fee for a bottled water facility and a \$150 license renewal fee (ANR 2013A).

Twice Maine has proposed an extraction fee on groundwater. In 2004 Maine proposed a \$0.20 per gallon extraction fee and in 2011 a \$0.01 per gallon fee. The 2004 proposal (36 MRSA. c. 720 §4841) exempted domestic water (from both public and private sources) and the first 500,000 gallons extracted for commercial uses. With the tax revenue the proposal sought to create the Maine Water Dividend Trust. The Maine Water Dividend Trust was to provide a dividend to Maine residents who pay income tax and fund a Water Resources Conservation Board for monitoring and regulating groundwater withdrawals (with attention to sustainable management of groundwater and surface water resources) (H2O for ME 2004). Although neither proposal passed, Poland Springs (Nestle) has a municipal contract of approximately \$0.005 a gallon for the extraction of groundwater from Range Pond (Flomenhoft and Kelly 2011).

### New Hampshire

New Hampshire regulates large water withdrawals greater than 57,600 gpd but does not charge a permit or withdrawal fee. New Hampshire does charge a \$400 license fee for operation of a bottled water facility. The state charges \$400 for license renewal (ANR 2013A).

### Massachusetts

Massachusetts charges a Safe Drinking Water Act assessment to users of public water systems of \$8.50 per million gallons (with a minimum of \$20) (ANR 2013A). The state also charges a \$300 license fee for bottled water facilities and a \$300 license renewal fee (ANR 2013A).

### Connecticut

Connecticut has an increasing block fee structure for large water withdrawals (ANR 2013A). The state charges \$2,050 for withdrawals greater than 50,000 gpd, \$4,000 for withdrawals greater than 500,000 gpd, and \$6,250 for withdrawals greater than 2 million gpd. The state also charges a \$300 license fee for bottled water facilities, with a \$150 renewal fee (ANR 2013A).

### Rhode Island

Rhode Islands maintains a \$0.0292 per 100 gallons surcharge on water sold by water suppliers (ANR 2013A). The state also charges a \$550 license fee for bottled water facilities, with a \$550 license renewal fee (ANR 2013A).