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# ADDRESSING OBESITY IN NEBRASKA'S YOUTH: WATER CONSUMPTION IN SCHOOLS

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WITH ASSISTANCE FROM JORDAN RASMUSSEN | JANUARY 2020

## I. KEY FINDINGS

- Nebraska ranks in the top half of most obese states for high school students, and adults, and the challenges grow as the Nebraska population ages.
- The state of Nebraska is looking at a cost of nearly \$487 million attributable to its 2017 childhood obesity rate for future health care costs and diminished productivity. Without seriously addressing the obesity rate and accompanying costs, this amount is likely to increase annually and compound upon itself.
- Due to the time young people spend there, schools are a natural location for proactive, cost-effective interventions to reduce obesity. Policy options to do so include more access to no-cost drinking water, education, promotion of water as a substitute for sugary beverages, and inclusion of water fountains and/or water bottle filling stations in new school buildings.

## II. BENEFITS OF WATER AND WATER CONSUMPTION AMONG YOUTH

Water is a foundation of human life. Water plays numerous roles in allowing the human body to function. It regulates temperature, protects sensitive tissues, transports nutrients, and helps rid the body of waste.<sup>1,2</sup> Sufficient consumption of water has long-term health benefits,

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1 Jequier, E., and F. Constant. "Water as an essential nutrient: The physiological basis of hydration." *European Journal of Clinical Nutrition*, 2010, 64:115-123.

2 "Increasing Access to Safe Drinking Water in Schools and Communities: Policy Statement." American Heart Association, June 2015, [heart.org/-/media/files/about-us/policy-research/policy-positions/healthy-schools-and-childhood-obesity/increasing-access-to-safe-drinking-water-ucm\\_475974.pdf?1a=en&hash=020C152B5B78EA29F1D4FF526AFEB0D21DE27FC4](https://www.heart.org/-/media/files/about-us/policy-research/policy-positions/healthy-schools-and-childhood-obesity/increasing-access-to-safe-drinking-water-ucm_475974.pdf?1a=en&hash=020C152B5B78EA29F1D4FF526AFEB0D21DE27FC4). Accessed December 2019.

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including reduced dental decay and cavities.<sup>3,4</sup> Increasing consumption of water, particularly as a substitute for sugary drinks, leads to lower calorie intake, improved overall health, and a lower risk for obesity.<sup>5,6,7</sup>

Adequate water consumption also positively affects cognition.<sup>8</sup> The effects of adequate water consumption are particularly acute for children, as it has been demonstrated to improve children's classroom focus and academic performance.<sup>9,10</sup> It has also been shown that adolescents who drink less water tended to drink less milk, eat less fruits and vegetables, drink more sugar-sweetened beverages, eat more fast food, and get less physical activity, all contributing to less healthy lifestyles.<sup>11</sup>

While the accepted amount of adequate water consumption for children is a function of many

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3 Ibid.

4 Patel, A.I., and K.E. Hampton. "Encouraging Consumption of Water in School and Child Care Settings: Access, Challenges, and Strategies for Improvement." *American Journal of Public Health*, 2011, 101(8): 1370-1379.

5 Popkin, B.M., et al. "Water Hydration and Health." *Nutrition Reviews*, 2010, 68.8: 439-458.

6 Muckelbauer, R., et al. "Promotion and Provision of Drinking Water in Schools for Overweight Prevention: Randomized Controlled Cluster Trial." *Pediatrics*, 2009, 123.4: e661-e667.

7 Zheng, M., et al. "Substitution of Sugar-sweetened Beverages with Other Beverage Alternatives: A Review of Long-term Health Outcomes." *Journal of the Academy of Nutrition and Dietetics*, 2015, 115(5):767-79, doi: 10.1016/j.jand.2015.01.006.

8 Masento, N.A., et al. "Effects of Hydration Status on Cognitive Performance and Mood." *British Journal of Nutrition*, 2014, 111(10):1841-52, doi: 10.1017/S0007114513004455.

9 Ibid.

10 Booth, P., et al. "Water Supplementation Improves Visual Attention and Fine Motor Skills in School-children." *Education and Health*, 2012, 30:75-79.

11 Park, S., et al. "Factors Associated with Low Water Intake Among U.S. High School Students – National Youth Physical Activity and Nutrition Study." *Journal of the Academy of Nutrition and Dietetics*, 2012, 112:1421-1427.

factors (e.g., body size, age, gender, physical activity level, exposure to heat, and stress) and is evolving, it is clear that most children and adolescents do not consume enough water.<sup>12,13</sup> From 2005 to 2010, U.S. youth drank an average of 15 ounces of water daily from a variety of beverages and foods.<sup>14</sup>

The Institute of Medicine of the National Academies recently released the following Daily Beverage and Drinking Water Requirements based on age and gender. See Table 1 on page 3.<sup>15</sup>

Less than one-third of children and adolescents meet or exceed these recommendations, and one-fourth of adolescents drink less than one serving of water per day.<sup>16,17,18</sup> Table 1 demonstrates this finding based on the average consumption of 15 ounces of water daily. As the data shows, the youngest U.S. children (ages 4 to 8) consume just over a quarter of the daily recommended amount of water. The amount of water consumed declines as children age.

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12 "Dietary Reference Intakes: Water, Potassium, Sodium, Chloride, and Sulfate." National Academies of Sciences, Engineering, and Medicine, Food and Nutrition Board, February 2004, [nationalacademies.org/hmd/Reports/2004/Dietary-Reference-Intakes-Water-Potassium-Sodium-Chloride-and-Sulfate.aspx](http://nationalacademies.org/hmd/Reports/2004/Dietary-Reference-Intakes-Water-Potassium-Sodium-Chloride-and-Sulfate.aspx). Accessed November 2019.

13 Drewnowski, A., et al. "Water and Beverage Consumption Among Children 4-13 Years in the United States: Analysis of 2005-2010 NHANES Data." *Nutrition Journal*, 2013, 12(1):85.

14 Ibid.

15 "Recommended Daily Allowance and Adequate Intake Values: Total Water and Macronutrients." Institute of Medicine of the National Academies, Dietary Reference Intakes (DRIs) Tables, 2004.

16 Kenney, E.L., et al. "Prevalence of Inadequate Hydration Among U.S. Children and Disparities by Gender and Race/Ethnicity." *National Health and Nutrition Examination Survey, 2009–2012*, *American Journal of Public Health*, 2015, 105(8): e113-8, doi: 10.2105/AJPH.2015.302572.

17 "Beverage Consumption Among High School Students – United States." Centers for Disease Control and Prevention, 2010.

18 "MMWR Morbidity Weekly Report." Centers for Disease Control and Prevention, 2013, 60(23):778-780.

**TABLE 1: DAILY BEVERAGE AND DRINKING WATER REQUIREMENTS BASED ON AGE AND GENDER**

Age range	Gender	Total water requirements (cups per day, converted to ounces—8 fluid ounces per cup)	Percent of daily water requirement consumed by average U.S. youth (based on 15 ounces consumed daily)
4 to 8 years	Girls and boys	57	26.8
9 to 13 years	Girls	71	20.8
	Boys	81	18.8

**TABLE 2: PERCENTAGE OF OBESE NEBRASKANS BY AGE, COMPARED TO NATIONAL RANKINGS, 2017**

Age	Percent of Nebraska's population considered obese	Nebraska's national obesity ranking (with 1 being most obese)	Most obese state	Least obese state
Children 10 to 17	12.5%	40	Mississippi, 25.4%	Utah, 8.7%
High school students	14.6%	18	Arkansas, 21.7%	Colorado, 9.5%
Adults	34.1%	15	Mississippi, West Virginia, 39.5%	Colorado, 22.6%

If U.S. youth are drinking an average of 15 ounces of water daily, then U.S. children and adolescents are severely lacking in water consumption. For our children's health and cognition, we need to do a better job of providing them safe and healthy water options.

### III. OBESITY IN NEBRASKA

Since obesity and the health-related issues that come from it are symptoms of less than adequate water consumption, the data above suggests Nebraska has significant challenges related to water consumption.

In 2018, Nebraska was in the top half of most obese states for older age groups. Of the state's children ages 10 to 17, 12.9 percent were obese. The percentage of obese Nebraskans more than doubled in adulthood, with 34.1 percent of the population categorized as obese, as defined by

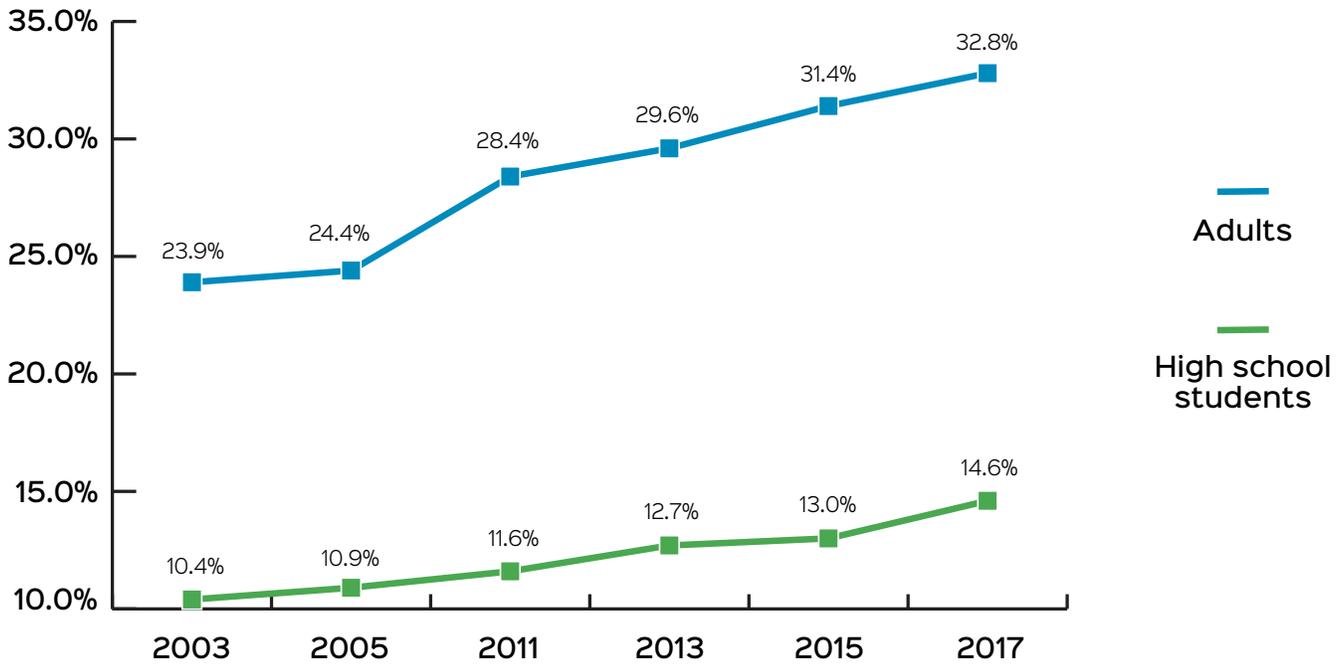
a body mass index of more than 30 percent.<sup>19</sup> See Table 2.<sup>20</sup>

The increase in Nebraska's obesity levels from childhood into adulthood is further evidenced by the rise in obesity rates among the state's high school students over time. In 2003, 10.4 percent of Nebraska's high school students were obese. As of 2017, this rate grew by 4.2 percentage points to 14.6 percent, as observed in Graph 1. Yet, during this same time there was an 8.9 percent increase in the number of obese adults in Nebraska, from 23.9 percent in 2003

19 "Defining Adult Overweight and Obesity." Centers for Disease Control and Prevention, April 11, 2017, [cdc.gov/obesity/adult/defining.html](https://www.cdc.gov/obesity/adult/defining.html). Accessed December 2019.

20 "Childhood Obesity." Robert Wood Johnson Foundation, 2019, [rwjf.org/en/our-focus-areas/topics/childhood-obesity.html](https://www.rwjf.org/en/our-focus-areas/topics/childhood-obesity.html). Accessed December 2019.

**GRAPH 1: PERCENT OF OBESE ADULTS AND HIGH SCHOOL STUDENTS IN NEBRASKA, 2003 TO 2017**



to 32.8 percent in 2017.<sup>21,22</sup> This would suggest there is an opportunity to mitigate obesity rates during childhood and high school. See Graph 1.<sup>23</sup>

21 In Nebraska public schools, a total of 323,391 students were enrolled during the 2017-2018 school year; 94,561 were high school students (grades 9-12). Grades pre-kindergarten through 5th grade were subtracted for this report (younger than 10 years of age), leaving a total of 165,300 students ages 10 through 17 (assumed to be 12th grade).

22 “Nebraska Public Schools State Snapshot, 2017-2018.” Nebraska Department of Education, [nep.education.ne.gov/State/Index/00-0000-000?DataYears=20172018&type=state#demographics](http://nep.education.ne.gov/State/Index/00-0000-000?DataYears=20172018&type=state#demographics). Accessed December 2019.

23 “Building a Healthier Future.” State of Childhood Obesity, Robert Wood Johnson Foundation, [stateofobesity.org](http://stateofobesity.org). Accessed December 2019.

Along with age, data also shows obesity among children increases as family income decreases. Obesity among children is highest in the lowest family income group. Using Supplemental Nutrition Assistance Program (SNAP) recipients as a proxy for the lowest income group, Nebraska faces a challenge in this respect, as well. Nearly 48 percent of SNAP households in Nebraska have children, the eighth highest rate in the nation.<sup>24</sup>

24 “Percentage of Participating SNAP Households with Children: 2017 Demographic Characteristics.” U.S. Department of Agriculture, Food and Nutrition Service, 2017, [snapvisualizations.net/SNAP-State-characteristics#](http://snapvisualizations.net/SNAP-State-characteristics#). Accessed December 2019.

## A. FUTURE HEALTH BENEFITS OF A REDUCTION IN CHILDHOOD OBESITY

The number of obese children and adolescents in Nebraska is staggering. Employing the Nebraska obesity data outlined above and Nebraska school enrollment for the 2017-2018 academic year, there are 13,800 high school students classified as obese and more than 25,600 students age 10 to 17 classified as obese.<sup>25</sup> Research has shown most obese children and teenagers will remain obese into adulthood.<sup>26</sup>

These young Nebraskans classified as obese now face a lifetime of serious health conditions, such as cardiovascular, metabolic, and psychosocial illnesses.<sup>27</sup> Researchers at the University of Oxford found obese children and adolescents have several risk factors for heart disease including raised blood pressure, cholesterol, and blood sugar levels, and a thickening of the heart muscle, compared with normal weight children who continue into adulthood. They warn that if these risk factors are allowed to progress into adulthood, obese children could already be at a 30 to 40 percent higher risk of future stroke and heart disease than their normal weight counterparts.<sup>28</sup>

These serious health conditions can be mitigated by reducing caloric intake, thus reducing the rates of obesity. Efforts to promote the consumption of water rather than sugary drinks must begin early, given the findings of childhood obesity continuing into adulthood, and should play a large role in this effort.

Replacing sugary drinks and caloric beverages with water has been shown to result in weight loss of 2 percent to 2.5 percent and a reduction of up to 235 calories per day from the average American diet.<sup>29,30</sup>

## IV. EFFECTS OF WATER CONSUMPTION ON OBESITY

Adequate consumption of water can contribute significantly to reduced caloric intake, resulting in weight loss and a reduction in the obesity rate.

A recent study in New York City elementary schools and middle schools found a connection between water availability in the schools (through water jets, which are electrically cooled, large, clear jugs that oxygenate, chill, and dispense water quickly) and decreased student weight.<sup>31</sup> The presence and use of water jets in the schools resulted in approximately a 1 percentage point reduction in the likelihood of being overweight for both girls and boys. The study concluded that

25 “Nebraska Public Schools State Snapshot, 2017-2018.” Nebraska Department of Education, nep.education.ne.gov//State/Index/00-0000-000?DataYears=20172018&type=state#demographics. Accessed December 2019.

26 Ward, Z.J., et al. “Simulation of Growth Trajectories of Childhood Obesity into Adulthood.” *New England Journal of Medicine*, 2017, 377(22):2145-2153, doi: 10.1056/NEJMoa1703860.

27 Wu, Y., et al. “Future Research Needs for Childhood Obesity Prevention Programs: Future Research Needs Paper No. 31.” Prepared by the John Hopkins University Evidence-based Practice Center, Rockville, Maryland: Agency for Healthcare Research and Quality, June 2013, Addendum August 2013. effectivehealthcare.ahrq.gov/reports/final.cfm. Accessed December 2019.

28 Friedemann, C., et al. “Cardiovascular Disease Risk in Healthy Children and its Association with Body Mass Index: Systematic Review and Meta-analysis.” *BMJ*, Sept. 25, 2012, 345:e4759, doi: 10.1136/bmj.e4759.

29 “School Water Access Facts.” American Heart Association, 2019.

30 Wang, Y. Claire, et al. “Impact of Change in Sweetened Caloric Beverage Consumption on Energy Intake Among Children and Adolescents.” *Pediatric and Adolescent Medicine*, April 2009, 163(4):336-43, doi: 10.1001/archpediatrics.2009.23.

31 Schwartz, A.E., et al. “Effect of a School-Based Water Intervention on Child Body Mass Index and Obesity.” *JAMA Pediatrics*, 2016, 170(3):220-226.

“decreasing the amount of caloric beverages consumed and simultaneously increasing water consumption is important to promoting child health and decreasing the prevalence of childhood obesity. Moreover, schools are a natural setting for such interventions [...].”<sup>32</sup>

## V. WAYS TO GET YOUTH TO CONSUME MORE WATER

Schools are a natural setting for interventions to decrease obesity. Children and adolescents spend a great portion of their days in school for the majority of the calendar year. In Nebraska, state law dictates the minimum number of instructional hours each school district has to provide their students. Kindergartners have to undertake a minimum 400 hours of instructional time each school year (though many school districts are going to full-day, every day kindergarten); students in grades 1 through 8 are required to have a minimum 1,032 hours of instructional time each school year; and students in grades 9 through 12, a minimum 1,080 hours of instructional time each school year.<sup>33</sup> Many students, particularly older students, also spend many hours at school facilities participating in extracurricular activities. School, therefore, plays a major role in structuring the lives of children and adolescents and setting habits for those lives.

Schools have the potential to influence water consumption habits among their students due in part to the time spent in school facilities or at school activities.<sup>34</sup> However, schools and school districts, particularly those in rural Nebraska, face significant challenges in providing safe, low-cost, or free drinking water to students. Many school buildings are old and in need of refurbishing or replacement. Yet, an opportunity

32 Ibid.

33 Nebraska Revised Statutes, Section 79-101(7).

34 Patel, A.I., and K.E. Hampton. “Encouraging Consumption of Water in School and Child Care Settings: Access, Challenges, and Strategies for Improvement.” *American Journal of Public Health*, 101.8, 2011, 1370-1379.

to increase water access for Nebraska’s students exists when new school facilities are built or existing facilities are expanded.<sup>35</sup>

Numerous rural Nebraska water systems are also facing issues related to excessive amounts of minerals and chemicals.<sup>36,37</sup> These impurities can lead to discoloration, odors, and tastes in drinking water supplies, while also causing adverse health effects. This can result in the avoidance of the consumption of water or leave communities without potable water. As customers of local water systems, schools are also left to navigate the access to clean, reliable water sources for their students.

While Nebraska communities and schools, particularly rural communities and schools, are left to resolve their water issues and needs, the state of Nebraska and its residents are staring at an expensive bill related to obesity. Based on the \$19,000 lifetime charge per obese child, Nebraska is looking at a cost of approximately \$486,818,000 attribut-

35 “ASCE’s 2017 Infrastructure Report Card.” American Society of Civil Engineers, 2019, [infrastructurereportcard.org/](http://infrastructurereportcard.org/). Accessed December 2019.

36 See, for example: Glissmann, Bob. “Bottled or Filtered Water Recommended After High Manganese Levels Found in West Point Water,” *Omaha World-Herald*, Aug. 30, 2019, [omaha.com/livewellnebraska/health/bottled-or-filtered-water-recommended-after-high-manganese-levels-found/article\\_661c45e7-8f69-58e1-a4f4-327f1e5662ac.html](http://omaha.com/livewellnebraska/health/bottled-or-filtered-water-recommended-after-high-manganese-levels-found/article_661c45e7-8f69-58e1-a4f4-327f1e5662ac.html). Accessed December 2019.

37 See, for example: Chisam, Elic. “Nebraska Health Department Issues Recommendation to Not Drink Water in West Point,” *News Channel Nebraska*, Aug. 30, 2019, [newschannelnebraska.com/story/40986634/nebraska-health-department-issues-recommendation-to-not-drink-water-in-west-point-due-to-high-levels-of-manganese](http://newschannelnebraska.com/story/40986634/nebraska-health-department-issues-recommendation-to-not-drink-water-in-west-point-due-to-high-levels-of-manganese).

able to its 2017 childhood obesity rate for future health care costs and diminished productivity.<sup>38,39,40</sup> Without seriously addressing the obesity rate and accompanying costs, this figure is likely to increase and compound upon itself.

## VI. POLICY OPTIONS

To meet the goal of enhanced water consumption by young people to appropriate levels to help reduce obesity, the following policy options are most appropriate.

### 1. Enact statewide policy increasing access to drinking water in schools by requiring additional drinking fountains and/or water bottle filling stations in new or expanded school buildings.

Making water available throughout a school building will increase water consumption and build healthy habits among students.<sup>41</sup> This is a proactive, cost-efficient method to increase access to water, enhance water consumption, and to address obesity. Only new school building construction or expansion of existing school buildings will be required to provide a mandatory number of water fountains.

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38 “Over a Lifetime, Childhood Obesity Costs \$19,000 Per Child.” Duke Global Health Institute, April 7, 2014, [globalhealth.duke.edu/media/news/over-lifetime-childhood-obesity-costs-19000-child](http://globalhealth.duke.edu/media/news/over-lifetime-childhood-obesity-costs-19000-child). Accessed December 2019.

39 In Nebraska public schools, a total of 323,391 students were enrolled during the 2017-2018 school year; 94,561 were high school students (grades 9-12). Grades pre-kindergarten through 5th grade were subtracted for this report (younger than 10 years of age), leaving a total of 165,300 students ages 10 through 17 (assumed to be 12th grade).

40 “Nebraska Public Schools State Snapshot, 2017-2018.” Nebraska Department of Education, [nep.education.ne.gov/State/Index/00-0000-000?DataYears=20172018&type=state#demographics](http://nep.education.ne.gov/State/Index/00-0000-000?DataYears=20172018&type=state#demographics). Accessed December 2019.

41 “Drinking Water Access in Schools.” Change Lab Solutions, National Policy & Legal Analysis Network, August 2010, [changelabsolutions.org/sites/default/files/WaterAccess\\_FactSht\\_20141106.pdf](http://changelabsolutions.org/sites/default/files/WaterAccess_FactSht_20141106.pdf). Accessed December 2019.

Some states have undertaken similar policy responses. During the 2019 Kentucky General Assembly, lawmakers adopted and the governor signed into law Senate Bill (SB) 162, a bill that, among other things, requires the chief state school officer not to approve plans for new public school buildings or old buildings being altered unless the plans and specifications of the new construction or renovation include:<sup>42</sup>

- Minimum of two water bottle filling stations;
- Minimum of one drinking fountain or water bottle filling station on each floor and wing;
- Minimum of one drinking fountain or water bottle filling station for each 75 students.

Local school districts have adopted similar policies. The Little Rock School District in Arkansas, for example, has a policy similar to the Kentucky law for new public school buildings or major buildings renovations. The Little Rock policy requires a minimum of one drinking fountain for every 100 students in addition to the same requirements regarding water bottle filling stations and drinking fountains as in the Kentucky law.<sup>43</sup>

Enacting similar policy in Nebraska would address many of the challenges discussed herein. Moreover, while many schools are already taking steps to increase access to water when undertaking a new construction or expansion project, establishing a policy of minimum standards creates greater opportunity to improve student water consumption and contribute to lowering the state’s obesity rates. This cost-effective response has the potential to resolve a host of health issues facing our children now and into the future.

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42 Kentucky Legislature, Senate Bill 162, 2019, Regular Session, Section 6.

43 “Water Bottle Filling Station.” Little Rock School District, Policy 5.29b, [lrsd.org/cms/lib/AR02203631/Centricity/Domain/575/5.29a-b%20Water%20Policy.pdf](http://lrsd.org/cms/lib/AR02203631/Centricity/Domain/575/5.29a-b%20Water%20Policy.pdf). Accessed December 2019.

**2. Enact statewide policy requiring safe drinking water be available at no cost to students throughout the school day and while activities are being held on school grounds outside of regular school hours.**

Some policy exists that requires schools to provide drinking water at times during the school day. The Healthy, Hunger-Free Kids Act, adopted by Congress in 2010, requires schools participating in the National School Lunch Program to provide drinking water to students at no charge during mealtimes in areas where meals are served.<sup>44</sup> More than 91 percent of Nebraska schools participate in the National School Lunch Program, so are required by law to provide drinking water during meals.<sup>45,46</sup>

However, drinking water must be provided in schools at all times during the school day and during activity times held on school grounds outside of regular school hours if the battle against obesity is to have a full effect.<sup>47</sup> While a start, requiring drinking water be provided only during the limited minutes of lunchtime is likely to have inadequate consequences in reducing obesity and the health effects related to obesity. One cup of water, which may be all that can be consumed during lunchtime, does not come close to meeting the minimum recommended intake of water for young people. Instead, students must rely upon water consumption at home and elsewhere where drinking water may not be available or provided, or where the habit of consuming drinking water may not be formed.

Providing drinking water throughout the school day, in addition to education and active promotion, may be effective methods to increase water intake, thus reducing obesity.<sup>48</sup>

The average volume of water consumed by students has been found to be greater in schools that provide and promote water.<sup>49</sup>

Because of the prevalence of obesity in Nebraska, these policy options need to exist and be implemented on a statewide basis. These policies can be achieved through legislation, regulation, or executive order, but not through voluntary approaches, as this is a statewide campaign against obesity and its costs. Policy intended to increase consumption of drinking water in schools should also be accompanied by a vigorous education program on the benefits of consuming water (as opposed to sugary drinks) for students and school staff.<sup>50</sup>

44 Healthy, Hunger-Free Kids Act of 2010, Public Law No. 111-296, Section 204, 124 Stat. 3183, 2010.

45 1,047 Nebraska public schools and residential child care institutions participate in the National School Lunch Program, out of 1,145 total public schools in the state.

46 "Nebraska Public Schools State Snapshot, 2017-2018." Nebraska Department of Education, nep.education.ne.gov//State/Index/00-0000-000?DataYears=20172018&type=state#demographics. Accessed December 2019.

47 Hood, N.E., et al. "Availability of Drinking Water in U.S. Public School Cafeterias." *Journal of the Academy of Nutrition and Dietetics*, 2014, 114(9):1389-1395.

48 Patel, A.I., et al. "Increasing the Availability and Consumption of Drinking Water in Middle Schools: a Pilot Study." *Prevention of Chronic Disease*, 2011, 8(3): A60.

49 Elbel, B., et al. "A Water Availability Intervention in New York City Public Schools: Influence on Youths' Water and Milk Behaviors." *American Journal of Public Health*, 2015, 105(2):365-72, doi: 10.2105/AJPH.2014.302221.

50 "Increasing Access to Safe Drinking Water in Schools and Communities, Policy Statement." American Heart Association, June 2015, heart.org/-/media/files/about-us/policy-research/policy-positions/healthy-schools-and-childhood-obesity/increasing-access-to-safe-drinking-water-ucm\_475974.pdf?1a=en&hash=020C152B5B78EA29F1D4FF526AFEB0D21DE27FC4. Accessed December 2019.

## VII. CONCLUSION

Nebraska is facing a crisis with its obesity ratings, starting in childhood and continuing into adulthood. Nebraska's obesity rankings are among the nation's highest and only decline relative to all the other states as Nebraskans enter adulthood. The cost of obesity is also placing a significant burden on Nebraskans in terms of health care costs and diminished productivity due to those obesity-related medical conditions.

Based only on the 2017 childhood obesity figures, Nebraska is facing nearly \$487 million in obesity-related costs over this child population's lifetime. To place this figure in context, if lifetime obesity costs were an item in the Fiscal Year 2019-2020 Nebraska General Fund state budget adopted by the Nebraska Legislature, it would account for nearly 11 percent of the budget.<sup>51</sup>

To address the obesity crisis and its significant costs to the state, its residents, and those facing the health-related outcomes, Nebraska policymakers must act. We suggest low-cost actions that have been proven to work in places that reach young people where they are and help build lifelong habits that will work to improve their health well into adulthood. That is why we propose using schools and the infrastructure of schools to provide greater access to water and greater consumption of water among Nebraska's young residents.

## ABOUT THE CENTER FOR RURAL AFFAIRS

Established in 1973, the Center for Rural Affairs is a private, nonprofit organization with a mission to establish strong rural communities, social and economic justice, environmental stewardship, and genuine opportunity for all while engaging people in decisions that affect the quality of their lives and the future of their communities. This institution is an equal opportunity provider and employer.

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<sup>51</sup> "2019-2021 Appropriation Summaries, as of 2019 Legislative Session." Nebraska Department of Administrative Services, State Budget Division, [budget.nebraska.gov/biennium-2019-2021.html](http://budget.nebraska.gov/biennium-2019-2021.html). Accessed December 2019.

