

Increasing Access to Drinking Water in Schools

Research indicates that healthier children perform better academically and that overweight and obesity have a negative impact on health, learning and self-esteem.¹ Districts have made significant strides—through educational programs, school meals and other food sales—in promoting student wellness and encouraging students' positive lifelong dietary habits.

There is growing support and evidence for the positive role that water consumption plays in student health and obesity prevention. Adequate water consumption may improve cognitive function in children and adolescents.²⁻⁴ It is especially advantageous when consumption of water substitutes for consumption of sodas and other sweetened beverages, which are linked to increased risk for obesity and tooth decay.⁵⁻⁶

This policy brief examines state and federal legal requirements for providing drinking water to students at school, the extent to which districts are complying with those legal requirements, and strategies for effectively and efficiently increasing students' access to and consumption of drinking water. For further information, consult the resources listed at the end of this brief.

Legal requirements

Education Code 38086, added by SB 1413 (2010), requires all California public, non-charter schools to make

free drinking water available during school mealtimes in the food service area. A district may be exempted from this requirement only if its governing board adopts a resolution, publicly noticed on at least two consecutive meeting agendas, demonstrating that the district is unable to comply due to fiscal constraints or health or safety concerns.

Districts that operate preschool or early care programs are expected to comply with Health and Safety Code 1596.808, added by AB 2084 (2010), which requires licensed child care facilities to make clean, safe drinking water readily available and accessible throughout the day, with the goal of supporting development of appropriate beverage preferences as early as possible.

In addition, the federal Child Nutrition and WIC Reauthorization Act of 2004 (42 USC 1758), amended by the Healthy, Hunger-Free Kids Act of 2010 (P.L. 111-296), requires all schools participating in the National School Lunch Program to make free, fresh drinking water available for consumption during meal service in places where meals are served. There is no exemption for any school participating in the National School Lunch Program. According to the U.S. Department of Agriculture (USDA), this requirement is also applicable to school sites that provide lunches through the Seamless Summer Meal Program and the Afterschool Snack Program (USDA Policy Memo 28-2011). It does not

- 1 California School Boards Association. (2012). *Student Wellness: A Healthy Food and Physical Activity Policy Resource Guide*. West Sacramento: California School Boards Association.
- 2 D'Anci, K.E., Constant, F., & Rosenberg, I.H. (2006). Hydration and cognitive function in children. *Nutrition Reviews*, 64(10), 457-464.
- 3 Popkin, B.M., D'Anci, K.E., & Rosenberg, I.H. (2010). Water, hydration, and health. *Nutrition Reviews*, 68(8), 439-458.
- 4 Kempton, M.J., Ettinger, U., Foster, R., Williams, S.C.R., Calvart, G.A., Hampshire, A., Zelaya, F.O., O'Gorman, R.L., McMorris, T., Owen, A.M., & Smith, M.S. (2011). Dehydration affects brain structure and function in healthy adolescents. *Human Brain Mapping*, 32, 71-79.
- 5 Babey, S.H., Jones, M., Yu, H., & Goldstein, H. (2009, September). *Bubbling Over: Soda Consumption and its Link to Obesity in California*. Health Policy Research Brief. Los Angeles: UCLA Center for Health Policy Research & the California Center for Public Health. Available at www.publichealthadvocacy.org/PDFs/Bubbling_PolicyBrief.pdf
- 6 California School Boards Association & Center for Oral Health. (2010). *Integrating Oral Health into School Health Programs and Policies*. West Sacramento: California School Boards Association.

apply to schools participating only in the School Breakfast Program, although the USDA encourages schools to provide water during all meal service.

Some food services staff have mistakenly believed that federal regulations for the National School Lunch Program require that only milk and juice may be provided during mealtimes.⁷ The new federal law makes it clear that drinking water must also be made available during lunchtime. However, drinking water is not part of the reimbursable meal and must not be served in lieu of fluid milk. Still, the reasonable costs associated with providing drinking water (e.g., pitchers, paper cups) are allowable expenses that can be charged to the district's nonprofit food services account.⁸

In April 2011, the USDA issued guidance to states and school food authorities notifying them of the water requirement and setting September 2012 as the implementation date. Then, in February 2013, in conjunction with proposed standards for all foods sold in schools, the USDA issued a proposed rule to codify the provision of federal law requiring schools to make potable water available to students at no charge in the place where lunches and after-school snacks are served. This proposed rule adds no new obligations for districts beyond those described in the 2011 guidance.

For further information about federal requirements, see the Questions and Answers in USDA Policy Memo 28-2011, available at www.fns.usda.gov/cnd/governance/Policy-Memos/2011/SP28-2011_osr.pdf.

Extent of compliance

In a survey conducted in California in 2009, prior to the effective date of the state and federal law, 40 percent of the districts sampled reported they did not provide access to free drinking water during school meals at any cafeteria in their district.⁹ Even when water was available, it was sometimes not consumed by students for the following reasons: (1) the water in the fountains or dispensers was not cold, (2) schools did not have enough drinking fountains for the number of students, and (3) drinking fountains or dispensers were poorly maintained.

A more recent survey of 240 California schools found that all of the schools offered free drinking water in at least one location on campus, but one in four schools did not provide such access where meals are served.¹⁰ However, the state law took effect July 1, 2011, and the study took place between May and November 2011. As noted by Sen. Mark

Leno, author of SB 1413, full implementation of the law is likely to take time.

Strategies for providing drinking water

Ensuring schools' compliance with the law is a district responsibility, but selection of strategies should be accomplished with the support of school administrators and staff who will be responsible for implementing and promoting them. In determining ways to implement these requirements and encourage consumption of water, the superintendent or designee may want to seek input from students, parents, school administrators, the child nutrition director and other food services staff, facilities planning and maintenance staff, school health councils and local school wellness committees, medical and dental health professionals, local water districts, community organizations and other interested persons.

Factors that should be considered include the safety and appeal of the water source, the current infrastructure in schools, the costs associated with various options, potential sources of funding and environmental impact.

It is recommended that schools offer water in areas that encourage consumption by all students, not just those participating in the school meal program or child care program. In addition, it is recommended that districts develop strategies that address the provision of water in before-school and after-school programs, summer programs, athletic programs and other school-sponsored activities.

Options for providing access to water include:

- **Refrigerated hydration stations.** Because students express a preference for chilled water, they may increase their intake of water if they have access to water stations that dispense chilled, fresh water (filtered when needed for safety or taste) that can fill a cup or reusable water bottle. In addition to placing water stations in cafeterias, some schools place them near school entrances, in hallways or on playgrounds where students are most likely to be thirsty.

Providing reusable bottles may be more cost-effective in the long run and more supportive of the district's green school operations. However, districts should keep in mind that students (particularly young children) may be prone to losing the reusable bottles or

7 Chandran, K. (2009). *Increasing Water Consumption in Schools: Challenges, Promising Practices, and Next Steps*. Oakland: California Food Policy Advocates.
8 For more information on what the USDA considers an allowable cost, see the USDA policy memo SP 28-2011 "Child Nutrition Reauthorization 2010: Water Availability During National School Lunch Program Meal Services" at www.fns.usda.gov/cnd/governance/Policy-Memos/2011/SP28-2011_osr.pdf.
9 California Project LEAN. (2009, September 14). Presentation. Oakland, CA.
10 Braff-Guajardo, E., Hecht, K., Hampton, K.E., Brindis, C.D., Grumbach, J.M., & Patel, A.I. (2012). *Policy brief: Fulfilling the Promise of Free Water in K-12 Schools*. Retrieved from <http://waterinschools.org/pdfs/FulfillingThePromiseOfFreeWater2012.pdf>

may not carry backpacks. Some schools require that students keep the bottles at school rather than take them home. However, when reusable bottles are selected as an option, schools still need to ensure that there is another option available to students who forget or lose their bottles.

One district's experience

"The water stations have been a joint effort by the district, students and community organizations. They allow us to comply with the law while also thinking about the impact of single-use plastic bottles on the environment. In addition to the district contributions, some funding has come from student initiatives at the secondary level and local community and environmental foundations who see this as an important investment. Having filtered water stations has been well-received by the students and staff at the schools. Although we do not have filtered water stations at each of our campuses yet, the Santa Barbara Unified School District is working towards this goal."

—Monique Limon, board president,
Santa Barbara Unified School District

- **Containers of tap water.** Schools may place large, insulated containers (such as the three- to 10-gallon water jugs often used at sporting events) of chilled tap water in the cafeteria during mealtimes. The containers may be filled with tap water and placed in a walk-in refrigerator overnight. This is an inexpensive option and requires minimal staff time.
- **Bottled water.** Vending machines at schools often sell bottled water but, under state and federal law, students cannot be required to pay for water during mealtimes. Providing free bottled water can be a costly option unless the district can secure donations of bottled water or can negotiate a lower price.
- **Drinking fountains.** The district should assess whether the number and location of drinking fountains available at each school are sufficient and, as needed, install additional drinking fountains or add other sources of water. In order to meet state and federal requirements to provide access to water during mealtimes, drinking fountains need to be in or immediately adjacent to the cafeteria, and students' access to the fountain cannot be restricted.

State plumbing code requires a minimum of one drinking fountain per 150 people in a K-12 school, with at least one drinking fountain per occupied floor. (For further specifications, see www.cde.ca.gov/lis/fa/sf/toiletrequire.asp.) However, these are minimum plumbing requirements only, and it is the opinion of

California Food Policy Advocates that this standard is likely too low if the goal is to encourage water consumption among students and staff. Districts are responsible to ensure that drinking fountains adequately serve students and staff based on the layout of the facility and cafeteria occupancy.

Districts choosing this option must ensure that all drinking fountains are operating properly, have sufficient water pressure, are cleaned daily and are accessible in areas where meals are served. Furthermore, to help keep drinking fountains sanitary, young children should be taught to drink from a fountain without putting their mouths to the spout.

Drinking fountains alone are unlikely to provide children with an adequate source of water for consumption during meals. Students are more likely to take a quick sip than a full serving of water. Even if students have cups or bottles, filling them is likely a slow process at most drinking fountains. Thus, the use of drinking fountains is more likely a strategy that will be used in conjunction with other strategies to provide drinking water during mealtimes.

For a comparison of water dispenser options that includes the estimated cost, source and factors to consider, see the California Food Policy Advocates' handout "Water Dispensers for School Cafeterias—Potential Options" at <http://cfpa.net/childnutrition/waterinschools/updated-water-dispenser-options-handout> or www.waterinschools.org.

Tap water vs. bottled water

In determining whether to provide tap water or bottled water to students during mealtimes, districts need to compare safety, availability, costs and environmental impact.

Tap water is generally more regulated and tested than bottled water. It also is more easily available, less expensive and, depending on the method selected to serve the water, may result in less waste. In many communities, tap water offers an extra benefit of containing fluoride, which is known to help prevent tooth decay.

However, in some communities, the quality and safety of tap water supplies have been questioned. Lead, arsenic, nitrates, bacteria and other contaminants can be a serious concern. If basic filtration or pipe flushing is too costly or not feasible in these communities, districts may have to consider alternatives, such as bottled water. They may also advocate with appropriate governmental agencies, as needed, to annually test the water quality at the tap of every school's drinking water and to step up efforts to improve water quality.

Studies have shown that, even when water is available, students may not consume adequate quantities. Thus, districts might also develop strategies to encourage water consumption. Ideas for marketing water consumption include developing posters or fliers explaining the importance of water consumption; addressing the benefits of water consumption in nutrition, health, science and/or physical education classes; and encouraging parent support for district efforts by sending information home to parents or posting information on the district or school website or social media. Perhaps more important, districts should regularly assess the quality, flavor and appearance of the water and make improvements as needed.

Board considerations

The governing board has a powerful leadership role in promoting student wellness. Working closely with the superintendent, the board can address the provision of drinking water at schools in the following ways:

- **Establish a district vision that promotes student wellness.** In the district's vision statement and goals, the board can emphasize its priority for supporting student health and identify specific desired outcomes which may include the provision and promotion of drinking water. Strategies related to the provision of drinking water should be part of a comprehensive, coordinated approach to address student health and should be aligned with nutrition standards for school meal programs, banning of sodas and other sweetened beverages on school campuses, nutrition education and other goals identified in the district's student wellness policy. Development of these goals and strategies provides an opportunity to call attention to research linking nutrition and student learning; build the buy-in of staff, parents, students and the community; and ensure consistent application across the district's different facilities and school sites.
- **Determine the feasibility of providing drinking water during mealtimes.** If fiscal constraints or health and safety concerns make it infeasible to provide drinking water during mealtimes, the board may adopt a resolution to exempt district schools from the state requirement, provided that the statutory "opt out" criteria are met and the specified process is followed (see section "Legal Requirements" above). Opting out of the water requirement should be considered a rare exception. If the board does adopt such a resolution, it should also adopt a correction plan to address the concerns that limit the district's participation. If district schools provide lunches through the National School Lunch Program, however, the exemption is not an option.
- **Adopt policy.** The board sets expectations and provides direction through the adoption of policies. Administrative regulations developed by the superintendent should detail how the district will implement policies and programs. In CSBA's policy services, the legal requirements for the provision of drinking water are reflected in sample administrative regulation AR 3550 - Food Service/Child Nutrition Program. In addition, sample board policy BP 5030 - Student Wellness addresses goals for nutrition promotion and education and nutritional guidelines for all foods and beverages available at school, in accordance with the requirements for student wellness policies contained in the federal Child Nutrition and WIC Reauthorization Act of 2004, as amended by the Healthy, Hunger-Free Kids Act of 2010. The board can review the district's policy manual for other opportunities to promote good nutrition and to ensure alignment of district efforts.
- **Allocate adequate resources.** It is the responsibility of the board to adopt a budget that reflects the priorities set forth in its vision and goals. The district also might seek funding from foundations, government grants, business partnerships or parent-teacher organizations or negotiate with businesses and industries that manufacture or sell reusable water bottles and water filters to receive subsidized or donated products.

In many districts, increasing access to drinking water will require relatively minor expenses, such as pitchers and paper cups. Other districts may incur higher initial expenses to modernize facilities or improve infrastructure (e.g., filters, pipes, coolers) necessary to provide hydration stations or water jets, but their ongoing costs may be smaller. Other resource considerations may include staff time to wash or sanitize water dispensers or reusable cups, or other new maintenance obligations. To the extent that drinking free water displaces the purchase of beverages from vending machines or the student store, there may be concerns about reduced revenues for the district or student groups.

If start-up funding and resources can be found, many efforts to provide drinking water should become sustainable in the long run.
- **Adopt curriculum that includes the benefits of drinking water.** To support the district's efforts to encourage students' consumption of water, the district might look for places in the curriculum to provide instruction about the benefits of drinking water. For example, the state's content standards for health education (2008) include nutrition standards at grades 2 and 4 related to understanding and explaining the benefits of drinking water. State content standards for physical education (2005) include standards at the elementary grades for understanding and explaining

the importance of drinking water before, during and after physical activity. The board may adopt curricula that include these concepts at additional grade levels or in additional subjects such as science.

- **Engage in community leadership to encourage collaboration.** Because children's health is a community concern, not just a district concern, the board should consider potential partners at the state, regional and local levels that might provide expertise and resources to assist in the district's efforts to provide drinking water. Potential partners might include a municipal water agency, local health department, health professionals and advocates, non-profit community organizations and/or parent-teacher organizations.
- **Monitor program implementation and effectiveness.** The board should work with the superintendent to establish indicators that will be used to measure the district's progress toward achieving its goals for student wellness, including the status and effectiveness of efforts to provide drinking water at schools. Indicators might include the extent to which schools are in compliance with law and district policy, levels of student participation, feedback from students and staff, and financial impacts. Assessment of these efforts may be included as part of the district's periodic evaluation of its student wellness policy conducted in accordance with the federal Healthy, Hunger-Free Kids Act of 2010. For further information, see CSBA's *Monitoring for Success: A Guide for Assessing and Strengthening Student Wellness Policies*, available on CSBA's website.

Resources

California School Boards Association

www.csba.org

Nutrition Standards for Schools: Implications for Student Wellness

Student Wellness: A Healthy Food and Physical Activity Policy Resource Guide

Monitoring for Success: A Guide for Assessing and Strengthening Student Wellness Policies

Building Healthy Communities: A School Leader's Guide to Collaboration and Community Engagement

California Department of Education

www.cde.ca.gov/ls/nu/he/water.asp

California Department of Public Health

www.cdph.ca.gov

California Food Policy Advocates

<http://cfpa.net/water-in-schools>

Improving Water Consumption in Schools: Challenges, Promising Practices, and Next Steps

Also see CFPA's Water in Schools project at www.waterinschools.org for case studies and other resources, including:

Water Dispensers for School Cafeterias—Potential Options

Encouraging Consumption of Water in School and Child Care Settings: Access, Challenges, and Strategies for Improvement (Patel, A.I. & Hampton, K.E., American Journal of Health, August 2011)

Observations of Drinking Water Access in School Food Service Areas Before Implementation of Federal and State School Water Policy, California, 2011 (Patel, A.I., Chandran, K., Hampton, K.E., Hecht, K., Grumbach, J.M., Kimura, A.T., Braff-Guajardo, E., & Brindis, C.D., Preventing Chronic Disease, 2012, 9:110315)

Increasing the Availability and Consumption of Drinking Water in Middle Schools: A Pilot Study (Patel, A.I., Bogart, L.M., Elliott, M.N., Lamb, S., Uyeda, K.E., Hawes-Dawson, J., Klein, D.J., & Schuster, M.A., Preventing Chronic Disease, 2011, 8(3):A60)

California Project LEAN (Leaders Encouraging Activity and Nutrition)

www.californiaprojectlean.org

Centers for Disease Control and Prevention

www.cdc.gov/healthywater/drinking

For resources specifically related to water access in schools, see www.cdc.gov/healthyyouth/npao/wateraccess.htm.

National Policy & Legal Analysis Network (NPLAN)

www.nplan.org

Model Wellness Policy Language for Water Access in Schools

Northcoast Nutrition and Fitness Collaborative

www.northcoastnutrition.org

Water Woes: Recommendations for Creating Healthier School Environments

U.S. Department of Agriculture, Food and Nutrition Service

www.fns.usda.gov/cnd

Make Better Beverage Choices: 10 Tips to Get Started, available in *The School Day Just Got Healthier* toolkit

Policy Memo SP 28-2011, *Child Nutrition Reauthorization 2010: Water Availability During National School Lunch Program Meal Service*