WATER WORKS

A Guide to Improving Water Access and Consumption in Schools to Improve Health and Support Learning

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Note
While we have attempted to provide the most up-to-date information and website URLs at the time of publication, some information may have changed.

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INTRODUCTION AND BACKGROUND

The *Water Works* Implementation Guide can help you develop a comprehensive program to increase access to safe, appealing, low-cost drinking water sources in your school. It also provides ideas, materials, and resources to help you increase water consumption among the school community. Finally, the guide provides resources to help you evaluate the impact of your water program.

THE IMPORTANCE OF IMPROVING ACCESS TO AND CONSUMPTION OF WATER IN SCHOOLS

Water Access is Important for Students' Health and Cognition

When schools provide drinking water as an alternative to sugar-sweetened beverages (SSBs) such as soda, fruit drinks, and sports drinks, schools promote children's overall health and development. Encouraging consumption of water, especially in place of SSBs, can help limit excess weight gain[1-8] and prevent dental cavities.[9-10] And of special importance to educators, drinking water helps students stay hydrated, focused, and ready to learn.[11-13]

Health benefits of drinking water include:

- ↑ hydration
- ↓ risk for dental cavities
- ↓ risk for obesity
- ↓ risk for diabetes

Water Access is Required by Law

The Healthy, Hunger-Free Kids Act of 2010 requires schools to make free drinking water available to students during mealtimes in areas where meals are served.[14] Recently, the United States Department of Agriculture (USDA) also released a proposed rule that school wellness policies include language about provision of free drinking water as well as maintenance of drinking water sources.[15] Some states also have legislation requiring schools to offer water at mealtimes. For example, California Senate Bill 1413 requires school districts to provide free, fresh drinking water wherever meals are served or eaten.[16]

(1) Wang YC, Bleich SN, Gortmaker SL. Increasing caloric contribution from sugar- sweetened beverages and 100% fruit juices among US children and adolescents, 1988-2004. *Pediatrics*. 2008;121(6): e1604-1614.
(2) Malik VS, Schulze MB and Hu FB. Intake of sugar-sweetened beverages and weight gain: a systematic review. *Am J Clinical Nutr*. 2006;84(2): 274-288.
(3) Malik VS, Popkin BM, Bray GA, et al. Sugar-sweetened beverages, obesity, type 2 diabetes mellitus, and cardiovascular disease risk. *Circulation*. 2010;121(11): 1356-1364.
(4) Wang YC, Ludwig DS, Sonneville K and Gortmaker SL. Impact of change in sweetened caloric beverage consumption on energy intake among children and adolescents. *Arch Pediatr Adolesc Med.* 2009; 63(4): 336-343.
(5) Daniels MC, Popkin BM. (2010). Impact of water intake on energy intake and weight status: a systematic review. Nutr Rev, 68(9): 505-21.
(6) Stookey, JD, Constant, F, Gardner, CD, Popkin, BM. Replacing sweetened caloric beverages with drinking water is associated with lower energy intake. *Obesity (Silver Spring).* 2007;15(12): 3013-3022.
(7) Ebbeling CB, Feldman HA, Osganian SK, Chomitz VR, Ellenbogen SJ, Ludwig DS. Effects of decreasing sugar-sweetened beverage consumption on body weight in adolescents: a randomized, controlled pilot study. *Pediatrics.* 2006;117(3): 673-680.
(8) Muckelbauer R, Libuda L, Clausen K, Toschke AM, Reinehr T, Kersting M. Promotion and provision of drinking water in schools for overweight prevention: randomized, controlled cluster trial. *Pediatrics*. 2009;123(4): e661-e667.
(9) McDonagh MS, Whiting PF, Wilson PM, et al. Systematic review of water fluoridation. *BMJ.* 2000;321(7265): 855-859.
(10) Ismail AI, Sohn W, Lim S, Willem JM. Predictors of dental caries progression in primary teeth. *J Dent Res*. 2009;88(3): 270-275.
(11) Edmonds CJ, Jeffes B. Does having a drink help you think? 6-7-Year-old children show improvements in cognitive performance from baseline to test after having a drink of water. *Appetite.* 2009;53(3): 469-472.
(12) D'Anci KE, Constant F, Rosenberg IH. Hydration and cognitive function in children. *Nutr Rev.* 2006;64(10 Pt 1): 457-464.
(13) Benton D, Burgess N. The effect of the consumption of water on the memory and attention of children. *Appetite.* 2009;53(1): 143-6.
(14) Healthy, Hunger-Free Kids Act of 2010, Pub. L. No. 111-296, 124 Stat 3183 (2010). http://www.fns.usda.gov/cnd/Governance/Legislation/CNR_2010.htm.
(15) Local School Wellness Policy Implementation under the Healthy, Hunger-Free Kids Act of 2010. RIN 0584-AE25. https://s3.amazonaws.com/public-inspection.federalregister.gov/2014-04100.pdf. Accessed March 3, 2014.
(16) CA SB1413 | 2009-2010 | Regular Session. (2010, September 30). LegiScan. http://legiscan.com/CA/bill/SB1413/2009. Accessed January 24, 2014.

ABOUT THIS IMPLEMENTATION GUIDE

How to Use This Implementation Guide

This implementation guide presents actions you can take to improve water access and consumption in schools (see the ***Checklist for Taking Action to Improve Water Access and Intake in Schools*** at the end of this guide). Some of these steps may not apply to your school, and you may prefer to complete the steps in a different order than presented here.

Target Audience

This toolkit is a great resource for anyone interested in increasing water intake among students and staff in school settings, including school administrators, parents, teachers, nutrition services staff, health and wellness coordinators, school nurses, and school community partners.

What You Will Find in This Implementation Guide:

We provice a comprehensive description of how to start a water program at your school, including information on how you can:

- **Build Your Team and Gather Support:** this section discusses how to identify and build relationships with key stakeholders, and provides suggestions for how to assemble a team.
- **Serve Safe and Appealing Water**: this section provides details on different types of water sources, and explains how to choose a location for new water sources, test water outlets for contaminants, and remediate any water quality problems.
- **Enhance and Sustain Your Water Program:** this section describes ways to conduct promotional and educational activities to encourage students to drink water, and provides an overview of key components of model wellness policy language to promote increased water intake.
- **Monitor Progress and Make Improvements:** this section describes how to evaluate your school water program.
- **Fund Your Water Program:** this section provides guidance on how to identify and approach funders to secure both short- and long-term funding.
- **Supplemental Materials:** the ***Water Works*** guide also comes with supplemental materials including:
  - Flowchart of water quality testing procedures for testing and remediating lead in drinking water
  - Descriptions of different types of water delivery options, reusable bottles, and cups
  - Links to sample promotional and educational activities
  - Model school wellness policy language for improving drinking water access and consumption
  - Overview and examples of methods to evaluate your water program

Learning Objectives:

After using the *Water Works* guide, you will be able to:

1) compare different water sources and vessels for serving water
2) test your school's water outlets for contaminants and remediate any water quality problems
3) develop methods for encouraging water consumption at your school
4) develop and implement a wellness policy that ensures water access and intake at your school
5) conduct a formal evaluation of your water program

ACTION 1 - GATHER SUPPORT AND BUILD YOUR TEAM

Implementing and sustaining a successful water program requires the help of many stakeholders. For example, facilities staff may help install and maintain a water source, teachers can role model healthy beverage consumption, and cafeteria staff can help serve water during mealtimes. As you develop your water program, you will need to identify and meet with these key stakeholders. Engaging with stakeholders will help you build a team that is committed to making sure your school water program is successful. This section describes:

- how you can identify and gather support from key stakeholders
- how you can form and meet with your water team

GATHER SUPPORT FROM KEY STAKEHOLDERS

Identify Key Stakeholders

Your first step in building your team is to identify individuals who will be directly involved in implementing the water program, such as cafeteria staff, custodial and facilities staff, and district or school administrators. You will also want to seek out individuals or groups from your school, district, and community who are interested in promoting water consumption a way to support students' health and well-being.

Potential Stakeholders for School Water Programs

Stakeholders at the District Level	Stakeholders at the School Site	Stakeholders from the Community
• Superintendent • Food services or nutrition director • Facilities or maintenance administrators • School board • District wellness coordinator	• Students • Cafeteria manager and staff • Custodial and facilities staff • Principal • Teachers • School nurse • School wellness coordinator • Parent Teacher Association • Parents	• Public health professionals (e.g., community health workers at your local health department) • Researchers • Community-based organizations focused on health promotion • Municipal water supplier

Meet with Key Stakeholders

After you identify key stakeholders for your water program, meet with them to discuss your plans and solicit their feedback. Below are suggested items for your discussion.

Discussion Items for Meeting with Key Stakeholders

In the table below are some of the key individuals and groups you might enlist for support of your water program (left column), along with issues you might want to discuss with each of the stakeholders (right column). In addition to these specific questions, it might be helpful to get a general idea of any concerns stakeholders have about starting a new water program.

Stakeholder Group	Key Questions to Discuss
School Administrators (e.g., superintendent, principals)	• Are there any preferences or restrictions about where water can be served or consumed at school? • Does the district or school have any resources available to facilitate the program (e.g., general funds that could be used for the water program)? • Does the school or district have plans to remodel or build new facilities? Can these plans include efforts to improve water access?
Food Service Staff (e.g., director of food/nutrition services department, cafeteria staff)	• What water sources are currently available during school meals (e.g., fountains available in cafeteria, bottled water served with meals)? • How do the food service staff determine whether the school is in compliance with federal and state laws requiring free water access during meals in areas where meals are served and eaten? • What resources does the food service staff have, if any, to facilitate the program? For example, are there monies to purchase cups or reusable bottles, or to put toward purchasing new water sources? • Are the food service staff aware that "reasonable costs" associated with providing free water access are an allowable expense to the school's non-profit food service account?[1] • Are cafeteria staff willing and able to assist in implementing the water program? What constraints do cafeteria staff face in assisting with the water program?

Maintenance Personnel (e.g., custodians, facilities staff)	• Are maintenance personnel willing and able to assist with any cleaning or maintenance of school water sources (including new units added as part of the water program)? For example, ask maintenance staff if they can help with the following:
	  • Picking up cups students use to access the water sources
	  • Cleaning the water source regularly
	• What resources do maintenance staff have available to assist with the installation of new units (e.g., does the district have plumbers who can help install units)?

Students	• Do students have preferences about where water is served? • Do students have preferences about what types of water delivery options should be installed? • What would motivate students to drink more water?

(1) Long, C. U.S. Department of Agriculture. *Child Nutrition Reauthorization 2010: Water Availability During National School Lunch Program Meal Service*. http://www.fns.usda.gov/cnd/governance/Policy-Memos/2011/SP28-2011_osr.pdf. Published July 12, 2011. Accessed February 24, 2014.

FORM YOUR TEAM

In addition to engaging key stakeholders at the onset of a new water program, you may also want to form a "water team," that is, a formal team that meets regularly to work on the water program. In addition to cafeteria managers, the principal or vice principal, students, and facilities staff, you might also invite parents, teachers, and other relevant parties to join your team.

Tips for Managing Your Team

- Select a team leader who can schedule and facilitate meetings and manage group dynamics
- Choose a regular meeting time and place that works for most members. Try meeting once every 4 to 6 weeks; more or less frequent meetings may be needed depending on your team's activities, goals, etc.
- Consider dividing up work so individual members can work on the actions that are most interesting to them
- Make sure members feel included in decision-making and recognized for their accomplishments

Resource Spotlight

The State of Washington Office of Superintendent of Public Instruction has created a toolkit called ***School Wellness Policy Best Practices for Development, Implementation and Evaluation***. The toolkit and its associated website feature sample letters to parents, community members, and staff inviting them to join the school's wellness committee. These letters can be adapted to work for water programs**.** Refer to the ***Resources*** supplementary material for a detailed list of resources, including weblinks.

ACTION 2 - SERVE SAFE AND APPEALING WATER

Once you have gained the support of key stakeholders and formed a "water committee", the next step in creating a comprehensive school water program is to ensure students have access to safe and appealing drinking water. This might include improving existing water sources (e.g., fixing broken fountains, retro-fitting existing fountains, or making sure existing water sources stay clean). Or, you may elect to install new water delivery sources, either to replace older units or to feature in addition to existing sources. Because many students, families, and school staff may not trust tap water supplies[1,2], it is important to also test drinking water, treat it when necessary, and publicize these efforts to the school community. In this section, we present:

- guidance on how to decide where to serve water
- steps to test school drinking water for contaminants and remediate water quality problems
- different types of water delivery options and vessels for serving water

DECIDE WHERE TO SERVE WATER

Federal law requires that schools offer students free water in places where meals are served.[3] Schools might meet this requirement by serving water from any one of a number of different water delivery sources, many of which are discussed in greater detail below. If your school does not yet comply with this requirement, priority should be given to providing free water in the cafeteria or food service areas. In addition to offering water in the cafeteria, you may also want to offer water in areas where students say they would like improved access.

Areas To Consider Offering Water

- Cafeteria or food service areas
- Indoor gymnasium
- Outdoor physical activity areas (blacktop, fields)
- Common areas and hallways
- Classrooms, including temporary and portable structures

(1) Patel, A.I., Shapiro, D.J., Wang, C., & Cabana, M.D. Sociodemographic characteristics and beverage intake of children who drink tap water. *Am J Prev Med.* 2013;*45*(1): 75-82.
(2) Sebastian RS, Wilkinson Enns C, Goldman JD. *Drinking Water Intake in the U.S.: What We Eat In America, NHANES 2005-2008*. Food Surveys Research Group Dietary Data Brief No. 7. September 2011. http://ars.usda.gov/Services/docs.htm?docid=19476. Accessed February 24, 2014.
(3) Healthy, Hunger-Free Kids Act of 2010, Pub. L. No. 111-296, 124 Stat 3183 (2010). http://www.fns.usda.gov/cnd/Governance/Legislation/CNR_2010.htm.

Conduct a Needs Assessment and Talk to Key Stakeholders

Needs assessment is a process for determining gaps between current and desired conditions. You can conduct a needs assessment by taking an inventory of the existing water sources at the school, including assessing how appealing these sources are (e.g., whether the water source kept clean, whether the water clear and cold). Additionally, surveys and focus groups can be used to solicit input from students and staff regarding their attitudes toward current drinking water sources, preferences for where new water sources could be added, and what type of water sources should be installed. If your school already conducts surveys or assessments with students or staff, you might be able to add some questions about water to these surveys. Below are some key questions to consider when choosing locations for new water sources in schools.

Key Questions to Consider When Choosing Locations for New Water Sources

- How many new water sources can be added (what are the budgetary constraints)?
- Is the school in compliance with federal law that free water be available in areas where meals are served or eaten? (If not, complying with the law should be prioritized).
- What areas of the school, if any, lack appealing water sources?
- What areas of the school have the highest student traffic during the day?
- Where are existing tap water lines?
- Where do students and staff want new water sources?

Resource Spotlight

The following resources will help you conduct a needs assessment to determine where to install new water sources. (Refer to the ***Resources*** supplemental material for a detailed list of resources, including weblinks).

- **Harvard School of Public Health:** ***Water Audit Tool***
- **University of Washington:** ***Water Inventory***

Improve or Retrofit Existing Water Sources

This implementation guide provides detailed information on choosing a ***new*** water source to install in schools. However, some schools may choose to retrofit or repair existing fountains instead of purchasing new water sources.[1]

Improve Existing Water Sources

The appeal of existing water sources often can be greatly improved with regular cleaning and maintenance. Work with your school's facilities and/or custodial staff to develop a cleaning and maintenance schedule for the school's water sources. You can also increase the appeal of existing water sources by posting artwork, signs, or posters on or near the water delivery source.

Cleaning your school's water fountains can improve their appeal

Louisville Water Company, the municipal water supplier in Louisville, KY, posted their branded "pure tap" signs above fountains at local schools to promote water consumption. Source: http://www.louisvillepuretap.com/

Retrofit Existing Water Sources

If your school has traditional drinking water fountains, these units can often be retro-fitted to increase their appeal and/or accessibility. For example, schools can retrofit existing fountains to add water bottle filling stations. More information on retrofitting can be found in the supplemental material ***Traditional Fountains, Fountains with Bottle Fillers and Stand Alone Bottle Fillers***.

Bellevue Union School District in Santa Rosa, CA, retrofitted their fountains to add a bottle filler next to the traditional drinking fountain. The District also installed wall-mounted cup dispensers to provide cups to students to use if they did not bring a reusable water bottle.[2]

(1) Harvard Prevention Research Center (Forthcoming). Keep It Flowing: A Practical Guide to School Drinking Fountain Planning, Maintenance, and Repair.
(2) Case Studies. Water in Schools website. http://waterinschools.org/case_studies/. Accessed February 24, 2014.

TEST WATER QUALITY AND REMEDIATE WATER QUALITY PROBLEMS

Once you have decided where to install new water delivery sources, it is important to ensure the water in these locations is free from contaminants and safe to drink. The procedures for testing drinking water quality at schools will vary based on several factors, including:

- the source of the school's tap water (i.e., a public water system vs. own water supply)
- the geographical location of the school
- the age of the school (e.g., older schools are more likely to have plumbing containing lead).

Contact the Environmental Protection Agency's (EPA) Safe Drinking Water Hotline[1] or your local Drinking Water Program District Office[2] for more information regarding the types of water quality testing your school should conduct.

Determine the Source of Your School's Drinking Water

The procedures your school should follow to ensure the drinking water is safe differ depending on the source of the school's water. Most schools get water from either a municipal water system (i.e., a water utility or water supplier such as the San Francisco Water Department), or from a private well. To find out where your school gets its water, contact your school's principal or facilities staff. This guide focuses on schools that receive water from a municipal water system.[3]

Supplemental Material

Once you determine the source of your school's water, the supplemental material ***Ensure the Quality of the Drinking Water in Schools: Initial Steps*** will guide you through the first steps toward ensuring the water at your school is safe to drink.

Determine What Contaminants to Examine

Work with your Drinking Water Program District Office to determine what contaminants your school should examine.

Resource Spotlight

The **Environmental Protection Agency** (EPA) guide ***Drinking Water Best Management Practices for Schools and Child Care Facilities Served by Municipal Water Systems*** provides detailed information on best practices for ensuring that your school provides high-quality drinking water, including information that will help you determine what contaminants you should examine. (Refer to the ***Resources*** supplementary material for a detailed list of resources, including weblinks).

Test for Lead

While the specific contaminants your school needs to examine will vary depending on characteristics of your school site, the EPA recommends all schools test drinking water outlets for lead contamination. It is important to ensure that the water at school is free of lead because exposure to lead can cause lowered IQ, learning disabilities, attention and behavioral problems, impaired growth, and hearing loss. Children are most susceptible to the effects of lead because their bodies and brains are still developing. Even if the drinking water your school receives from your water supplier or well meets federal and state standards for lead, your school's water may still have elevated lead levels. Lead may leach into the water supply from plumbing materials such as fixture or solder, particularly in schools built before 1986, when Congress passed the Safe Drinking Water Act. You should test for lead in all water sources used for cooking or drinking. You can use the supplemental material ***Test For and Remediate Lead in School Drinking Water*** to learn the steps required to ensure the drinking water at your school is free of lead contamination.

(1) Call toll free at 1-800-426-4791 to speak with an Information Specialist.
(2) State of California Department of Public Health Drinking Water Program District Offices. http://www.cdph.ca.gov/programs/Documents/DDWEM/OriginalDistrictMapCDPH.pdf. Updated February 11, 2014. Accessed February 24, 2014.
(3) If your school receives drinking water from its own water source (e.g., from a private well), see also: Environmental Protection Agency. Drinking Water Best Management Practices for Schools and Childcare Facilities Served by Their Own Drinking Water Source. http://water.epa.gov/infrastructure/drinkingwater/schools/upload/epa816b13001.pdf. Published April, 2013. Accessed February 24, 2014.

Determine Which Water Sources You Will Examine

Once you have identified what contaminants you need to test for, you will need to determine which water sources need to be examined. Although ideally schools should test all water outlets used for cooking or drinking, this may not be feasible at all schools due to cost concerns. At a minimum, it is important that you test the water supplying any new drinking water sources your school plans to add. It is best to test these outlets before you install the new drinking water source(s) so that you can determine if the new water source needs a filtration or treatment device. Additionally, once you have tested and remediated the water sources at your school, you can promote these sources as safe to students and school staff.

EPA-Recommended Priority Sample Sites:

- drinking fountains
- kitchen sinks
- classroom combination sinks and drinking fountains
- home economics room sinks
- teachers' lounge sinks
- nurse's office sinks
- sinks in special education classrooms
- any other sink used for consumption (e.g., sinks near a coffeemaker or where cups are provided)

Remember to also examine any outlets that will provide water to new water sources your school plans to add.

Resource Spotlight

The **Environmental Protection Agency** manual ***3Ts for Reducing Lead in Drinking Water in Schools*** provides detailed information on testing for and remediating lead in school drinking water. Refer to the ***Resources*** supplementary material for a detailed list of resources, including weblinks.

Select a Laboratory

All testing should be completed by an EPA-certified laboratory. To find an EPA-certified lab in your area, contact your state drinking water program or EPA's Safe Drinking Water Hotline (see the ***Resources*** supplementary material for more information, including weblinks). When selecting a laboratory, you might consider the following factors:

- How much will the testing cost? Are there discounts available (e.g., to schools or non-profit organizations or for bulk orders)?
- Will the laboratory collect the samples for you, or will you or a staff member need to collect them?
- How long does it take for testing to be completed?

You can also contact your municipal water supplier or local public health department, as these agencies can sometimes assist with water quality testing at schools.

Supplemental Material

The supplemental material ***San Francisco Bay Area Environmental Protection Agency (EPA) Certified Water Quality Testing Laboratories*** provides contact and cost information for EPA-certified labs in the San Francisco Bay Area.

Remediate Water Quality Problems

If testing reveals water quality problems (e.g., the presence of lead or other contaminants), you will need to remediate these problems. You may want to devise both short- and long-term strategies for remediation. Work with your local Drinking Water Program Office[1] to develop your remediation plan.

Short-term Water Quality Remediation Strategies:

- Install point-of-use filtration or treatment systems for the affected outlets
- Flush affected water outlets (allow water to run for 30 seconds to 2 minutes)[2]
- Shut off the problem outlets
- Provide bottled water in place of tap water

Long-term Water Quality Remediation Strategies:

- Replace fixtures and associated pipes and fittings
- Reconfigure plumbing so that water supplied for drinking or cooking is redirected to bypass sources of contamination

Refer to the ***Resources*** supplemental material for more information about remediation strategies.

Choose a Point-of-Use Filtration or Treatment System to Remediate Water Quality Problems

If testing reveals water quality problems, one short-term remediation strategy is to filter the affected outlets. Work with your facilities department to find and install a filter or treatment device that is certified to remove the specific contaminant(s) detected in your school's water. A full list of approved treatment devices is available (sorted by contaminant) from the California Department of Public Health.[3] Note that for treatment devices to work effectively, they must be properly installed and maintained. For example, if you do not change the filters in the treatment device regularly, contaminants may build up and release bursts of extremely high levels, causing much more serious exposure.[4]

Many contaminants can be removed from drinking water using a filter like this one, which reduces the amount of lead, cysts, and asbestos in the water.

(1) State of California Department of Public Health Drinking Water Program District Offices. http://www.cdph.ca.gov/programs/Documents/DDWEM/OriginalDistrictMapCDPH.pdf. Updated February 11, 2014. Accessed February 24, 2014.
(2) Flushing outlets may not remove any or all contaminants, but is often an effective measure to remove lead from water. Follow-up samples must be taken to determine whether flushing removes contaminants. Refer to EPA resources (e.g., "3Ts" manual) for more information on flushing.
(3) See: http://www.cdph.ca.gov/certlic/device/Pages/watertreatmentdevices.aspx or call (916) 449-5600.
(4) What can I do if my water is unsafe to drink? Community Water Center. http://communitywatercenter.org/wp-content/uploads/2013/12/CWC_What-can-I-do-if-my-water-is-unsafe-to-drink_2013.pdf. Accessed February 24, 2014.

Report Results

Schools should inform students, parents, school staff, and other stakeholders about the results of the water testing and, if tests show quality concerns, what steps the school is taking to remediate the problem. Your school should also make copies of the water testing results available to the public, either by keeping copies in the school administrative offices and/or by posting results online.

Ways to Communicate Water Testing Results and Remediation Efforts

- Letters (e.g., mailed directly to parents, placed in school staff mailboxes)
- Parent and staff newsletters
- Presentations at community, parent-teacher association (PTA), school board, or staff meetings
- Email, listserves and school website

Resource Spotlight

Los Angeles Unified School District (LAUSD) Office of Environmental Health and Safety maintains a website describing how LAUSD manages lead in school drinking water. Included in the website are sample letters to parents describing district efforts to provide lead-free drinking water; such letters could be adapted to meet your school's needs. Refer to the ***Resources*** supplementary material for a detailed list of resources, including weblinks.

SELECT A WATER DELIVERY OPTION

Once you have determined where to install new water delivery options and have ensured the safety of the water at this outlet, your next step is to decide what type of water delivery option your school would like to install.

Water delivery options can be categorized into three main types of water sources:

- Tap water dispensers
- Point of use water machines
- Traditional water fountains, water fountains with bottle fillers, and stand alone bottle fillers

Each type of water delivery option has its own benefits and considerations, reviewed in more detail below. Key questions to consider when choosing a water delivery option include:

- How much does the delivery option cost to purchase, install, use, and maintain?
- What installation and plumbing are required?
- Will the unit be installed outdoors or indoors?
- How long will the unit last?
- Does the unit require electricity?
- Does the unit require frequent cleaning or maintenance?
- Can the unit chill water?
- Will students need a cup or reusable bottle to get water from the unit?
- What type of unit do students and staff prefer?

Tap Water Dispensers

Tap water dispensers are refillable containers with a spout for students to self-serve tap water. Units are filled from an existing tap water source such as a kitchen sink.

Benefits:

- Low cost
- Water can be chilled by adding ice or putting container in fridge overnight before serving
- Can be filled up from a water source in a central location in the school and transported to area of use
- No electricity needed to use units
- No additional plumbing needed
- Many schools already have such dispensers on hand (e.g., for sports teams or staff meetings)

Considerations:

- Larger dispensers are heavy when full (a utility cart is useful for transport)
- More labor-intensive than other options because staff need to fill the dispenser with water daily (or more often) and clean it weekly
- Students must have vessel (e.g., cup, reusable bottle) to get water from the dispenser
- Some units may contain Bisphenol A (BPA), a chemical that can cause adverse health effects

Examples of Tap Water Dispensers

Point of Use Water Machines

Point of Use Water Machines are bottleless water coolers that hook into a tap water line. Students press a button to dispense water.

Benefits:

- Some units can chill water
- Volume discounts may be available
- Some units can be rented
- Some units are compatible with filtration systems
- Hook directly into tap water line so they do not need to be filled like tap water dispensers
- Minimal maintenance and cleaning required

Considerations:

- Higher upfront costs compared to tap water dispensers
- May require professional installation, sometimes at additional cost
- Require electricity, which incurs (sometimes significant) additional cost
- Some units do not drain excess water automatically and staff must manually empty drip tray
- Students must have a cup or reusable bottle to get water from machine

Examples of Point of Use Water Machines

Traditional Water Fountains, Fountains with Bottle Fillers and Stand Alone Bottle Fillers

Schools may also elect to install traditional drinking water fountains, drinking fountains that also include a station for filling water bottles, or stand alone bottle fillers (a station for filling water bottles without a traditional drinking fountain spout).

Benefits:

- Long-lasting
- Some units are refrigerated (offer chilled water)
- Some units are compatible with filtration systems
- Hook directly into tap water line so they do not need to be filled like tap water dispensers
- Some units operate with gravity and don't require electricity
- Minimal maintenance and cleaning required

Considerations:

- Upfront costs are more expensive than tap water dispensers and point of use water machines
- Requires professional installation
- Stand alone bottle fillers may not be accessible to students unless cups or reusable water bottles are also provided; fountains and combination units (fountain with a bottle filler) increase accessibility

Example of a Traditional Water Fountain

Examples of Fountains with Bottle Fillers

Example of a Stand Alone Bottle Filler

Supplemental Material

The following supplemental materials provide detailed information on each type of water delivery option, including information on specific examples of each type (cost, where you can purchase, specific considerations for that unit):

- ***Overview of Drinking Water Delivery Options***
- ***Tap Water Dispensers***
- ***Point of Use Machines***
- ***Traditional Fountains, Fountains with Bottle Fillers, and Stand Alone Bottle Filler Options***

CHOOSE VESSELS TO SERVE WATER

For many of the water delivery options described above, students must have a vessel to obtain water from the unit. Providing students with a vessel ensures they can easily access the water source and is likely to increase water consumption. There are two main types of vessels schools can provide: reusable water bottles and cups, and single-use cups.

Reusable Water Bottles and Reusable Cups

Reusable water bottles and cups provide an easy and eco-friendly way for students to get water at school. Reusable bottles also allow students to carry water with them throughout the day. Bottles and cups can be kept on-site (e.g., in the cafeteria or classrooms) or students can bring them to/from school. If kept on-site, schools should take responsibility for cleaning the vessels. See the supplemental material ***Reusable Water Bottles*** for detailed information about specific factors to consider when purchasing water bottles for students' use.

Single-Use Cups

Although reusable water bottles are an environmentally friendly way for students to access water in schools, in some schools there may not be a culture of using reusable water bottles (that is, students may not be in the habit of carrying water bottles with them, may lose or forget bottles, etc.). Providing single-use cups next to tap water dispensers, water bottle fillers, and point-of-use water machines is an easy way for students to serve themselves water and may increase water consumption. See the supplemental material ***Single-Use Cups*** for more information on what to consider when purchasing cups, including more detailed information about specific products (e.g., brand, size, cost).

Reusable Water Bottles and Reusable Cups vs. Single-Use Cups

Advantages of Providing Reusable Bottles or Reusable Cups

- More environmentally friendly (reduces waste)
- Can be sold (e.g., schools can sell at cost to finance their purchase, or can sell as a fundraiser)
- Can brand them with school logo, health messages, etc.
- Students can bring water with them throughout the school day

Disadvantages of Providing Reusable Bottles or Reusable Cups

- May have a greater upfront costs than disposable cups
- Must be provided for each entering class
- Either students must remember to bring bottle/cup each day, or school must provide a place to store them and a means to clean them

Advantages of Providing Single-Use Cups

- Ensures students have access to water sources even if they do not remember to bring a reusable bottle
- Can brand them with school logo, health messages, etc.

Disadvantages of Providing Single-Use Cups

- Less environmentally friendly (generates more waste)
- Can create mess if students do not throw away cups after use
- Cups have to be continually supplied, which can be costly

ACTION 3 - ENHANCE AND SUSTAIN YOUR WATER PROGRAM

Installing new water delivery options (or improving existing water sources) is an important first step in any water program. However, to further increase students' intake of water you may also want to conduct promotional and educational activities that highlight the benefits of drinking water. Further, to sustain your water program over time, you may want to incorporate language about water into your school's wellness policy. This section describes:

- common ways to promote water and educate students about the benefits of drinking water
- key messages your school can use in its promotional campaigns
- main content areas of water-related language for school wellness policies

ENCOURAGE WATER CONSUMPTION THROUGH PROMOTION AND EDUCATION

Key Messages About Water

The first step in developing the educational and promotional components of your water program is to decide what information about water you wish to convey to students. That is, what do you want students to learn about water? What messages might motivate students to drink more water and fewer sugary beverages? There are many messages your program might cover, several of which we outline below:

- **Water is good for students' health and performance:**
  - Water has zero calories and no sugar 
  - Drinking more water and fewer sugary drinks can help prevent weight gain 
  - Drinking more water and fewer sugary drinks can help prevent dental cavities 
  - Drinking water hydrates students so they can perform their best 
  - Drinking water may improve cognitive function 
- **Water is inexpensive:**
  - Tap water costs less than 1 cent per gallon, making it considerably less expensive than other beverages 
  - Drinking tap water instead of one bottled beverage every day can save up to $350 a year, which is enough to buy two iPod nanos 
- **Water tastes good:**
  - Especially when chilled, water is tasty and refreshing 
  - Infusing water with fruit, vegetables, or herbs is an easy way to make water enticing without adding calories 
- **Drinking tap water instead of bottled beverages is better for the environment:**
  - Drinking tap water saves energy because no plastic bottles need to be produced 
  - Drinking tap water reduces the number of plastic bottles that end up in landfills 
- **Tap water is safe to drink**
  - Tap water is tested for contaminants more often than bottled water, and in most locations is safe to drink 
- **Water is easy to find**
  - Tap water is available almost anywhere, including schools, restaurants, parks, community centers, and homes 

Promotional and Educational Methods

You will also need to decide *how* you will encourage water consumption. Here, we outline some commonly used methods of education and promotion. The method you choose will depend on what staff are available to help with implementation, how much funding is available, and your goals for the water program.

Activities, Lesson Plans, and Curricula

You can incorporate information, lessons, and activities about water and other beverages into classroom activities in diverse subject areas, from science to the humanities. Lessons and activities can be tailored to specific age groups and then integrated into the curricula for school courses or for afterschool programs.

Benefits:

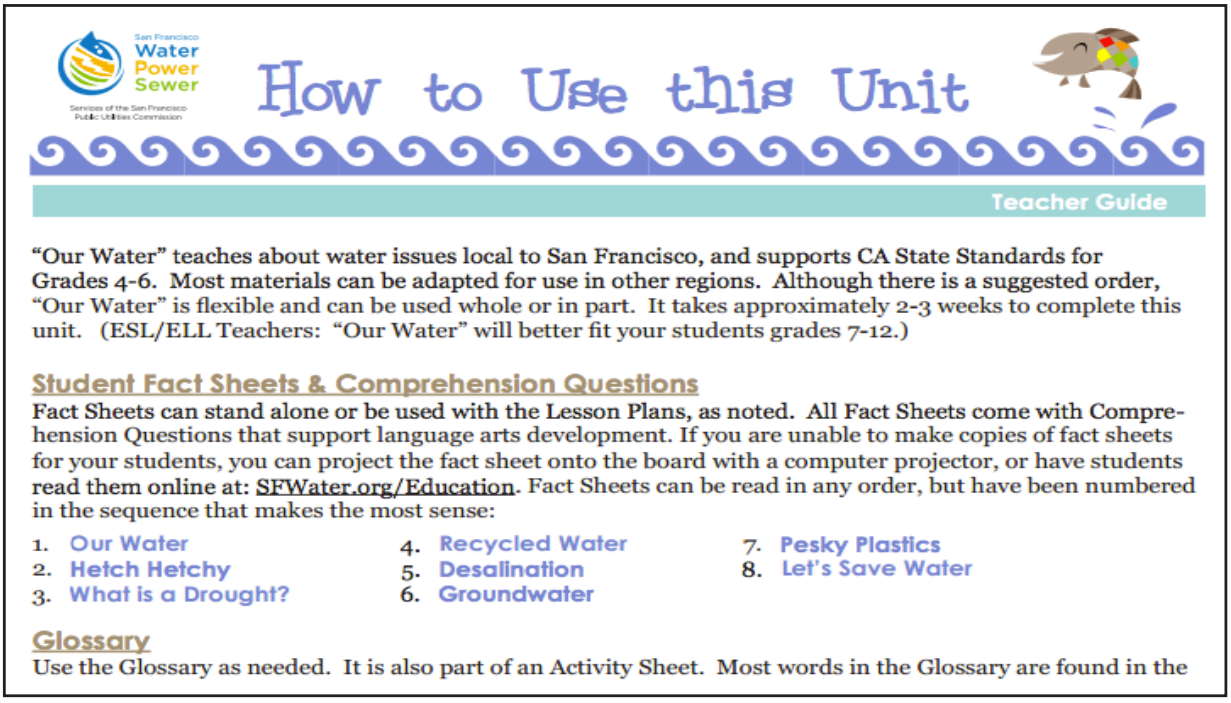
- Some existing materials meet state curriculum standards, and many can be modified to help support your school's educational standards
- Students are a "captive" audience as they are already in class
- When students take an active part in an educational activity they may be more likely to retain the information presented

Considerations:

- Teachers must be willing to incorporate activities into their lesson plans
- Limited instructional time may mean other topics take precedence
- Short activities and worksheets may have less of an impact compared to lesson plans of longer duration

Supplemental Material

You can find examples of water-related lesson plans and activities in the supplemental material ***Activities, Lesson Plans, and Curricula to Encourage Water Intake in Schools.***



San Francisco Water Power Sewer
Services of the San Francisco Public Utilities Commission

How to Use this Unit

Teacher Guide

"Our Water" teaches about water issues local to San Francisco, and supports CA State Standards for Grades 4-6. Most materials can be adapted for use in other regions. Although there is a suggested order, "Our Water" is flexible and can be used whole or in part. It takes approximately 2-3 weeks to complete this unit. (ESL/ELL Teachers: "Our Water" will better fit your students grades 7-12.)

Student Fact Sheets & Comprehension Questions

Fact Sheets can stand alone or be used with the Lesson Plans, as noted. All Fact Sheets come with Comprehension Questions that support language arts development. If you are unable to make copies of fact sheets for your students, you can project the fact sheet onto the board with a computer projector, or have students read them online at: SFWater.org/Education. Fact Sheets can be read in any order, but have been numbered in the sequence that makes the most sense:

1. Our Water
2. Hetch Hetchy
3. What is a Drought?
4. Recycled Water
5. Desalination
6. Groundwater
7. Pesky Plastics
8. Let's Save Water

Glossary

Use the Glossary as needed. It is also part of an Activity Sheet. Most words in the Glossary are found in the

The San Francisco Public Utilities Commission has developed a curriculum called "Our Water" to teach elementary students about water issues in the San Francisco Bay Area. The lessons support California State Standards. This is one example of an existing material you could adapt to use in your school. Source: SFWater.org/Education

Videos and Songs

There are numerous videos and songs related to water and/or sugary beverage consumption. You can play these during class, at lunchtime, or in afterschool programs.

Benefits:

- May be more fun or engaging than other activities
- Easy to implement, often requiring less time or funding to carry out than other activities

Considerations:

- Schools or teachers may be unable or unwilling to show videos or songs (for example, if school lacks computers or projectors, or if school policies prohibit use of websites such as YouTube)

Supplemental Material

You can find examples of songs and videos promoting water consumption in the supplemental material ***Videos and Songs to Encourage Water Intake in Schools.***

Get Students Involved

When you involve students in designing and implementing your educational and promotional activities, you not only get some extra hands to help with your program, you will also increase the likelihood that your materials and messages resonate with students. There are many ways to involve students in promoting water. For example, students can:

- make posters
- create music videos
- design logos for reusable water bottles
- help teach lessons about water in class or afterschool programs

You can also partner with students and teachers in your school's art, music, photography, and digital media classes to design and implement class projects promoting water consumption. For example, students can make water bottle logos in a digital media class, or even make reusable water bottles out of clay in a ceramics class.

Below is a snapshot of a music video made by teens in Oakland, CA. The rap song and video highlight the benefits of drinking water as well as the negative effects of drinking soda in a fun way that teens can relate to.

Oakland teens rap "Drinkin' That Water" to encourage their peers to drink more water and less soda. Source: http://www.youtube.com/ch?v=FLqbrCnPJt

Posters

You can also promote water consumption, and educate students about water, using posters and flyers. You can hang signs around school, pass out flyers to students directly, or even mail information home to students and their families.

Benefits:

- Posters can reach many students (e.g., if you hang a poster in the cafeteria, most students will see it)
- Usually easy to implement: you can simply hang up posters in visible locations

Considerations:

- Posters and flyers may have limited impact if students do not pay attention to them
- Printing and distributing posters or fact sheets will incur costs

Posters and flyers can be simple like this one, developed by the Redwood City School District, which reminds students to choose water first.

Supplemental Material

You can find examples of posters and flyers with information about water in the supplemental material ***Posters to Encourage Water Intake in Schools.***

DEVELOP AND IMPLEMENT MODEL SCHOOL WELLNESS POLICY LANGUAGE FOR DRINKING WATER ACCESS AND CONSUMPTION

School leadership and staff change over time. It is important that your water program is sustainable despite such changes. All schools participating in the National School Lunch Program are required by law to implement a school wellness policy. These policies are intended to help schools create and maintain a healthy environment for students, and must include goals and guidelines related to nutrition promotion and education. Incorporating language about water access and promotion into your school or district wellness policy will help support these broader efforts and sustain the positive changes you make as a part of your water program.

In addition, the United States Department of Agriculture (USDA) recently released a proposed rule, *Local School Wellness Policy Implementation*, suggesting that school wellness policies include language about where and when free drinking water will be provided during the school day and about the maintenance of drinking water sources.[1] Schools will need to revise their wellness policies soon, making now an ideal time to examine water-related language in your local school wellness policy.

The supplemental material ***Model School Wellness Policy Language for Drinking Water Access and Consumption*** provides model language your school can incorporate into its wellness policy to ensure both that water is available throughout the school day and that drinking water sources are regularly maintained.

(1) The proposed rule can be found at: https://s3.amazonaws.com/public-inspection.federalregister.gov/2014-04100.pdf. Specifically, the proposed rule suggests local school wellness policies include, "Policies regarding the availability and locations of free drinking water throughout the school day, including during the meal service as required by section 9(a)(5) of the NSLA and the frequency of regular maintenance on all water fountains to ensure hygiene standards for drinking fountains, water jugs, hydration stations, water jets, and other methods for delivering drinking water." As of press time, the proposed rule is open to public comment; see page 2 of the proposed rule for instructions on submitting a comment.

The Importance of School Wellness Policies

Wellness policies are written documents outlining a school's goals and commitments related to student health and wellbeing. When a school makes these commitments formal:

- the school signals its commitment to the health and well-being of its students
- staff and students understand what rules and guidelines they must follow
- healthy changes to the school environment are sustained even as students and staff come and go
- rules and guidelines can be enforced

Incorporating language about water into your school wellness policy will help ensure your water program is sustained over many years.

Key Content Areas of Water-Related Language for School Wellness Policies

Below, we summarize the main content areas of water-related language to include in school wellness policies. Ideally, your school would include robust policies within each of these categories.

Content Areas for Water-Related Language in School Wellness Policies

- **Water Delivery Options**
  - Types of water delivery options and vessels for serving water
- **Access**
  - Location of water sources
  - Time water sources are available for students to use
  - Number of water sources
  - How water sources will be maintained
  - When and where students are allowed to use reusable water bottles
- **Promotion and Marketing:**
  - School activities to promote water consumption
  - School staff are role models of healthy beverage consumption
- **Education**
  - Information about the benefits of drinking water integrated into the formal curriculum
- **Safety and Quality**
  - Contaminants to be tested
  - Frequency of water quality testing
  - Plan for communicating results of water quality testing
- **Monitoring and Evaluation**
  - Outcomes to be measured
  - Frequency of monitoring
  - Plan for disseminating evaluation findings
  - Making improvements based on evaluation

Essential Goals for Wellness Policies

- There is safe, free, and appealing drinking water that is accessible without restriction at all times during the day.
- All children have an equal opportunity to drink water.
- The formal curriculum includes education about drinking water-related issues, especially the health benefits of drinking water.
- Safe tap water is promoted over single-use bottled water.
- The drinking water policy is accepted and embraced by the whole school community, including school administration, teachers, food services staff, facilities manager, students and parents.

Resource Spotlight

To assess the strength of your wellness policy, you can use the **Yale Rudd Center for Food Policy and Obesity: *School Wellness Policy Evaluation Tool.*** Refer to the ***Resources*** supplementary material for a detailed list of resources, including weblinks.

Supplemental Material

The supplemental material ***Model School Wellness Policy Language for Drinking Water Access and Consumption*** provides language for water access and promotion in schools that aligns with best practice recommendations. You can use these model policies as they are, or adapt them to meet the needs and priorities of your school.

Case Study: Earlimart School District in Southern Tulare County, CA

Located in California's Central Valley, Earlimart School District is a K-8 district serving 2,000 students at four school sites.[1] In June 2011, the Earlimart School Board revised the local school wellness policy to strengthen and clarify existing policy language for healthy beverages.[2] The policy states that only the following beverages can be served at school: water with no additives; unflavored, non-fat or 1% cow's milk; unflavored non-dairy milk alternatives; and fruit or vegetable juice than contains at least 50% juice.[3] In addition, the policy commits the school to providing access to free, safe drinking water before, during, and after school; allows students to bring water into classrooms; encourages school administrators, teachers, and other staff to model drinking water; and states that the district will perform periodic maintenance and testing of all water fountains. With strong language that promotes drinking water and prohibits flavored milk and sports drinks, the Earlimart School District's wellness policy exceeds many state and federal requirements.

ALLOWABLE BEVERAGES (Applies at all times, regardless of the time of day). Beverages may not contain added sweeteners – caloric or non-caloric – with the exception of non-dairy milk alternatives (e.g., almond, rice, soy milks).

Additionally, no beverages may contain additives, including colors, flavorings, herbs, vitamins, and minerals (e.g., electrolytes), or stimulants (e.g., caffeine).

Only the following beverages are allowed:

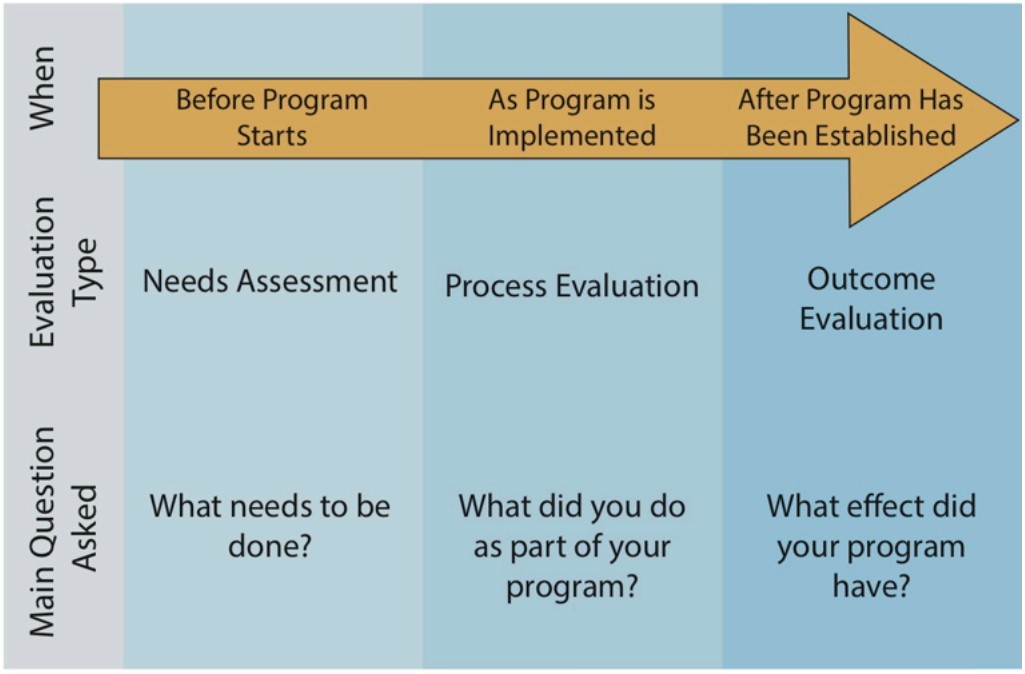
- Water
- Non-fat or 1% cow's milk
  - Must contain vitamins A and D and at least 25% of the Daily Value for calcium per 8 fluid ounces
  - Excludes flavored milks, including chocolate, strawberry and vanilla
- Non-dairy milk alternatives
  - Must contain vitamins A and D and at least 25% of the Daily Value for calcium per 8 fluid ounces
  - Excludes flavored milks, including chocolate, strawberry and vanilla
  - No more than 5 grams of fat per 8 fluid ounces
  - No more than 12 grams of caloric sweetener per 8 fluid ounces.
  - Fruit or vegetable juice that contains at least 50% juice

(1) Earlimart School District. http://www.earlimart.org. Accessed February 24, 2014.
(2) California Project Lean Case Study: Earlimart School District Eliminating Electrolyte Replacement Beverages. http://www.californiaprojectlean.org/docuser-files/Case%20Studies_Earlimart-Final.pdf. Accessed February 25, 2014.
(3) Earlimart School District Wellness Policy BP5030. http://www.earlimart.org/files/user/1/file/Wellness%20Policy%20Earlimart%20BP5030%20FINAL%206%207%202011.pdf. Published May 17, 2011. Accessed Feburary 25, 2014.

ACTION 4 - MONITOR PROGRESS AND MAKE IMPROVEMENTS

COMPONENTS OF EVALUATION

As you develop and implement your water program, you may want to consider evaluating the program. Evaluation means systematically investigating the process and outcomes of your program. Effective evaluation can help you identify successes as well as ways to improve your program. Evaluation occurs in three major phases, as shown below:



Needs assessment describes a process for determining gaps between current and desired conditions. *Process evaluation* describes what services, activities, policies, and environmental changes were implemented. *Outcome evaluation* is used to measure whether a program met intended goals and objectives. Needs assessment was described in more detail under ***Action 2***, above; here we focus on process and outcome evaluation.

IMPORTANCE OF EVALUATION

Evaluation can help you understand the effect your water program has on student and staff behavior (for example, whether the program improved students' water intake). Evaluation data can also help provide evidence of your program's impact for funders or school district officials. Such data can also be used for additional funding proposals. Finally, evaluation can help you identify ways to improve your water program moving forward.

Evaluation Can Help You:

- Understand the impact of your program
- Provide evidence of success to funders or administrators
- Identify ways to improve your program

CONDUCT YOUR EVALUATION

Form Your Evaluation Team

To begin evaluating your water program, you will need to form your evaluation team. First, designate a "point person" or "evaluation leader." This person will coordinate the evaluation process. Gather a team to assist in conducting the evaluation (e.g., in designing the evaluation plan, collecting and analyzing data, and reporting results). This team can include a diverse range of people who have a stake in the water program. You can also partner with public health departments and researchers at local universities to help you design and conduct the program evaluation.

Your evaluation team might consist of :

- School administrators
- Cafeteria or food service staff
- Facilities and maintenance staff
- Students
- Parents
- School wellness coordinator or nurse
- Teachers
- Researchers, staff from the local health department, or individuals with experience in program evaluation

Resource Spotlight

The **Community Tool Box:** ***Evaluating Community Programs and Initiatives*** website offers detailed information on conducting evaluations of community programs. For information on selecting evaluators, see especially Chapter 36: Section 4. Refer to the ***Resources*** supplementary material for a detailed list of resources, including weblinks.

Key Questions to Consider Regarding Your Evaluation

With your team assembled, you can begin planning your evaluation activities. Below are several key questions you may want to discuss with your team of evaluators:

1. What do you hope to learn from your evaluation? What questions do you hope to answer?
    - These questions might be about the process of implementing the water program (e.g., how much does the program cost or what changes did your school make as part of the program?), or about the outcomes of the program itself (e.g., did the water program change students' beverage choices?).
2. What is the best way to gather information about the impact of the program?
    - The approach you take to collecting information will vary based on what outcomes you are interested in evaluating. For example, if you are interested in understanding if the program increased students' water intake, you may want to install flowmeters on new water sources. If you are interested in perceptions of water sources at school, you may want to talk to or survey students and school staff about their thoughts and opinions.
3. How will you analyze the information you gather to answer your questions?
    - To analyze the data you have collected, you can partner with individuals who have expertise in data analysis at nearby universities or public health departments.
4. How will you use the information you gathered to make improvements to the program?
    - Develop a plan for how you will use the results of the evaluation to improve the program. Consider hypothetical outcomes from the evaluation, and discuss with your team how you would respond to each finding. For example, if you found that the program increased students' water consumption but did not decrease their sugary beverage consumption, would this finding cause you to modify the program? How so?

Process Evaluation: Document What Was Done

Conducting a process evaluation, in which you record and study the activities, policies, and environmental changes you implemented for your program, can help you document accomplishments and challenges. For a water program, a process evaluation might include tracking the types, location, and number of new water sources installed in your school over time, or documenting the time, money, and labor that went into implementing your program. Below are domains you may want to consider when completing a process evaluation of your water program.

Main Domains of Process Evaluation for Water Programs

- **Changes in Water Access**
  Implementation of your water program might include offering new water sources or improving upon existing sources (e.g., cleaning or repairing existing fountains). Use the water audit and inventory tools described in the ***Needs Assessment*** section above to document such changes.
- **Changes in Policy**
  If your water program involves creating or improving beverage policies for your school or district, you may want to document the process of devising and implementing these policies. For example, you might want to record how the policy was developed (e.g., which stakeholders offered input), when the policy was adopted, and whether and how the policy was implemented (e.g., who enforces the policy and how it is enforced). You can also record challenges you encounter in developing and implementing the policy, and how these challenges were overcome, so that other schools can learn from your experience. You can also assess changes in the strength of your beverage policies.
- **Cost of the Program**
  Cost is an important consideration when implementing new programs. You can track the costs associated with implementing your water program. Some costs are upfront (e.g., cost to purchase a new water delivery option) whereas other costs are ongoing (e.g., cost to provide cups). See the boxes below for more examples of upfront and ongoing costs.
- **Experiences of Implementing the Program**
  You might also want to learn about how your key stakeholders thought the program went. For example, what challenges were experienced? What did not go as planned? How did staff, students, and teachers like the program?

Examples of Upfront (One-Time) Costs

- Cost of purchasing new water delivery options
- Cost of installing new water delivery options
- Cost of purchasing additional supplies for water delivery options (utility cart, floor mat, etc.)

Examples of Ongoing (Annual) Costs

- Cost of conducting promotion/education
- Cost for water quality testing and remediation
- Cost of water, cups, and/or reusable bottles
- Cost of electricity (depending on the water delivery option used, your school or district may incur new electricity costs to operate units that refrigerate or dispense water)
- Cost of labor to implement the water program

Outcome Evaluation: Document Program Effects

By documenting the outcomes of your program, you can measure whether your program met its intended goals and objectives. Below, we list some common outcomes that school water programs might influence as well as tools that can be used to measure such outcomes.

Main Domains of Outcome Evaluation for Water Programs

- **Students' Water Consumption**
  A primary goal of many water programs is to increase the number of students who drink water and the amount of water they drink.
- **Students' Sugary Beverage Consumption**
  Because intake of sugary drinks is associated with obesity and dental cavities, it may be important to measure the impact of water programs on students' intake of sugary beverages.
- **Knowledge, Attitudes, and Intentions**
  You may also want to measure whether your program affected students' or staff members' knowledge (e.g., of the health benefits of drinking water), attitudes (e.g., perceived quality of tap water), and intentions (e.g., likelihood to drink water).

Supplemental Material

For an overview of the different types of evaluation, as well as examples of tools you can use to evaluate your program, see the supplemental material ***Evaluate Your Water Program: Overview.***

What if Something Else Caused These Outcomes?

There are many changes happening in a school and community at any given time. In order to determine whether the water program or another secular trend (such as a national or local drinking water campaign) produced the outcome you are interested in, it is best to measure outcomes before and after the implementation of the water program, and to have a control group (a group that does not receive the program, for use as a comparison). Although this an ideal study design, it may not be feasible due to cost and time constraints.

REPORT RESULTS AND MAKE IMPROVEMENTS

Once you have conducted your evaluation activities, you may want to summarize your findings in a written report or formal presentation. Key questions that can help you develop a future action plan for your water program include:

- What did you learn from these evaluation activities?
- What aspects of your program went well?
- What changes would you like to make?
- Did the program have the outcomes you expected?
- What resources are needed to make the program better?

You can then share this product with key stakeholders, such as school or district administration, food services managers, parent groups, the school wellness committee, or your local public health department. Sharing your findings can help you to highlight successes of the program, gain support or funding to continue or expand the program, and solicit new insights on how to improve the program.

Resource Spotlight

The **Community Tool Box:** ***Evaluating Community Programs and Initiatives*** offers insights on how to use the results of your evaluation to improve the program (see especially Chapter 39: Section 2 & Section 4). For ideas on how to communicate your findings to stakeholders, check out **Smarter Lunchrooms Movement's website Share Your Success:** ***Publicizing Your Smarter Lunchrooms Makeover.*** Refer to the ***Resources*** supplementary material for a detailed list of resources, including weblinks.

ACTION 5 - FUND YOUR WATER PROGRAM

Many schools have started water programs with very little funding, for example by repurposing supplies used by other programs (e.g., using sports teams' water coolers to serve water during lunchtime) and by recruiting water champions who are passionate about students' health. In some cases, students take initiative to start water projects at their school with the support of teachers and staff. Even with these forms of support, you may need to secure funding to begin or enhance your water program. This section describes:

- potential partnerships and funding sources
- strategies for approaching potential funders, including how to address concerns funders commonly have

IDENTIFY POTENTIAL PARTNERS AND FUNDING SOURCES

Your first step is to identify potential partners and sources of funding. Below, we provide an overview of several types of funding sources. Work with your team to brainstorm which of these sources will work best for your program.

District and School Funding Sources

Your school and district may have funding available for new initiatives like your water program. Below, we outline some common school and district-based sources of funding for school water programs, and provide examples of schools that have used such funding to improve water access.

District or School General Fund

Most school districts and schools have a General Fund, a portion of the budget that is unrestricted (available for general purposes). Talk to your School Board, Superintendent, or Principal about whether the school or district's general fund could help support your water program.

Funding In Action

Zane Middle School in Humboldt County, CA secured funding from the school's Site Council to install a touch-free bottle filler (an insert in the wall that dispenses water into refillable bottles using infrared sensors).[1]

School Nurse or Wellness Office

Find out if your school has a nurse or wellness coordinator. These staff or their offices may have access to funding for health-related programs.

Food/Nutrition Services

School or District Food Services Departments can fund the purchase of new water sources or of vessels to serve water (e.g., cups or reusable bottles).[3]

Funding In Action

In Newark Unified School District in Newark, CA, the school food service director used cafeteria funds to purchase tap water dispensers and cases of paper cups for students to use at mealtimes. He filled the containers with water and sliced fruit from commodity funds. Costs were estimated to be around $0.01 per serving, mostly reflecting the price of the paper cup.[1]

(1) Case Studies. Water in Schools website. http://waterinschools.org/case_studies/. Accessed February 24, 2014.
(2) Inspiring Youth, Growing Change: Nurturing Strong Minds for a Healthy Community. Network for a Healthy California. http://www.cdph.ca.gov/programs/cpns/Documents/InspiringYouthGrowingChange.pdf. Published December, 2011. Accessed February 25, 2014.
(3) The USDA allows food services departments to charge to its nonprofit accounts (which holds revenue from selling meals and a la carte items) "necessary and reasonable" costs associated with providing drinking water, such as pitchers and paper cups. See http://changelabsolutions.org/publications/wellness-policy-water.

Facilities Department

School or district facilities departments may have money available for physical improvements to your school, including renovating old water sources or installing new ones.

Funding In Action

Bellevue Union School District in Santa Rosa, CA, installed drinking water stations in the lunch rooms at its four elementary schools. The stations consist of tall "glass-filler faucets" mounted on existing water fountains. The cost of the faucets, including installation, was about $300 each, and the money came from the district's facilities budget.[1]

Athletics Department

Your school's athletic department may have tap water dispensers it could loan out during mealtimes, or could have funding to help with your program.

Parents and Parent Groups

Parents at your school may be interested in supporting the water program. Parent Teacher Associations may have funding available for programs, or may be able to assist you in organizing a fundraiser specifically for the water program. Parents can also volunteer to help with programs or speak to school officials to advocate for funding.

Governmental Organizations

Federal, state, and local agencies sometimes put out calls for grant proposals on specific topics. You can search the internet to see if any agencies are looking to fund initiatives related to water or student health. Local governmental agencies sometimes have grants available specifically for local groups. You might consider looking for grants or other support from the following organizations:

- City Council or Board of Supervisors
- Public Health Department
- Department of Education
- Municipal water supplier (e.g., Public Utilities Commission, Water Department)

Funding In Action

A parent in Oakland, California obtained funding from his school's Parent Teacher Association and matching funds from the city council to pay for a hydration station at his child's school.[2]

Funding In Action

San Francisco Unified School District partnered with the San Francisco Department of Public Health and the city's municipal water supplier, the San Francisco Public Utilities Commission, to develop and launch the "Drink Tap" initiative. The group began by installing bottle-fillers at five schools, and later obtained funding from The California Endowment to purchase reusable water bottles for 2500 students at the five pilot schools. The Drink Tap program is now expanding to an additional 36 public schools.[3]

Students from San Francisco Unified School District with free water bottles provided with support from the California Endowment.[3]

(1) Case Studies. Water in Schools website. http://waterinschools.org/case_studies/. Accessed February 24, 2014.
(2) Model Wellness Policy Language for Water Access in Schools. National Policy & Legal Analysis Network to Prevent Childhood Obesity. http://changelabsolutions.org/sites/phlpnet.org/files/WaterAccessSchools_ModelPolicy_FINAL_20101008.pdf. Published October, 2010. Accessed February 25, 2014.
(3) Drink Tap in Schools: Innovative Partnerships to Change the Way We Drink Water. San Francisco Water Power Sewer. http://sfwater.org/Modules/ShowDocument.aspx?documentID=3677. Accessed February 24, 2014.

Businesses and Corporations

Companies might be able to provide several types of support for school water programs, including:

- Direct financial support, such as grants or donations (visit company websites to see if they have a foundation or philanthropic division; see what types of programs they typically fund)
- Discounted or free products (e.g., new water sources, reusable water bottles, cups, or promotional materials)
- Technical assistance or in-kind support (e.g., a media company might assist in developing promotional materials at no charge, or a plumbing company might donate the labor needed to install new water units)

Funding In Action

With help from two other companies, Superior Water and Air, a private corporation based in Utah, donated filters to purify the water in more than 18,000 drinking fountains in 750 Utah schools.[1]

Companies are often especially interested in investing in the communities where they are located. Consider approaching local businesses or looking for corporations that have headquarters or corporate facilities near your community.

Foundations

Both private and corporate foundations often fund programs and projects. Foundations differ greatly in their scope and goals, so you will need to identify a foundation that is a good match for the goals of your water program. For example, you might search for foundations that are interested in preventing childhood obesity.

Resource Spotlight

The County Health Rankings and Roadmaps "Guide to Funding Your Community Health Initiative" includes a list of resources that can help you identify funding opportunities, including websites that list top grantmaking foundations. (Refer to the ***Resources*** supplementary material for a detailed list of resources, including weblinks).

Funding in Action

In 2010, the Community Environmental Council (CEC), with funding from the Orfalea Foundation and other private partners, installed 12 hydration stations in schools across Santa Barbara County. CEC also provided students and staff with reusable water bottles and provided education to students, parents, and teachers about the environmental benefits of drinking tap water instead of bottled beverages.[2]

Non-Profit and Community-Based Organizations

Local non-profit and community-based organizations may also have monetary or in-kind resources available. Potential partners in this area include:

- Organizations focused on health promotion
- Organizations focused on children and youth
- Healthcare providers or organizations (e.g., local hospitals, healthcare groups, or community clinics)
- Faith-based organizations
- After-school programs
- Rotary Club, Kiwanis Club, Lions Club, and other service organizations

Funding in Action

A school district in California purchased reusable water bottles for its students with funding obtained from the California Nutrition Network, a collective of local, state, and national partners working to promote increased fruit and vegetable consumption and physical activity among low-income communities.[3]

(1) Searing, N. Superior Water for Utah Classrooms. *Water Conditioning & Purification.* http://www.wcponline.com/PDF/0205%20Utah%20Classrooms.pdf. Published February, 2005. Accessed February 25, 2014.
(2) Case Studies. Water in Schools website. http://waterinschools.org/case_studies/. Accessed February 24, 2014.
(3) Model Wellness Policy Language for Water Access in Schools. National Policy & Legal Analysis Network to Prevent Childhood Obesity. http://changelabsolutions.org/sites/phlpnet.org/files/WaterAccessSchools_ModelPolicy_FINAL_20101008.pdf. Published October, 2010. Accessed February 25, 2014.

Student Groups

Student groups might have small amounts of funds available (e.g., sometimes student government organizations have monies collected from school dances or other activities), or might be interested in assisting with fundraising.

APPROACH FUNDERS FOR SHORT-TERM FUNDING

Once you have identified potential funders, your next step is to approach these individuals or organizations to request support.

Determine What You Will Ask For

Specify the resources or funds you need to implement each aspect of your water program. You may also want to prioritize these requests. Ask your team which elements of the program are essential, and which are lower-priority? When you approach potential partners, clearly state what you are asking for.

Understand the Funder's Interests

The individuals and organizations you approach will each have their own interests, goals, and missions. When approaching a potential funder, you will want to demonstrate how your water program aligns with the funder's goals. You should be able to clearly explain to the funders how your water program furthers their aims. For example, if you approach a public health department, you may want to explain how your water program will improve the health of students at your school. Companies and businesses may be interested in partnerships that increase their visibility or brand within your community. Educators will be interested in how your water program can help students' academic performance. Foundations will generally make their goals clear in the request for grant applications. Spend time learning what potential donors want, and be clear about how your water program can benefit them.

Anticipate Common Concerns

There are several common concerns funders may have when deciding whether to support a new program. By anticipating these concerns in advance, you can increase your chances of securing a funder. Below are some common topics funders will want you to address:

- **Sustainability** – Funders often want to know whether you have a plan for the long-term future of your program. To demonstrate to funders that your program is sustainable, you might describe the support or commitments you have received from other individuals or organizations, including the key stakeholders described above. For example, school administrators are key gatekeepers in implementing school-based programs, so funders may want you to demonstrate that you have the support of your school's administration. You might also mention other organizations that have pledged support to signal that others have confidence in your program.
- **Implementation** – Funders may want to know the details of your plans for implementing the program. The more you are able to show funders that you are well organized and prepared to implement your program, the more confident they will feel in your potential for success.
- **Results** – Funders will also want to know what they can expect your program to achieve. You should detail the outcomes your program aims to produce, and how you will evaluate whether those outcomes are met. More details on evaluating your program can be found in ***Action 4: Monitor Progress and Make Improvements***. To show a funder that you value evaluation, make sure to include an estimate of the costs of evaluation in your budget.

Tips for Approaching Funders

When you approach funders, you should:

- Know your audience:
  - Help the funder see how your program will also further their goals or mission
- Have your pitch ready:
  - Explain what organization you represent, what you hope to accomplish (e.g., purchase a hydration station), what support you would like from the funder, and how your water program aligns with their mission
- Bring a summary document that explains your program's goals and funding needs
- Describe what steps you have already taken toward implementing and enhancing your program
  - Indicate what other individuals and organizations have pledged support or commitment to your program
  - Explain how you will ensure the long-term success of your program
- Explain how you will measure whether your program has been successful

SECURE LONG-TERM FUNDING

Obtaining one-time grants is often a necessary first step to getting your water program started. However, grants usually have fixed timelines and budgets, and once the money is spent or the grant period ends, your funding will end. To continue your water program beyond this initial period, you will need to either continue applying for new grants or work toward longer-term funding solutions.

One way you can secure longer-term funding is to get a line item for your water program written into the school budget. For example, you might work with your food services department to get annual costs for providing cups to students written directly into the food service budget. This will ensure that there is money, year after year, to provide cups.

School districts also have long-term capital-improvement plans, which stipulate long-range plans for the repair and modernization of district facilities. You might consider working with administrators at the district level (e.g., the superintendent, school board, or district facilities director) to make water access a part of these plans. For example, the plans might direct the district to consider innovative water sources when renovating old buildings or constructing new ones.

CONCLUSIONS

Students should have easy access to safe, appealing drinking water at school. Not only is water access in schools required by law, ensuring water access is important to the health and wellbeing of children. When children drink water, especially in place of sugar-sweetened beverages, they are less likely to become obese, develop diabetes, and get dental cavities.

Chances are you know a child who eats meals at school. You are therefore a key actor in holding school districts accountable for meeting the spirit of the laws that require water access in schools. Below are key actions you can take to improve water access and consumption among students:

- Build a team of key stakeholders committed to improving water access and consumption
- Ensure the water at your school is safe to drink
- Select a water delivery option that is appealing to students
- Encourage students to drink water using promotional and educational activities
- Implement model water-related language in your school's wellness policy
- Secure funding for water policies and practices
- Evaluate your program and make improvements

This guide has given you tools, resources, and strategies to develop a comprehensive water program in your school. But starting a school-based water program can be as simple as offering pitchers of tap water on cafeteria tables at mealtime or hanging posters promoting water consumption. Increasing water access and consumption in schools is an easy and low-cost strategy to promote children's health. Get started on your water program today!

CHECKLIST FOR TAKING ACTION TO IMPROVE WATER ACCESS AND INTAKE IN SCHOOLS

1. BUILD YOUR TEAM AND GATHER SUPPORT

Action	Steps	Tools/Resources[1]
Gather support from key stakeholders	• Identify key stakeholders (e.g., students, public health departments, non-profit organizations, school and district administrators, parent organizations) • Meet with stakeholders to identify interests and constraints	• Public Health Advocacy Institute: *Mapping School Food: A Policy Guide*
Form your team	• Plan and hold regular meetings for a core "water team" • Invite key stakeholders and other interested individuals	• State of Washington Office of Superintendent of Public Instruction: *School Wellness Policy Best Practices for Development, Implementation and Evaluation* (especially p. 24-25)

2. SERVE SAFE AND APPEALING WATER

Action	Steps	Tools/Resources[1]
Choose a location for water sources	• Assess water environment: take an inventory of all water sources, including taste, temperature, flow, and clarity of the water • Survey students and school staff	• Harvard School of Public Health: *Water Audit Tool* • University of Washington: *Water Access Inventory*
Test water outlets for contaminants	• Determine what water sources to examine • Determine what contaminants to examine • Select a laboratory • Collect samples and send to lab • Remediate any water quality problems (e.g., flush water source, install filter) • Report results and remediation strategies to the school community	• ***Ensure the Safety of the Drinking Water in Schools: Initial Steps*** • ***Test for and Remediate Lead in School Drinking Water*** • ***Bay Area Environmental Protection Agency (EPA) Certified Water Quality Testing Laboratories*** • Environmental Protection Agency: *3Ts for Reducing Lead in Drinking Water in Schools* (see p. 17-36, p. 55-59, p. 65-69) • Los Angeles Unified School District Office of Environmental Health and Safety: website on lead testing and remediation
Choose a water delivery option	• Determine budgetary, space, and infrastructure constraints • Devise short- and long-term approaches to improving water access • Provide drinking vessels for encouraging water intake (e.g., cups, reusable water bottles)	• ***Overview of Drinking Water Delivery Options*** • ***Tap Water Dispenser*** • ***Point of Use Water Machine*** • ***Traditional Fountains, Fountains with Bottle Fillers and Stand Alone Bottle Fillers*** • ***Reusable Water Bottles*** • ***Single-Use Cups***

(1) Refer to the ***Resources*** supplemental material for a detailed list of resources, including weblinks. Items listed in ***bold italics*** are included as appendices to the ***Water Works*** guide.

CHECKLIST FOR TAKING ACTION TO IMPROVE WATER ACCESS AND INTAKE IN SCHOOLS

3. ENHANCE AND SUSTAIN YOUR WATER PROGRAM

Action	Steps	Tools/Resources[1]
Encourage water consumption with educational and promotional activities	• Gather student input on promotional and educational activities • Select promotional and educational messages • Select types of promotional and educational activities	• Alameda County Public Health Department: *Tap Into Health Water Promotion Toolkit*
Develop and implement model school wellness policy language to promote water access and consumption	• Identify school or district policies that address drinking water • Assess extent to which current policies support water access and consumption • Tailor model policy language for your school or district • Work with school administrators to incorporate water language into relevant school and district policies	• ***Model School Wellness Policy Language to Promote Water Access and Consumption*** • Yale Rudd Center for Food Policy and Obesity: *School Wellness Policy Evaluation Tool* (especially p. 18)

4. MONITOR PROGRESS AND MAKE IMPROVEMENTS

Action	Steps	Tools/Resources[1]
Designate a point person for evaluation	• Identify a person or group to monitor, evaluate, and report back to stakeholders regarding implementation and outcomes of the water program	• Community Tool Box: *Evaluating Community Programs and Initiatives* (see Chapter 36: Section 4)

Evaluate implementation process	• Conduct "Process Evaluation" to document:
	  • Changes to water environment
	  • Changes to wellness policies
	  • Cost of implementing program
	  • Experiences with program
		• Harvard School of Public Health: *Water Audit*
		• University of Washington: *Water Access Inventory*
		• Yale Rudd Center for Food Policy and Obesity: *School Wellness Policy Evaluation Tool* (see p. 18)

Evaluate your program's impact	• Conduct "Outcome Evaluation" to measure changes in:
	  • Students' knowledge about water
	  • Students' attitudes toward water or other beverages
	  • Students' beverage consumption
		• ***Evaluate Your Water Program: Overview***
		• ***Observation Tool: Examine the Number of Students Who Access a Water Source***
		• University of Wisconsin-Madison Office of Quality Improvement: *Focus Groups: A Guide to Learning The Needs of Those We Serve*
		• University of California Los Angeles Health Policy Research: *California Health Interview Survey - Adolescent Questionnaire, 2011-2012* (see p. 14-18)

Share results and make improvements based on evaluation	• Use evaluation results to make improvements to water program • Report findings to stakeholders	• Community Tool Box: *Evaluating Community Programs and Initiatives* (see Chapter 39: Section 2 & Section 4) • Smarter Lunchrooms Movement: *Share Your Success: Publicizing Your Smarter Lunchrooms Makeover*

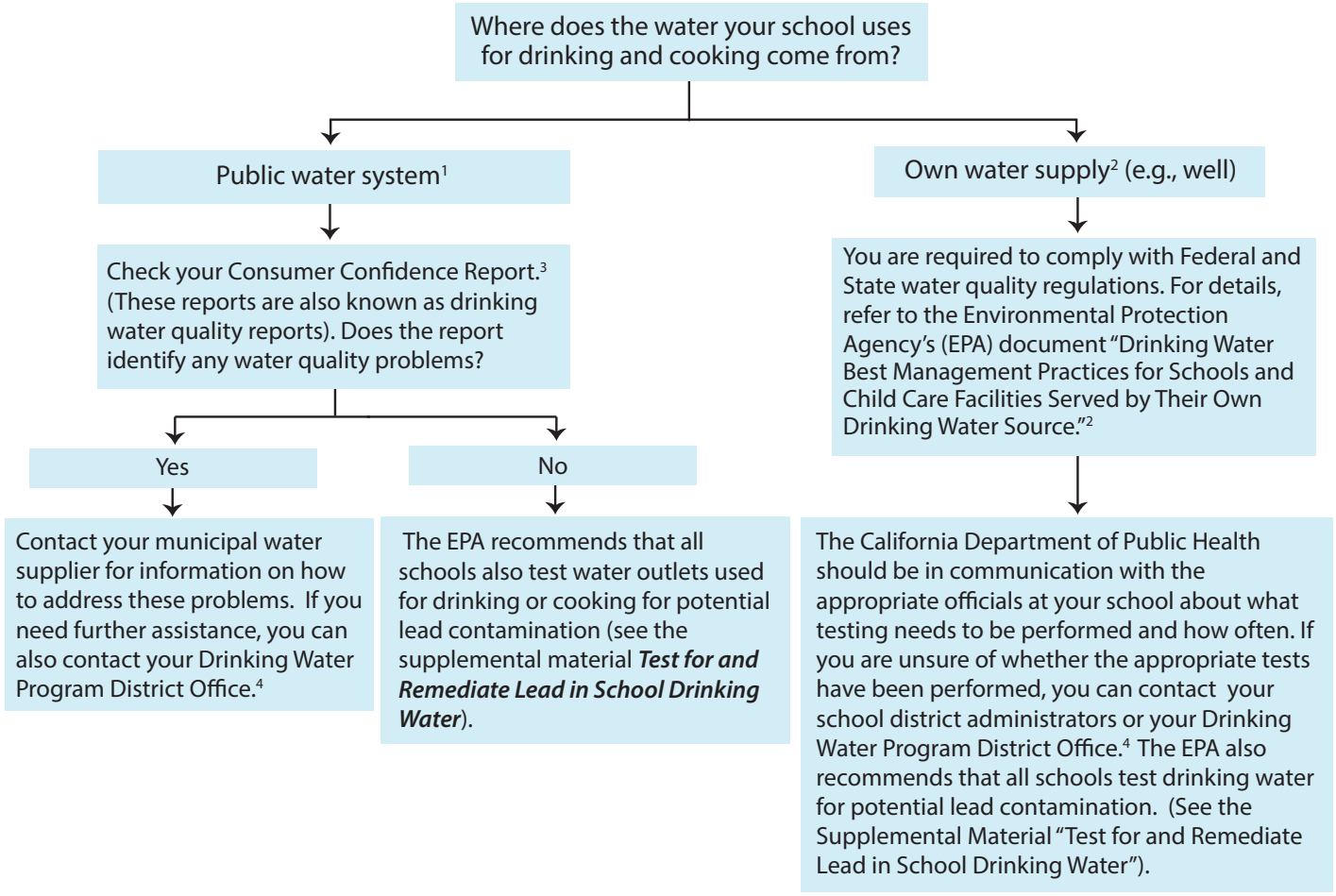
(1) Refer to the ***Resources*** supplemental material for a detailed list of resources, including weblinks. Items listed in ***bold italics*** are included as appendices to the ***Water Works*** guide.

CHECKLIST FOR TAKING ACTION TO IMPROVE WATER ACCESS AND INTAKE IN SCHOOLS

5. FUND YOUR WATER PROGRAM		
Action	**Steps**	**Tools/Resources[1]**
Identify potential partners and funders	• Work with your team to brainstorm potential sources of funding and support	• County Health Rankings and Roadmaps *Guide to Funding Your Community Health Initiative* (see p. 3-7) • Patel, AI & Hamption, KE (2011). *Encouraging Consumption of Water in School and Child Care Settings: Access, Challenges, and Strategies for Improvement*. American Journal of Public Health, 101(8): 1370-9. (See p. 1375) • Environmental Protection Agency: *Water Quality Funding Sources for Schools*
Approach funders for short-term funding of program	• Specify what funding and resources you need for your program (what you need funding for, what amount of funding you need, and priorities for funding) • Determine what interests and goals you share with potential funders • Prepare answers to funders' common concerns • Create a pitch for potential funders	• Community Tool Box: *Generating, Managing, and Sustaining Financial Resources* (see Chapter 42: Getting Grants and Financial Resources) • Foundation Center: *GrantSpace* website • Michigan State University Libraries: *Non-Profit Fundraising Web Resources*
Attempt to secure long-term funding sources	• Work with your school or district's administrator, food service department, and/or facilities department to get a line item for your water program into the annual budget • Find out if your school or district has capital improvement plans, and work with administrators to make improving water access part of these plans	• Community Tool Box *Social Marketing and Institutionalization of the Initiative* (see Chapter 46 - Planning for Long-Term Institutionalization)

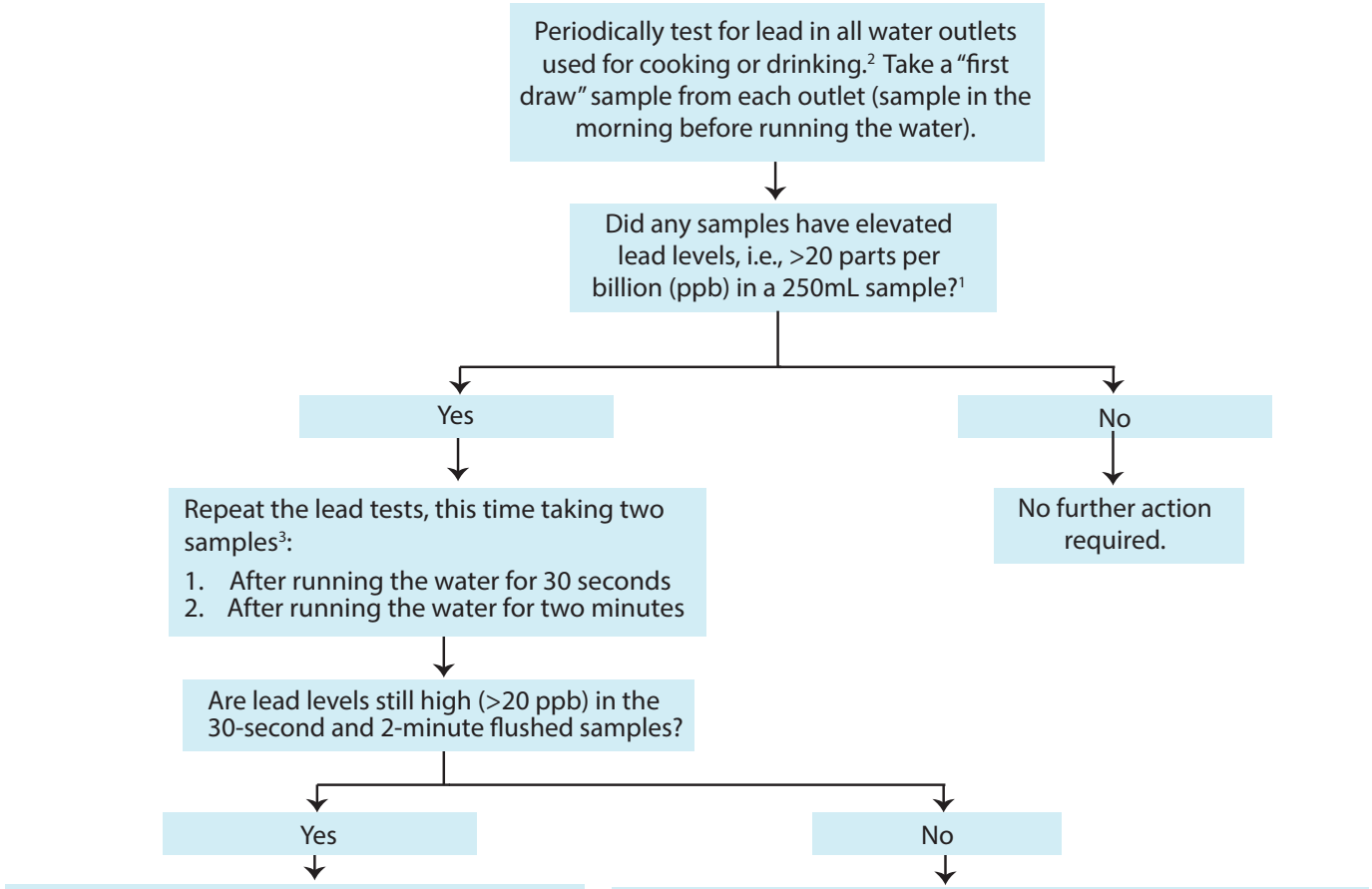
(1) Refer to the ***Resources*** supplemental material for a detailed list of resources, including weblinks. Items listed in ***bold italics*** are included as appendices to the ***Water Works*** guide.

ENSURE THE QUALITY OF DRINKING WATER IN SCHOOLS: INITIAL STEPS



(1) See also: Environmental Protection Agency. Drinking Water Best Management Practices for Schools and Child Care Facilities Served by Municipal Water Systems. http://water.epa.gov/infrastructure/drinkingwater/schools/upload/epa816b13002.pdf
(2) See also: Environmental Protection Agency. Drinking Water Best Management Practices for Schools and Child Care Facilities Served by Their Own Drinking Water Source. http://water.epa.gov/infrastructure/drinkingwater/schools/upload/epa816b13001.pdf
(3) Each year by July 1st, you should receive by mail a Consumer Confidence Report (an annual water quality report) from your water supplier that tells you where your water comes from and what is in it. Many water systems also put their water quality reports online. Visit the EPA website (http://water.epa.gov) or your local public utility's or water company's website for more information.
(4) The Department of Public Health runs the Drinking Water Program District Offices for the State of California. Contact information for each district can be found at: http://www.cdph.ca.gov/programs/Documents/DDWEM/OriginalDistrictMapCDPH.pdf.

TEST FOR AND REMEDIATE LEAD IN SCHOOL DRINKING WATER[1]



(1) For more information, see "3Ts for Reducing Lead in Drinking Water in Schools" by the Environmental Protection Agency (EPA): http://www.epa.gov/ogwdw/schools/pdfs/lead/toolkit_leadschools_guide_3ts_leadschools.pdf. See also: "Lead-Safe Schools Guide" developed by the Labor Occupational Health Program at the University of California, Berkeley: http://www.lohp.org/docs/pubs/lead/lssguide.pdf

(2) Consult with your Drinking Water Program District Office (http://www.cdph.ca.gov/programs/Documents/DDWEM/OriginalDistrictMapCDPH.pdf) to determine how often you need to perform lead tests.

(3) For more information on potential sources of lead contamination, see "Drinking Water Best Management Practices for Schools and Childcare Facilities Served by Municipal Water Systems" from the EPA: http://water.epa.gov/infrastructure/drinkingwater/schools/upload/epa816b13002.pdf

(4) To search for NSF Certified drinking water treatment units and water filters, use the search tool here: http://info.nsf.org/Certified/dwtu/. For more information, visit the NSF website: http://www.nsf.org/consumer-resources/health-and-safety-tips/water-quality-treatment-tips/

(5) For detailed instructions on how to flush water outlets, see Exhibit 5.1 (pp. 56) in the "3Ts for Reducing Lead in Drinking Water in Schools" by the EPA: http://www.epa.gov/ogwdw/schools/pdfs/lead/toolkit_leadschools_guide_3ts_leadschools.pdf

BAY AREA ENVIRONMENTAL PROTECTION AGENCY (EPA) CERTIFIED WATER QUALITY TESTING LABORATORIES

Below is a list of laboratories that test drinking water for common water contaminants, including lead, arsenic, and nitrates. All of the laboratories on the list are accredited by the Environmental Protection Agency (EPA).[1] For a complete list of EPA accredited laboratories, visit http://www.cdph.ca.gov/certlic/labs/Pages/ELAP.aspx and click on "Certified Laboratory List (Excel, New Window)" underneath the "Procedures and Lists" section.

Bay Area Environmental Protection Agency Certified Water Quality Testing Laboratories

Lab Name	Contact	Approximate Cost for Lead Test	Approximate Cost for Arsenic Test	Approximate Cost for Nitrate Test	Discounts Available	Courier Services	Turn-Around Time	Other Considerations
Alpha Analytical Laboratories, Inc.	(925) 828-6226 6398 Dougherty Road, Suite #35 Dublin, CA 94568	$24	$24	$24	$70 for lead, arsenic, and nitrate test combined; other discounts available on a case-by-case basis	Yes	5 business days	
Caltest, Inc.	(888) 258-8378 1885 N. Kelly Rd Napa, CA 94558	$25	$35	$39	5% off for 5+ samples, 10% off for 10+ samples	Yes, at cost with 2 days notice; fees may be waived for bulk orders	10 business days	
Cel Analytical, Inc	(415) 882-1690 82 Mary St, Suite #2 San Francisco, CA 94103	$25-55 (depending on technique used)	$25	$50	For bulk orders	Yes (no cost)	7 business days	
Cerco Analytical, Inc.	(925) 462-2771 1100 Willow Pass Ct Concord, CA 94520	$27	$27	$27	N/A	Yes (free within certain pick-up areas)	10 business days	Minimum order of $55

(1) Between June and August 2013, the authors contacted all EPA-certified laboratories in five San Francisco Bay Area counties (Alameda, Marin, San Francisco, San Mateo, and Sonoma Counties). We included here all labs that were open and indicated they would offer lead, arsenic, and/or nitrate testing to schools. Contact information and pricing subject to change; contact the labs directly for up-to-date information.

Bay Area Environmental Protection Agency Certified Water Quality Testing Laboratories								
Lab Name	**Contact**	**Approximate Cost for Lead Test**	**Approximate Cost for Arsenic Test**	**Approximate Cost for Nitrate Test**	**Discounts Available**	**Courier Services**	**Turn-Around Time**	**Other Considerations**
Curtis & Tompkins, Ltd.	(510) 486-0900 or (510) 204-2223 2323 Fifth Street Berkeley, CA 94710	$25	$25	$20	$40 for lead and arsenic tests combined, other discounts available on a case-by-case basis	Yes (free with order of $75 or more)	5 business days	Minimum order of 2 samples
Dysert Environmental, Inc.	(650) 799-9204 918 S. Humboldt St San Mateo, CA 94402	$30	$30	$25	For bulk orders	Yes (no cost)	10 business days	Samples for nitrate tests must get to lab on same day that sample was retrieved
Forensic Analytical Laboratories, Inc.	(510) 887-8828 x 1865 3777 Depot Road #409 Hayward, CA 94545	$18	$10	N/A (not offered)	On a case-by-case basis	Yes	5 business days	Sometimes require multiple samples per site to conduct contaminant tests
McCampbell Analytical, Inc.	(925) 252-9262 1534 Willow Pass Rd Pittsburg, CA 94565	$17	$12	$20	For bulk orders	Yes (no cost)	5 business days (rush processing also available)	
Micro Analytical Laboratories, Inc.	(510) 653-0824 5900 Hollis Street, Suite M Emeryville, CA 94608	$55	N/A (not available)	N/A (not available)	For bulk orders	No, must mail or drop off samples in-person	3 to 5 business days	

OVERVIEW OF DRINKING WATER DELIVERY OPTIONS

	Tap Water Dispensers	Point of Use Water Machines	Fountains, Founains with Bottle-Fillers, & Stand Alone Bottle-Fillers
Water Delivery Option	Refillable containers with a spout for students to self-serve tap water 	Bottleless water coolers that hook into a tap water line. Students press a button to dispense water 	Traditional drinking water fountains with or without stations for filling water bottles, or stand-alone bottle-fillers 
Approximate Price Range	$15 to $150	$250 to $700 to purchase; starting at $25/month to rent	$600 to $4000 for new unit; $500-$1000 to add bottle filler to existing fountain
Advantages	• Low cost • Water can be chilled by adding ice or putting container in fridge overnight before serving • Can be filled up from a water source in a central location in the school and transported to area of use • No electricity needed to use units • No additional plumbing needed • Many schools already have such dispensers on hand (e.g., for sports teams or staff meetings)	• Some units can chill water • Volume discounts may be available • Some units can be rented • Some units are compatible with filtration systems • Hook directly into tap water line so do not need to be filled like tap water dispensers • Minimal maintenance and cleaning required	• Long-lasting • Some units are refrigerated (offer chilled water) • Some units are compatible with filtration systems • Hook directly into tap water line so do not need to be filled like tap water dispensers • Some units operate with gravity and don't require electricity • Minimal maintenance and cleaning required
Considerations	• Larger dispensers are heavy when full (a utility cart is useful for transport) • More labor-intensive than other options because staff need to fill the dispenser with water daily (or more often) and clean it weekly • Students must have a cup or reusable bottle to get water from the dispenser	• Upfront costs are more expensive than tap water dispensers • May require professional installation, sometimes at additional cost • Require electricity, which incurs (sometimes significant) additional cost • Some units do not drain excess water automatically and staff must manually empty drip tray • Students must have a cup or reusable bottle to get water from machine	• Upfront costs are more expensive than tap water dispensers and point of use water machines • Requires professional installation • Stand alone bottle fillers may not be accessible to students unless cups or reusable water bottles are also provided; units that include traditional fountains increase accessibility to students without a cup or bottle

TAP WATER DISPENSERS

Description: refillable containers with a spout for students to self-serve tap water

Benefits:

- Low cost
- Water can be chilled by adding ice or putting container in fridge before serving
- Can be filled up from a water source in a central location in the school and transported to area of use
- No electricity needed to use units
- No additional plumbing needed
- Many schools already have such dispensers on hand (e.g., for sports teams or staff meetings)

Considerations:

- Larger dispensers are heavy when full; a utility cart is useful for transport
- Staff need to fill with water daily (or more often) and clean weekly.

Examples of Tap Water Dispensers

Brand Name and Picture	Approximate Price	Specific Considerations
Cambro 	• 1.5 to 2.5-gallons: ~$90 • 5-gallon: ~$100 • 10 to 11.75 gallon: ~$150 to $200	• Insulated (can be used for hot or cold beverages) • Certified by NSF-International, a public health and safety organization • Not Bisphenol A (BPA) -free
Igloo 	• 5-gallon: ~$50 to $60 • 10-gallon: ~$75 to $80	• Some units are insulated (can keep water cold • Some units include cup holders • BPA-free
Reliance Aqua-Trainers (available from Recreation Equipment Incorporated) 	• 7-gallon: ~$17.00	• BPA-free
Rubbermaid 	• 3-gallon: ~$33.99 • 5-gallon: ~$36.99 • 10-gallon: ~$56.99	• BPA-free

Examples of Tap Water Dispensers (Continued)

Brand Name and Picture	Approximate Price	Specific Considerations
Service Ideas 	• 3-gallon rectangular: ~$55 • 3-gallon round: ~$50	• BPA-Free • NSF-International certified • Clear design allows students to see beverage • Includes a reuseable icepack to chill water • Includes an infuser to add natural flavor (e.g., lemon, cucumber) to water
Creative Ware 	• 3-gallon: ~$30	• BPA-free • Clear design allows students to see beverage • Includes an infuser to add natural flavor (e.g., lemon, cucumber) to water
ZeroWater 	• 0.6 gallon: ~$33 • 1.4 gallon: ~$40	• BPA-free • Clear design allows students to see beverage • Includes an FDA-certified filter that removes lead and other contaminants (including nitrate, zinc, and aluminum) from water

POINT OF USE MACHINES

Description: bottleless water coolers that hook into a tap water line; students press a button to dispense water

Benefits:

- Most units can chill water
- Hook directly into tap water line, so do not need to be filled like tap water dispensers
- Minimal maintenance and cleaning required

Considerations:

- More costly to purchase than tap water dispensers
- May require professional installation, sometimes at additional cost
- Require electricity (at additional cost)
- Some units do not drain excess water automatically, so staff must manually empty drip tray

Examples of Point of Use Machines

Brand Name and Picture	Approximate Price to Rent	Approximate Price to Purchase Outright	Filtration Capabilities[1]	Specific Considerations
Accupure 	• Alpha: ~$28 to $31/month • Excel: ~$30 to $33/month • Signature: ~$35 to $40/month	N/A	• Carbon • Reverse Osmosis	• Rental includes servicing 2x/year • Installation is free if unit installed within 25' of tap line; otherwise $1/foot distance from tap line
TaylorMade 	• Starting at ~$45/month	• Must contact sales representative for quote	• Carbon • Reverse Osmosis • UV	• Rental includes servicing 2x/ year, replacement filters • Installation is $125+
Culligan 	• Starting at ~$25/month	• Starting at $395 per unit	• Carbon • Reverse Osmosis	• Rental includes servicing 2x/year, replacement filters • Rental does NOT include installation – additional $99 for basic installation • Purchase DOES include basic installation

(1) Some filters and filtration devices involve additional costs. Choice of filtration device may influence the price of the unit (e.g., machines with carbon filters included are generally less expensive than machines with reverse osmosis filters, all else being equal). Filters need to be changed/replaced regularly, which may incur further costs (some rental agreements include filter changes in the rental fee; others do not.

Examples of Point of Use Machines (Continued)

Brand Name and Picture	Approximate Price to Rent	Approximate Price to Purchase Outright	Filtration Capabilities[1]	Specific Considerations
Neptune Water Solutions 	• ~$40 to $50/month	N/A	• Sediment • Carbon • Reverse Osmosis	• Installation, servicing (as needed), replacement filters included in rental price
Oasis Coolers 	N/A	• ~$250 to $600, depending on model	• Sediment • Carbon	• Must find local sales representative/ distributor to purchase; this company also handles installation (costs may vary) • Leasing options may also be available
Global Water 	N/A	• ~$500 to $750, depending on model	• Carbon • Reverse Osmosis	• Purchase online; self install or hire outside contractor to assist with installation (at additional cost)
iBottless Coolers 	N/A	• ~$390 to $600, depending on model	• Carbon (included) • Reverse Osmosis (additional ~$189)	• Purchase online; self install or hire one of iBottless's approved service providers for ~$200

(1) Some filters and filtration devices involve additional costs. Choice of filtration device may influence the price of the unit (e.g., machines with carbon filters included are generally less expensive than machines with reverse osmosis filters, all else being equal). Filters need to be changed/replaced regularly, which may incur further costs (some rental agreements include filter changes in the rental fee; others do not.

TRADITIONAL WATER FOUNTAINS, WATER FOUNTAINS WITH BOTTLE FILLERS, AND STAND ALONE BOTTLE FILLERS

Description: traditional drinking water fountains with or without stations for filling water bottles, or stand alone bottle fillers

Benefits:

- Some units are refrigerated (offer chilled water)
- Some units are compatible with filtration systems
- Hook directly into tap water line, so do not need to be filled like tap water dispensers
- Some units operate with gravity and don't require electricity

Considerations:

- Upfront costs are more expensive than tap water dispensers and point of use water machines
- Require installation
- Stand alone bottle fillers may not be accessible to students unless cups or reusable water bottles are also provided; combination units (fountains with bottle fillers) are accesible to students regardless of whether they bring a cup or bottle

Examples of Traditional Water Fountains, Water Fountains with Bottle Fillers and Stand Alone Bottle Fillers

Brand Name and Picture	Approximate Price	Filtration Capabilities	Specific Considerations
Elkay 	• Fountain only: ~$450 to $4000 • Fountain + Bottle Filler Unit: ~$1500 to $1700 • Retrofit Bottle Filler only: ~$600 to $700 • Bottle Filler only: ~$1200 to $2000	• Some units include WaterSentry® filter (for lead, Class 1 Particulates, and chlorine)	• Retrofit options available (can add bottle filler to existing fountain) • Some units include digital display of quantity of plastic bottles saved by using fountain instead of buying bottled water
Oasis Coolers 	• Fountain only: ~$400 to $2000 • Fountain + Bottle Filler: $1200 to $5000 • Retrofit Bottle Filler only: ~$200 to $600 • Bottle Filler only: ~$1800 to $4300	• Some units include "Versafilters" (for lead, Class 1 Particulates, and chlorine)	
Halsey Taylor 	• Fountain only: ~$200 to $5300 • Fountain + Bottle Filler: ~$1800 to $7600 • Bottle Filler retrofit - $200-$800 • Bottle Filler only - $1300 to $2800	• Some units include WaterSentry® filter (for lead, Class 1 Particulates, and chlorine)	• Some units include digital display of quantity of plastic bottles saved by using fountain instead of buying bottled water

Examples of Traditional Water Fountains, Water Fountains with Bottle Fillers and Stand Alone Bottle Fillers (Continued)

Brand Name and Picture	Approximate Price	Filtration Capabilities	Specific Considerations
Brita Hydration Station 	• $2050 (wall mounted unit) • $2150 (recessed unit)	• Includes filtration system for lead, cysts, and chlorine	• No drinking fountain option, so may not be maximally accessible to students unless cups or reusable bottles are also provided
GlobalTap 	• Fountain only: ~$1000 • Fountain + Bottle Filler: ~$1800 to $3700 • Bottle Filler only: ~$1000 to $4700	• Current models do not support filters	• Custom colors available • Refrigeration NOT available
Acorn 	• Fountain only: ~$1000 to $7000 • Fountain + Bottle Filler: ~$1500 to $4000 • Bottle Filler retrofit - $500 to $700	• Some models come with filters for lead and cysts	

REUSABLE WATER BOTTLES

Reusable water bottles provide an easy way for students to get water at school and carry water with them during the day. Providing reusable water bottles may help increase students' water consumption. Reusable bottles can also be sold as a fundraiser, offering a healthy alternative to food/beverage-based fundraisers. Read below for information about what to consider when purchasing reusable water bottles.

Material/Types: There are five main types of reusable water bottles, with considerations for each outlined below. Note that some schools choose to only allow clear bottles so that teachers and staff can easily see what students are drinking.

	Aluminum/Steel	Soft Plastic Sport Top	Hard Plastic Screw Top	Hard Plastic Straw Top	Foldable/Collapsible
Example					
Advantages	• Durable • Most are free of Bisphenol A (BPA)	• Easy to drink from (do not need to unscrew cap), good for sports • Less likely to spill • Relatively inexpensive	• Durable	• Durable • Easy to drink from (do not need to unscrew cap) • Less likely to spill	• Easy to store • Lightweight • Many options include carabineers, which can connect bottle to backpack • Less likely to spill
Considerations	• Opaque, meaning teachers cannot see what students are drinking	• Some options may contain BPA	• Some options may contain BPA • More likley to spill	• Straw component can be hard to clean • Some options may contain BPA	• Some options may contain BPA • Less durable

Size of Bottle: 12- to 30-ounce (0.4L to 0.9L) bottles are appropriate for school-age children. Smaller bottles may be easier for students to carry.

Popular Brands include Nalgene, Sigg, Klean Kanteen, Nathan, Contigo, Bobble, Camelbak. Wholesalers and online retailers also sell inexpensive bottles in bulk volume.

Cleaning: Reusable bottles must be properly cleaned and fully air-dried at least once per week to ensure they don't harbor bacteria or unpleasant orders or tastes. If bottles are kept at school, teachers should take responsibility for cleaning them; otherwise, students and their parents should take responsibility.

Popular Reusable Water Bottles

Name & Picture	Description	Approximate Price	Website & Considerations
Camelbak - "eddy" 	• Top has a bite valve and straw that lets students sip water without tipping or spilling • Comes in BPA-free hard plastic and in stainless steel	• BPA-free plastic: ~$13 for 0.4L • Stainless steel: ~$24 for 0.7L, ~$30 for 0.5L insulated	• www.camelbak.com
Klean Kanteen - "Original" 	• Stainless steel bottle • Variety of tops available: sport top (shown), regular silicone cap, sippy cap, wide-mouth, and bamboo/ steel cap	• 12oz: ~$17 • 18oz: ~$19 • 27oz: ~$20	• www.kleankanteen.com • Wholesale pricing may be available to schools; call 530-592-4552
Sigg - "Original" and "Traveler" 	• Aluminum bottle • Variety of tops available: regular (shown), wide-mouth, and "active" cap	• 0.4L: ~$21 • 0.6L: ~$23	• www.mysigg.com • Discounts may be available to schools; call 203-922-7500
Sigg - "Performance" 	• Aluminum bottle with a bite valve and straw that lets students sip water without tipping or spilling	• 0.4L: ~$25 • 0.6L: ~$27 • 0.75L: ~$29	• www.mysigg.com • Discounts may be available to schools; call 203-922-7500
Nalgene 	• BPA-free hard plastic bottles with a variety of mouth/cap options including: narrow mouth, "On the Go" (can open with one hand), "On the Fly" (can open with one hand, spill-proof), wide mouth	• 16oz Narrow Mouth: ~$9 • 16oz Wide Mouth: ~$9 • 24oz On the Go: ~$10 • 24oz On the Fly: ~$13	• www.store.nalgene.com

Popular Reusable Water Bottles (continued)

Name & Picture	Description	Approximate Price	Website & Considerations
Contigo - "Addison" 	• BPA-free hard plastic bottles with straw tops for one-handed drinking	• 24oz: ~$13	• www.gocontigo.com • Bulk pricing available through Staples Promotional Products (see chart below) • Can also purchase in bulk at some Costco stores
Contigo - "Grace" 	• BPA-free hard plastic bottle with small opening: user presses a button to sip; the bottle auto seals when not pressing button; this allows for one-handed use with no caps to remove	• 24oz: ~$11	• www.gocontigo.com • Bulk pricing available through Staples Promotional Products (see *Websites Selling Water Bottles in Bulk* chart)
Platypus - "Softbottle" 	• Flexible, foldable, and collapsible bottle made from soft, BPA-free plastic. Several cap types available: "closure cap" (screws on/off), "push-pull cap", "hyperflow cap" (bite cap to sip water)	• 0.5L Closure Cap or Push-Pull Cap: ~$8 • 0.5L Hyperflow Cap: ~$12	• www.cascadedesigns.com/platypus/bottles-and-storage/category
Nathan - "Steamline Tritan" 	• BPA-free hard plastic bottle with straw that flips up with a push button	• 0.7L: ~$12	• www.nathansports.com
Fuel Belt 	• BPA-free soft plastic with pressure release valve for one-handed sipping	• 24oz: ~$8	• www.fuelbelt.com

Websites Selling Water Bottles in Bulk[1]

Company	Website	Considerations
Discount Mugs	www.discountmugs.com (select "Sport Bottles" from the tabs running down the left-hand side of the page)	• Can print custom images or text on bottles (e.g., school name / logo) for extra cost • Minimum order of 12
Bulletin Bottle	www.bulletinbottle.com	• Can print custom images or text on bottles (e.g., school name/ logo) for extra cost • Some bottles have minimum order of >100
Quality Logo Products	www.qualitylogoproducts.com (select "Water Bottles & Mugs" from the tabs running down the left-hand side of the page)	• Can print custom images or text on bottles (e.g., school name/ logo) for extra cost • Some bottles have minimum order of >50
Staples Promotional Products	www.staplespromotionalproducts.com (search for "water bottles")	• Most prices include cost of custom image/text printed on bottles • Some bottles have minimum order requirement
Office Max Promotional Products	2013 Catalog available at http://www.e-digitaleditions.com/t/43121 Can also search for "Office Max Promotional Products catalog" in your search engine	• Most prices include cost of printing image/text in 1 color on bottles • Some bottles have minimum order requirement
Factory Direct Promos	www.factorydirectpromos.com/reusable-water-bottles.html	• Must request quote for exact pricing
Custom Earth Promos	http://www.customearthpromos.com/ (select "Reusable Bottles" from tabs across top of page)	• Must request quote for exact pricing
Inkhead Promotional Products	www.inkhead.com/water-bottles	• Prices include printing in 1 color on bottles • Some bottles must be ordered in increments of 48

(1) This is not an exhaustive list of all companies selling water bottles in bulk; rather, this list is meant to be a starting point for schools looking to purchase inexpensive bottles for their students. The companies listed here each offer a very large variety of bottles. See their websites for more options and details.

SINGLE-USE CUPS

Providing **single-use cups** next to tap water dispensers, water bottle fillers, and point-of-use water machines provides students with an easy way to serve themselves water, and may increase water consumption among students. Read below for more information on what to consider when purchasing cups including more detailed information about specific products (e.g., brand, size, cost).

Material/Types: Single-use cups are made of five types of materials that vary in cost and durability. Some are recyclable or compostable in certain areas.

	Polystyrene (PS)	Polypropylene (PP)	Polylactic Acid (PLA)	Poly-ethylene-terephthalate (PET/PETE)	Paper
Example					
Material #	#6	#5	#7	#1	NA
Relative Cost	Less expensive	More expensive	More expensive	More expensive	Less expensive
Relative Durability	Less durable (cracks easily)	More durable	Less durable (melts easily)	More durable	More durable if inside of cup is lined with wax or plastic; less durable if unlined
Recycable[1]	No	Yes	No	Yes	Depends on lining
Compostable[1]	No	No	Yes	No	Depends on lining

(1) Indicates whether the material is recyclable or compostable *in general*. Your community may not recycle/compost all the materials listed here as recyclable/compostable.

Size of Cup: 7 ounces to 12 ounces is appropriate for school-aged children and adolescents. Smaller cups are less expensive, but students may have to refill them multiple times to get desired amount of water.

Popular Brands include Karat (PS, PP, PETE), Conex (PS, PP, PETE), Dixie (PS, PP, PETE), Solo (PS, PP, PETE), Green Stripe (PLA/compostable), Eco-Products (PLA/compostable)

Examples of Companies Selling Cups Online (not an exhaustive list):

- www.cupdepot.com
- www.greensafestore.com
- www.amazon.com
- www.ecoproductsstore.com
- www.webstaurantstore.com
- www.instawares.com
- www.parishsupply.com
- www.dartcontainer.com

Options for Single-Use Cups[1]			
Name and Picture	**Size (Ounces)**	**Approximate Price**	**Material**
Dixie CC5 Plastic 	7oz	~$0.06 per cup (~$60 for pack of 1000 cups)	PS (#6)
Karat Clear Plastic PET 	7oz - 12oz	~0.05 to $0.08 per cup, depending on size and quantity ordered (~$50 to $80 for pack of 1000 cups)	PET(E) (#1)
Karat Clear Frosted Polystyrene	7oz - 9oz	~$0.03 to $0.04 per cup, depending on size ordered (~$40 for pack of 1000 or ~$95 for pack of 2500)	PS (#6)
Greensafe Store PLA Clear 	7oz - 12oz	~$0.05 to $0.09 per cup, depending on size ordered (~$100 for pack of 2000 7oz cups to ~$92 for pack of 1000 12oz cups)	PLA (#7)
Eco-Products Green Stripe for Cold Drinks 	7oz - 12oz	~$0.06 to $0.16 per cup, depending on size and quantity ordered	PLA (#7)
Choice Paper for Hot Drinks 	8oz	~$0.03 to $0.04 per cup, depending on quantity ordered (~$30-33 for pack of 1000)	Paper lined with polyethylene
Dixie Pathways Paper Hot Cups 	8oz - 12oz	~0.06 to $0.09 per cup, depending on size and quantity ordered ($66 to $85 per pack of 1000)	Paper lined with polyethylene
Green Choice Compostable Paper Coffee Cups 	8oz - 12oz	~$0.06 to $0.08 per cup, depending on size ordered ($63 to $75 per pack of 1000)	Paper lined with PLA

(1) Not an exhaustive list. Organized by size of cup.

Options for Single-Use Cups[1]			
Name and Picture	**Size (Ounces)**	**Approximate Price**	**Material**
Eco-Products World Art Hot Paper Cup 	8oz - 12oz	~$0.10 per cup, depending on size ordered (~$100 per pack of 1000)	Paper lined with PLA
Karat Eco-Friendly PLA 	9oz	~$0.09 to $0.10 per cup (~$95 for pack of 1000 cups)	PLA (#7)
Karat White Paper Cold Cups 	9oz - 12oz	~$0.06 to $0.08 per cup, depending on size ordered (~$58 to $78 for pack of 1000)	Paper lined with polyethylene
Dixie WiseSize PETE 	10oz	~$0.11 per cup (~$58 for pack of 500)	PET(E) (#1)
World Centric Compostable Corn Clear Cold 	10oz	~$0.09 to $0.10 per cup	PLA (#7)
Karat PolyPropylene Clear Cold	12oz	~$0.06 to $0.07 per cup, depending on quantity ordered	PP (#5)

(1) Not an exhaustive list. Organized by size of cup.

ACTIVITIES, LESSON PLANS, AND CURRICULA TO ENCOURAGE WATER INTAKE IN SCHOOLS

Below are some examples of and ideas for activities, worksheets, lesson plans, and curricula about water and beverages that you can incorporate into class or afterschool lessons.

Activities and Worksheets		
Description	**Grade Level**	**Weblink**
"Sugar Savvy" Activities: developed by the Bay Area Nutrition and Physical Activity Collaborative (BANPAC). A collection of activities related to drinking water instead of sugar- sweetened beverages, including puzzles and worksheets.	Materials available for preschool through high school	English: http://www.banpac.org/resourc-es_sugar_savvy.htm#english Spanish: http://www.banpac.org/ resourc- es_sugar_savvy_drink_ otter. htm#eng_poster
Coloring page: developed by "Soda Free Summer" curriculum. Shows Potter the Otter and several of his friends drinking water.	Preschool	http://www.banpac.org/pdfs/sfs/ sfs_dw_coloring_sheet.pdf
"Good For Teeth?": worksheet, developed by BANPAC. Students circle things that help keep teeth healthy.	Preschool	http://www.banpac.org/pdfs/sfs/ sfs_dw_good_for_teeth.pdf
"How Much Sugar?": worksheet developed by BANPAC. Students circle the number of spoons of sugar in one can of soda.	Preschool	http://www.banpac.org/pdfs/sfs/ sfs_dw_how_many_spoons.pdf
Do it Yourself Infused Water: a hands-on way to teach kids how to add healthy, natural flavors to water using herbs and fruit.	Kindergarten and up	http://playfullearning.net/diy-in-fused-water-station/
Lesson Plans and Curricula		
Description	**Grade Level**	**Weblink**
"The Story of Bottled Water": a video discussing the environmental implications of drinking bottled water instead of tap water. Accompanying lesson plan is focused on tap vs. bottled water and media literacy.	6th grade and up	Clip: http://www.storyofstuff.org/ movies-all/story-of-bottled-wa- ter/ Lesson plan: http://teachingro- cks. ca/ban-the-bottle/
"Take Back the Tap" Curriculum: developed by Food and Water Watch. Lesson plans discussing the benefits of tap water. Covers multiple subjects.	6th to 8th grade	http://ci.santa-rosa.ca.us/doclib/ Documents/Take back the TAP. pdf

Lesson Plans and Curricula (Continued)		
Description	**Grade Level**	**Weblink**
Environmental Protection Agency's "Kids' Stuff": lesson plans, classroom games, and activities related to drinking water and the environment. Lessons cover a wide range of subject areas.	Materials available for elementary through high school	http://water.epa.gov/learn/kids/drinkingwater/
Water.org: lesson plans and mini- units that align with national standards. Cover range of subjects and a variety of different types of activities.	Materials available for elementary through high school	http://water.org/news/les- son-plans/
"Tap Into Health" Water Promotion Toolkit: developed by the Alameda County Public Health Department. Contains lesson plans, worksheets, and interactive activities such as contests and scavenger hunts, all aimed at promoting water consumption among middle schoolers.	6th to 8th grade	http://www.healthylivingforlife.org/_web-assets/pdfs/water-promo/Tap%20into%20Health%20Water%20Promotion%20Toolkit/Water%20Promotion%20Toolkit.pdf
"Sugar Savvy" Students: developed by Alameda County Public Health Department. Curriculum aims to teach students about the importance of decreasing sugar intake.	Includes materials specific to kindergarten through 5th grade and to 6th to 8th grade	**Elementary school:** http://www.banpac.org/sugar_savvy_curr/ss_students_K_5_rev052208_10_21_08.pdf **Middle school:** http://www.banpac.org/sugar_savvy_curr/ss_students_6_8_rev052208_10_21_08.pdf
"Our Water" Curriculum: developed by the San Francisco Public Utilities Commission. Teaches students about water resources and the importance of conservation. Interdisciplinary units that support CA State Standards.	4th to 6th grade	http://sfwater.org/index.aspx-?page=490

VIDEOS AND SONGS TO ENCOURAGE WATER INTAKE IN SCHOOLS

Below are some examples of videos and songs you can use to promote water intake at your school.

Videos and Songs		
Description	**Grade Level**	**Weblink**
"Drink More Water!": song encourages children to drink more water and less juice.	Preschool and kindergarten	**Music Video:** http://www.youtube.com/watch?v=QrWquDo7TzE **Instructional video teaching song's accompanying motions:** http://www.youtube.com/watch?v=PXp21n-IT_E
"W-A-T-E-R": an animated children's video with a rhyming story about drinking water at home. After the story, video includes water facts and fun ways to drink water (fountain, bottle, lemon slices, silly straws, fun-shaped ice, etc.).	Preschool and kindergarten	http://www.youtube.com/watch?v=yM6hn-Z1UWw
"Water, Water, Water": children's song that encourages kids to drink water. Developed by the Healthy Kids initiative in Australia.	Preschool and kindergarten	http://www.healthykids.nsw.gov.au/downloads/file/campaignsprograms/4.Water,water,water.mp3
"Drink Water for Your Life": narrated video with facts about water.	4th grade and up	http://www.youtube.com/watch?v=833lbjUejFM
"Drinkin' that Water": rap music video about drinking water instead of sugary beverages. Written and performed by Oakland, California teens.	6th grade and up	http://www.youtube.com/
"Water Cycle Rap Song": song teaches students about the water cycle.	6th grade and up	http://www.youtube.com/watch?v=yNW1evt93e4

POSTERS TO ENCOURAGE WATER INTAKE IN SCHOOLS

Below are some examples of posters you can use to promote water intake at your school.

Posters		
Description	**Grade Level**	**Weblink**
Sugar Savvy / Potter the Otter Posters: series of mini-posters with fun facts promotes consumption of water instead of sugary beverages. Available in English and Spanish.	Preschool and kindergarten	http://www.banpac.org/resources_sugar_savvy_drink_otter.htm#eng_poster
Sugar Content in Popular Drinks: developed by LiveWellOhama. Shows how much sugar is in popular drinks, visually represented as sugar packets.	4th grade and up	http://livewellomaha.org/wp-content/uploads/2011/08/Poster-Choose-DrinksB4FAEA.png
Healthy Kids Fact Sheet: fact sheet outlines health benefits of water. Developed by the Healthy Kids initiative in Australia (so uses metric system units in fact sheet).	6th grade and up	http://www.healthykids.nsw.gov.au/downloads/file/kidsteens/HealthyKids_KidsFactSheet_ChooseWaterAsADrink.pdf
ReThink Your Drink: informational poster highlights the importance of drinking milk and water. Also demonstrates how to read a nutrition label for beverages. Available in English and Spanish.	9th grade and up	http://www.healthyeating.org/Portals/0/Documents/Tip%20Sheets/ReThinkYourDrink.pdf
"Water Cycle Rap Song": song teaches students about the water cycle.	6th grade and up	http://www.youtube.com/watch?v=yNW1evt93e4
"Tapped": documentary about the bottled water industry.	6th grade and up	http://www.tappedthemovie.com/

MODEL SCHOOL WELLNESS POLICY LANGUAGE FOR DRINKING WATER ACCESS AND CONSUMPTION

This model policy provides language for water access and promotion in schools. It includes recommended language for your school wellness policy and provides actions you can take to implement the policy. The intent of this model policy is to provide language for the provision of drinking water in schools that aligns with best practice recommendations. It is the "ideal" drinking water policy. This model policy addresses seven main areas of water-related language for school wellness policies:

- Water access
- Water delivery options
- Promotion and marketing
- Education
- Safety and quality
- Reusable water bottles
- Monitoring and evaluation

INCORPORATING MODEL WATER-RELATED LANGUAGE INTO YOUR SCHOOL WELLNESS POLICY

For each of these areas, recommended language is provided in the text box followed by specific actions your school or district can take to implement the guideline. Your school or district can use all of the best practices as written to implement a comprehensive drinking water policy. Or you phase-in over time the adoption of individual parts of the model policy. The model guidelines can be revised to meet the needs and priorities of your school or district.

1) Water Access

Recommended Language

The school district shall provide all students (including those with disabilities) and staff with easy access to clean, safe, and good-tasting drinking water free of charge at every school campus. Potable drinking water will be readily available at all times during the day and at before- and after-school activities in the food service and eating areas, common areas, gyms, outdoor physical activity spaces, classrooms, and faculty lounges.

Implementation Actions

- At minimum, the school district should comply with the fountain to student ratio as required by the State's building code.[1] However, the size of the school campus, the drinking water needs of the students, and district resources can also determine the number of water delivery options available at individual school sites.
- The school district can provide students with drinking vessels (e.g., recyclable, compostable, or reusable cups) next to the tap water dispensers, water bottle fillers, point-of-use water machines, or other water delivery options for students to serve themselves water.
- School staff will ensure that the refillable water dispensers are filled when empty during each meal period, at a minimum, and, ideally, throughout the school day.
- If plain bottled water is sold, the school district should ensure that bottled water sold in vending machines, a la carte lines, and student stores costs no more than competitive beverages, such as sports drinks, fruit-flavored drinks, and flavored bottled water with added sweeteners.

(1) For example, the California State building code requires schools to have one water outlet for every 150 individuals (see: 2010 California Plumbing Code Table 4-1: https://law.resource.org/pub/us/code/bsc.ca.gov/prince/gov.ca.bsc.2010.05.pdf).

2) Water Delivery Options

Recommended Language
The school district shall consider the installation of appealing water delivery options in the event that there is construction of a new school campus, renovation of a school building, or substantial repairs or upgrades of existing drinking fountains.

Implementation Actions

- Consider non-traditional fountain water delivery options that include, but are not limited to, tap water dispensers, point of use water machine, bottle filling stations, and fountains with bottle fillers. Survey students to learn what kind of water delivery option they prefer.
- Ensure the water delivery option dispenses clear, chilled, good-tasting drinking water that is free of odors.

3) Promotion and Marketing

Recommended Language
The school district will actively promote water consumption throughout the school day and at before- and after-school activities. Promotional activities might include announcements, posters and signage, contests, and multimedia campaigns (e.g., videos, songs, social media, etc.).

Implementation Actions

- The school district will encourage all school administrators, teachers, and building staff to be role models by drinking tap water around students.
- The school district will encourage drinking water, preferably tap water, at all school or school-sponsored events, meetings, or parties (e.g., birthday or holiday celebrations in the classroom).

A poster used by Redwood City School District to promote water consumption

4) Education

Recommended Language
[Designated School Official] will review formal curriculum to ensure information relating to drinking water is consistent and up-to-date. As appropriate, teachers will include information about drinking water in their lesson plans. Lessons will incorporate information about the health and learning-related benefits of drinking adequate levels of water regularly throughout the school day.

Implementation Actions

- Water topics can be integrated within the comprehensive health education curriculum and taught at every grade level according to the standards of the [State] Department of Education.
- Schools can link water education activities with existing coordinated school health programs or other comparable comprehensive school health promotion frameworks.

5) Safety and Quality

Recommended Language

The school district shall conduct periodic water quality tests of all drinking water outlets in each district facility in accordance with Environmental Protection Agency guidelines. The school district shall maintain and sanitize all water delivery options on a regularly scheduled basis (e.g., as part of facility maintenance schedule).

Implementation Actions

- The school district should make the test results available in an easily accessible format (e.g., post on district website, include in school newsletter), and deliver letters with test results to students and parents.
- The school district should take the necessary remediation measures to keep the water safe to drink (e.g., water is flushed through at the start of week and after holiday closure, filters are installed when necessary) and communicate such action with affected students and parents.
- The school district should service all water delivery options and replace units in accordance with manufacturer guidance.
- For water delivery options with a filter, the filter will be changed in accordance with the manufacturer guidelines.
- Pitchers, refillable water dispensers, and drip trays should be cleaned weekly (or more frequently as needed).[1]

6) Reusable Water Bottles

Recommended Language

Students will be permitted to carry reusable water bottles while at school for the specific use of drinking water only. Each student must have his or her own water bottle that is clearly labeled with his/her name. Students are allowed to take their reusable water bottles into the classroom except into the computer or science labs. Misuse of bottles will be subject to disciplinary action.

Implementation Actions

- Students can be responsible for providing their own reusable water bottles in accordance with the school district policy. At minimum, the reusable water bottle should be made of good quality, BPA-free plastic and fitted with a secure cap.
- The school district may also require that the reusable water bottles be clear plastic (transparent) to minimize the risk of students putting drinks other than water in their bottles.
- The school district can include reusable water bottles in the uniform list or school supplies list.
- The school district should encourage individual school sites to make reusable water bottles available to the school community through fundraisers or for purchase in the food service area and student stores.
- The school district should establish and communicate health and safety guidelines for reusable water bottles to the school community. Students and parents can be provided instructions for proper cleaning of bottles.

(1) See also: Harvard Prevention Research Center (Forthcoming). *Keep It Flowing: A Practical Guide to School Drinking Fountain Planning, Maintenance, and Repair.*

7) Monitoring and Evaluation

Recommended Language

Through implementation and enforcement of this policy, the school district will create an environment that supports opportunities for improving water access and water consumption. To ensure continuing progress, the school district or individual school sites will evaluate implementation efforts and their impact on students and staff.

Implementation Actions

- The school district should designate a school official to ensure that individual school sites comply with this drinking water policy.
- Policy language should be assessed each year and revised as needed.
- The school district should regularly assess whether schools are meeting students water intake needs.

EVALUATE YOUR WATER PROGRAM: OVERVIEW

Needs Assessment		
Variable	**Methods**	**Resources***
Current Water Access	Audit or inventory of current water sources, including how appealing the water sources are	• **Harvard Preventiong Research Center:** ***Water Audit Tool*** • **University of Washington:** ***Water Inventory***
Desired Water Access	Surveys, interviews, or focus groups with students or staff regarding their preferences for new water sources	• Surveys: **Sage Publications:** ***Research Methods in Education*** (see Chapter 8, Survey Research) • Surveys: **University of Wisconsin-Madison Office of Quality Improvement:** ***Survey Fundamentals: A Guide to Designing and Implementing Surveys*** • Interviews: **University of California Los Angeles Health Policy Research:** ***Performing a Community-Based Assessment*** (See see Appendix Section 4: "Key Informant Interviews") • Interviews: **University of Florida IFAS Extension:** ***Conducting an In-depth Interview*** • Focus Groups: **University of Wisconsin-Madison Office of Quality Improvement:** ***Focus Groups: A Guide to Learning The Needs of Those We Serve***

Process Evaluation			
Variable	**Methods**	**Resources[1]**	**Considerations**
Water Access	Audit or inventory of water sources	• **Harvard Preventiong Research Center:** ***Water Audit Tool*** • **University of Washington:** ***Water Inventory***	• Also consider any current or future plans district has to renovate existing drinking water sources or add new drinking water sources.
Wellness Policy	Review of wellness policy	• **Yale Rudd Center for Obesity and Food Policy:** ***School Wellness Policy Evaluation Tool*** (see p. 18)	
Cost to Implement Program	Review/tracking of costs using documents such as water bill, electric bill, receipts	• **Cradock et. al.:** ***Getting Back on Tap: The Policy Context and Cost of Ensuring Access to Low-Cost Drinking Water in Massachusetts Schools***	• Consider both upfront costs (e.g., purchase of new water sources) and annual, ongoing costs (e.g., electricity and water bill).
	Surveys of staff to determine how much time/labor was required to implement the program.	• Surveys: see above	• Staff you may want to survey include: cafeteria staff, facilties staff, wellness coordinator. Staff could also keep a log or diary recording time spent implementing the program.
Experience of Implementing the Program	Surveys, interviews, and focus groups of staff involved in implementing the program	• Surveys: see above • Interviews: see above • Focus Groups: see above	• You might ask questions like, "What challenges were experienced?", "What worked well about the program?" or "What did you like or dislike about the program?"

(1) Refer to the ***Resources*** supplementary material for a detailed list of resources, including weblinks.

Outcome Evaluation			
Variable	**Methods**	**Resources***	**Considerations**
Students' Water Consumption	Observation of how many students take water from a water source	• Supplemental Material ***Observation Tool: Examine the Number of Students Who Access a Water Source***	• Observation of water access will help you determine how many students used the water source, but not how much water was consumed.
	Plate waste methodology (measure or weigh amount of water students take from water source, and amount of water leftover when they finish drinking)	• **Jacko, et al.:** ***The Use of the Plate Waste Method to Measure Food Intake in Children*** • **Smarter Lunchrooms Movement**: ***Tray Waste Lab and Lesson Plan***	• Using plate waste methodology is time- and labor-intensive, but will more accurately estimate the amount of water students consume.
	Measure volume of water taken from water source of interest using flowmeters (for water fountains/bottle fillers or point of use machines) or manual estimation for tap water dispensers	Flowmeters: • www.flowmeters.com • www.badgermeter.com • www.watermeters.com • www.tdsmeter.com/products	• Flowmeters and manual estimation will tell you how much water students took from the water source, but will not perfectly reflect the amount students consumed, as students may not drink all water they take from the source.
	Surveys of students regarding their water consumption	• Surveys (general): see above • University of California Los Angeles Health Policy Research: "California Health Interview Survey," Adolescent Version 15.3 (2011-2012) (see p. 14-18)	• Self-reported beverage consumption is not highly accurate. • Administering surveys can be time- and labor-intensive.
Students' Sugar-Sweetened Beverage Consumption	Review of beverage sales (from vending machines, school store, or cafeteria line)	• Health Care Without Harm: "Sugar Sweetened Beverage Purchasing Tracking Tool"	• Need to work with school administrators, cafeteria staff, and food service companies to obtain sales data records
	Surveys of students regarding their sugary beverage consumption	• Surveys: see above • **University of California Los Angeles Health Policy Research:** ***California Health Interview Survey, Adolescent Version 15.3 (2011-2012)*** (see p. 14-18)	• Self-reported beverage consumption is not highly accurate. • Administering surveys can be time- and labor-intensive.
Knowledge, Attitudes, and Intentions	Surveys, interviews, and focus groups of students and/or staff	• Surveys: see above • Interviews: see above • Focus groups: see above	

(1) Refer to the ***Resources*** supplementary material for a detailed list of resources, including weblinks.

OBSERVATION TOOL: EXAMINE THE NUMBER OF STUDENTS WHO ACCESS A WATER SOURCE

Instructions:

- Tally the number of students who drink water from the observed water source.
- You can observe any time period you wish, as long as you are consistent each time you conduct the observations. For example, if you observe a lunch period at the beginning of your water program, you will want to always observe the same lunch period. That way, you can compare results across time.
- For more accurate results, you can repeat this observation two days in a row and average your results from the two days.
- You can repeat this observation at all water sources you are interested in, or at different times during the day.
- Make note of anything happening at school that might affect how many students drink water, such as an event (barbeque, party, celebration, etc.) or activity (students ran the mile in physical education class, students taking exams, many students on a field trip, etc.).

General Information	
School Name:	Day, Date:
Data Collector Name:	Water Source Observed: *Describe type of source and its location*
Observation Start Time:	Observation End Time:
Observations	
Tally of Students Who Drank Water from Observed Water Source:	
Attendance (in school / class) for today[1]:	
% of Students Who Drank from This Water Source: *Divide the total number of students who drank from the observed water source by the attendance for today. Multiply this answer by 100%. This will give you the percentage of students who drank from this water source today. Your equation will look like this: (number of students / attendance) * 100%*	
Notes:	

(1) You should obtain the total attendance based on the time and location you observe. For example, if you observe a cafeteria water fountain for all lunch periods and all students access the cafeteria during lunchtime, then you would want to calculate attendance at the entire school for the day you observed. If you observed 3rd period gym class, you should find out the daily attendance of 3rd period gym class on the day you observed.

RESOURCES

ACTION 1 - BUILD YOUR TEAM AND GATHER SUPPORT

Gather Support from Key Stakeholders

Public Health Advocacy Institute: ***Mapping School Food: A Policy Guide***
http://www.phaionline.org/wp-content/uploads/2007/11/mappingschoolfood.pdf

Form Your Team

State of Washington Office of Superintendent of Public Instruction: ***School Wellness Policy Best Practices for Development, Implementation and Evaluation*** (see p. 24-25)
http://www.k12.wa.us/ChildNutrition/SchoolWellness/SchoolWellnessManual.pdf

ACTION 2 - SERVE SAFE AND APPEALING WATER

Decide Where to Serve Water

Harvard School of Public Health: ***Water Audit Tool***
http://www.hsph.harvard.edu/nopren/water-access-working-group/
http://www.hsph.harvard.edu/nopren/files/2013/10/Water-audit-tool-_NOPREN.pdf

University of Washington: ***Water Inventory Tool***
http://courses.washington.edu/nutr531/Tapwateraccess/2013%20Water%20Project_Final%20Report%203.18.pdf

Harvard Prevention Research Center: ***Keep It Flowing: A Practical Guide to School Drinking Fountain Planning, Maintenance, and Repair.***
Forthcoming; for more information visit the Nutrition and Obesity Policy Research and Evaluation Network Water Access Working Group website: http://www.hsph.harvard.edu/nopren/water-access-working-group/

Test Water Quality and Remediate Water Quality Problems

Environmental Protection Agency (EPA)
http://water.epa.gov

Drinking Water Best Management Practices for Schools and Child Care Facilities Served by Municipal Water Systems (see p. 7-12)
http://water.epa.gov/infrastructure/drinkingwater/schools/upload/epa816b13002.pdf

Drinking Water Best Management Practices for Schools and Child Care Facilities Served by Their Own Drinking Water Source (see p. 11-17)
http://water.epa.gov/infrastructure/drinkingwater/schools/upload/epa816b13001.pdf

3Ts for Reducing Lead in Drinking Water in Schools (see p. 17-36, p. 55-59, p. 65-69)
http://www.epa.gov/ogwdw/schools/pdfs/lead/toolkit_leadschools_guide_3ts_leadschools.pdf

California Department of Public Health Drinking Water Program
http://www.cdph.ca.gov/programs/pages/dwp.aspx

District Offices Contact Information
http://www.cdph.ca.gov/programs/Documents/DDWEM/OriginalDistrictMapCDPH.pdf

Certified Water Treatment Devices
http://www.cdph.ca.gov/certlic/device/Pages/watertreatmentdevices.aspx

Community Water Center: ***Resources for Communities***
http://communitywatercenter.org/resources/for-communities/

RESOURCES (CONTINUED)

Test Water Quality and Remediate Water Quality Problems (Continued)

Los Angeles Unified School District Office of Environmental Health and Safety
http://www.lausd-oehs.org/Lead_DrinkingWater.asp

Labor Occupational Health Program at the University of California, Berkeley: ***Lead-Safe Schools Guide*** (see p. 48-52)
http://www.lohp.org/docs/pubs/lead/lssguide.pdf

ACTION 3 - ENHANCE AND SUSTAIN YOUR WATER PROGRAM

Encourage Water Consumption Through Promotion and Education

Alameda County Public Health Department: ***Tap Into Health Water Promotion Toolkit***
http://www.healthylivingforlife.org/tools.php

San Francisco Public Utilities Commission: ***Our Water Curriculum***
http://sfwater.org/index.aspx?page=490
http://sfwater.org/education

Bay Area Nutrition and Physical Activity Collaborative: ***Sugar Savvy Students***
Kindergarten to 5th grade: http://www.banpac.org/sugar_savvy_curr/ss_students_K_5_rev052208_10_21_08.pdf
6th to 8th grade: http://www.banpac.org/sugar_savvy_curr/ss_students_6_8_rev052208_10_21_08.pdf

Water.org Lesson Plans
http://water.org/news/lesson-plans/

Environmental Protection Agency: ***Kids' Stuff***
http://water.epa.gov/learn/kids/drinkingwater/

Food and Water Watch: ***Take Back the Tap Curriculum***
http://ci.santa-rosa.ca.us/doclib/Documents/Take back the TAP.pdf

"W-A-T-E-R" animinated children's video
http://www.youtube.com/watch?v=yM6hn-Z1UWw

"Drinkin' that Water" music video
http://www.youtube.com/watch?v=FLqbrCnPJtE&feature=youtu.be

"The Water Cycle Rap Song" music video
http://www.youtube.com/watch?v=yNW1evt93e4

Develop and Implement Water-Related Language for School Wellness Policies

Yale Rudd Center for Obesity for Food Policy: ***School Wellness Policy Evaluation Tool*** (see p. 18)
http://www.yaleruddcenter.org/resources/upload/docs/what/communities/SchoolWellnessPolicyEvaluationTool.pdf

National Policy & Legal Analysis Network to Prevent Childhood Obesity (NPLAN): ***Model Wellness Policy Language for Water Access in Schools***
http://changelabsolutions.org/publications/wellness-policy-water

ACTION 4 - MONITOR PROGRESS AND MAKE IMPROVEMENTS

Form Your Evaluation Team

Community Tool Box: ***Evaluating Community Programs and Initiatives*** (see especially Chapter 36: Section 4, "Choosing Evaluators")
http://ctb.ku.edu/en/table-of-contents/evaluate/evaluation/choose-evaluators/main

RESOURCES (CONTINUED)

Conduct Your Evaluation: Process Evaluation

Harvard School of Public Health: *Water Audit Tool*
http://www.hsph.harvard.edu/nopren/files/2013/10/Water-audit-tool-_NOPREN.pdf

University of Washington: *Water Inventory Tool*
http://courses.washington.edu/nutr531/Tapwateraccess/2013%20Water%20Project_Final%20Report%203.18.pdf

Yale Rudd Center for Obesity for Food Policy: *School Wellness Policy Evaluation Tool* (see p. 18)
http://www.yaleruddcenter.org/resources/upload/docs/what/communities/SchoolWellnessPolicyEvaluationTool.pdf

Craddock et al., American Journal of Preventive Medicine (2012): *Getting Back on Tap: The Policy Context and Cost of Ensuring Access to Low-Cost Drinking Water in Massachusetts Schools.*
http://www.hsph.harvard.edu/nopren/files/2013/07/Cradock_Back-on-Tap_AJPM.pdf

Conduct Your Evaluation: Outcome Evaluation

Focus Groups

University of Wisconsin-Madison Office of Quality Improvement: *Focus Groups: A Guide to Learning The Needs of Those We Serve*
http://oqi.wisc.edu/resourcelibrary/uploads/resources/Focus_Group_Guide.pdf

Surveys

Sage Publications: *Research Methods in Education* (see Chapter 8: Survey Research)
http://www.sagepub.com/upm-data/43589_8.pdf

University of Wisconsin-Madison Office of Quality Improvement: *Survey Fundamentals: A Guide to Designing and Implementing Surveys*
http://oqi.wisc.edu/resourcelibrary/uploads/resources/Survey_Guide.pdf

Interviews

University of California Los Angeles Center for Health Policy Research: *Performing a Community-Based Assessment* (see see Appendix Section 4: "Key Informant Interviews")
http://healthpolicy.ucla.edu/programs/health-data/trainings/Documents/tw_cba23.pdf

University of Florida IFAS Extension: ***Conducting an In-Depth Interview***
http://edis.ifas.ufl.edu/fy393

Water and Sugar Sweetened Beverage Consumption

University of California Los Angeles Health Policy Research: *California Health Interview Survey Adolescent Version 15.3 (2011-2012)* (see p. 14-18)
http://healthpolicy.ucla.edu/chis/design/Documents/CHIS2011teenquestionnaire.pdf

Health Care Without Harm: *Sugar Sweetened Beverage Purchasing Tracking Tool*
http://www.healthyfoodinhealthcare.org/healthybeverage.implementation.php

Jacko et al. (2007) in the Journal of Extension: *The Use of the Plate Waste Method to Measure Food Intake in Children*
http://www.joe.org/joe/2007december/rb7.php

Smarter Lunchrooms Movement: *Tray Waste Lab and Lesson Plan*
http://smarterlunchrooms.org/resource/tray-waste-lab-lesson-plan

Conduct Your Evaluation: Outcome Evaluation (Continued)

Flowmeters

www.watermeters.com
http://www.badgermeter.com/Water-Utility/Meters.htm
www.flowmeters.com
http://www.tdsmeter.com/products/fm2.html

Report Results and Make Improvements

Community Tool Box: ***Evaluating Community Programs and Initiatives***
http://ctb.ku.edu/en/table-of-contents/evaluate/evaluation-to-understand-and-improve

Smarter Lunchrooms Movement: ***Share Your Success: Publicizing Your Smarter Lunchrooms Makeover***
http://smarterlunchrooms.org/sites/default/files/share_your_success.pdf

ACTION 5 - FUND YOUR WATER PROGRAM

Identify Potential Funders

County Health Rankings and Roadmaps: ***Guide to Funding Your Community Health Initiative*** (see p. 3-7)
http://www.countyhealthrankings.org/roadmaps/funding-guide

Patel, AI & Hampton, KE (2011). ***Encouraging Consumption of Water in School and Child Care Settings: Access, Challenges, and Strategies for Improvement.*** American Journal of Public Health, 101(8): 1370-9. (See especially p. 1375).
http://www.ncbi.nlm.nih.gov/pmc/articles/PMC3134515/

Environmental Protection Agency: Water Quality Funding Sources for Schools
http://www.epa.gov/ogwdw/schools/pdfs/lead/funding_schools_fundingsources.pdf

United States Department of Agriculture: ***Local Wellness Policy Resources: Grants/Funding Opportunities***
http://healthymeals.nal.usda.gov/local-wellness-policy-resources/school-nutrition-environment-and-wellness-resources/grantsfunding

Approach Funders for Short-Term Funding

Community Tool Box: ***Generating, Managing, and Sustaining Financial Resources*** (see Chapter 42: Getting Grants and Financial Resources)
http://ctb.ku.edu/en/generating-managing-and-sustaining-financial-resources

Foundation Center: ***GrantSpace***
http://grantspace.org/

Michigan State University Libraries: ***Non-Profit Fundraising Web Resources***
http://staff.lib.msu.edu/harris23/grants/4fcelec.htm

Secure Long-Term Funding

Community Tool Box: ***Social Marketing and Institutionalization of the Initiative*** (see Chapter 46: Planning for Long-Term Institutionalization)
http://ctb.ku.edu/en/table-of-contents/sustain/long-term-institutionalization