Introduction
The negative impacts of sugar-sweetened beverages (or SSBs, e.g. soda, fruit drinks, sports drinks) in increasing the risks of developing obesity, type 2 diabetes, and dental caries, are well-known. Water offers a low-cost, zero-calorie alternative to SSBs, while offering a host of benefits for physical health, including mental function. As children spend substantial time in schools and can arrive at school inadequately hydrated, and as legislation has excluded SSBs from schools, we place importance on providing excellent access to water. In earlier work, we identified elements of excellence in drinking water access in schools: (1) provision of safe tap water; (2) access to appealing, clean and fully functional water sources; (3) availability of water in at least 4 of 5 key school locations where students eat, learn, and are active; (4) access to non-fountain water sources; (5) access to drinking vessels (e.g. cups, reusable water bottles); and (6) a high density of free water access points.

In 2010, California enacted SB 1413, legislation which required the provision of free drinking water in food service areas during meal times in public schools. This statute generated momentum for similar language to be incorporated into the 2010 federal Healthy, Hunger-Free Kids Act (HHFKA). This policy brief summarizes how drinking water access in California public schools has changed from before to after implementation of SB 1413/HHFKA, and proposes policy recommendations to build on California's historical leadership on water in schools.

Study Methodology
This study used phone surveys with school officials from a representative sample of 240 California public schools, conducted in 2010-11 before the implementation of SB 1413/HHFKA, and again in 2016-17, five years after implementation, to analyze changes in drinking water access in California public schools.

We also obtained wellness policies of school districts participating in this study and assessed the strength and comprehensiveness of the water-related language in their district wellness policies.

To explore the policy implications of this research, we organized a virtual convening, attended by a range of water experts and stakeholders, including water policy advocates, school officials and researchers mostly based in California (n=14). To obtain additional feedback on our proposed policy recommendations, we followed up with surveys and interviews of convening participants and other experts (n=10).

Study Takeaways
Since SB 1413/HHFKA was implemented in 2010, there have been marked improvements in drinking water access in California public schools. Our study finds no significant changes in the first two indicators of water excellence listed above (i.e. provision of safe, appealing, clean or functional drinking water), but finds significant improvements in all other indicators. Highlights of research findings include:

- Improvements in schools providing water access in key school locations (including outdoor physical activity areas, food service areas and temporary structures)
California has made significant advances in drinking water access in schools. In fact, in creating a “letter of the law” and setting minimum standards for drinking water access in schools, some schools have gone beyond legislative mandates to meet the “spirit of the law,” to ensure that children have truly excellent access to drinking water. However, there remains room for improvement.

These policy recommendations are informed by the above study findings, along with input from key stakeholders. These recommendations also meet the additional requirements of being impactful, viable and/or feasible.

Policy Recommendations

Study findings and additional expert input informed these policy recommendations:

1. **Ensure that all drinking water in California public schools is safe**
   The 2016–17 survey results show that 95% of school officials believe that their school drinking water is safe. As statewide testing of water in schools for lead shows low rates of contamination, school officials can have a high level of confidence that school drinking water will meet safety standards. Completed statewide testing, together with education to school officials and to the school community, can bring 95% to 100%. In California, align AB 746 (Gonzalez-Fletcher) implementation with State Water Board data, to ensure that lead testing is conducted at the most heavily-utilized water access points in schools.11 With drinking water safety assured, schools can move to the following two policy recommendations.

2. **Improve water source maintenance and water source type**
   This study shows that some school officials still do not consider their drinking water sources to be clean and functional—which are basic requirements, and are critical in encouraging water consumption. Local school district wellness policies or other policies should specify clear and actionable standards for water source maintenance. Policy can also require improved dispensing methods, like chilled “hydration stations,” in key locations. Advocates in states like California are fighting to establish sustainable funding for safe and affordable drinking water, to address water safety issues faced by highest-poverty school districts and schools in disadvantaged communities (DACs).12

3. **Extend SB 1413 to require drinking water access at no charge in other key school locations**
   Areas such as indoor and outdoor physical activity areas—where students are exercising and need to hydrate—as well as high-traffic areas should be considered for required water access.

References

9. These five key school locations extend beyond the HHFKA/SB1413-regulated food service areas, and include classrooms, indoor and outdoor physical activity areas, high-traffic common areas, and temporary structures.
10. Kenney EL et al. Grab a cup, fill it up! An intervention to promote the convenience of drinking water and increase student water consumption during school lunch. AJPH 2015, 105(5), 1777-1783.
11. AB 746 (Gonzalez-Fletcher) is a 2017 California state bill requiring community water systems to complete lead testing in select sites on every public school campus.
12. For instance, SB 623 (Monning) is a proposed California state bill with a corresponding budget request, which would provide much-needed resources for both interim and longer-term safe water remediation and infrastructure investments, especially for domestic wells and/or small water systems unregulated by the state.