# **ENCOURAGING STUDENT TAP WATER CONSUMPTION**

# A School Environmental Change Pilot Project Summary

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# Background

Oregon's children need access to clean drinking water to promote health where they learn, eat and play. Chapter 29 of the Oregon Structural Specialty Code (Sec. 2903) requires only that schools have one drinking fountain per floor. This leaves some schools with sizeable populations lacking adequate water access. Access to clean drinking water, and increased water consumption, has been found to reduce the risk of youth overweight and obesity<sup>1</sup>.

David Douglas School District, home to the largest high school in Oregon, partnered with Upstream Public Health, a non-profit health policy organization to increase water access in the District's high school and middle schools. Upstream and the District each received a Multnomah County Communities Putting Prevention to Work mini-grant to fund this project, and other related school environment changes.

## **Setting and Population**

The David Douglas School District is in mid-Multnomah County in Oregon where populations carry a disproportionate burden of poverty and health issues (see Image 1). The District's boundaries encompass the highest household poverty rates in the county. More than 70% of students at each school site are eligible for free and reduced lunches. In this same region, 22% of youth in 8th and 11th grade are overweight or at risk of being overweight<sup>2</sup>. David Douglas serves a diverse student population; nearly one quarter of students are English Language Learners and nearly half are



people of color. The three schools in this project educate nearly 4700 students.

Image 1: Map of David Douglas SD

UPSTREAM

We are providing project elements to three schools: two middle and one high school. Our partners helped us select schools based on those with: 1) the largest student populations, 2) oldest buildings, 3) limited water access, and 4) student need based on free and reduced eligibility. We asked another middle school to participate in the student survey to help us evaluate the project; they received promotional materials and a new water station from our partners at the District as a thank you for their help.

# **Project Objectives & Elements**

This is an on-the-ground project to support the David Douglas School District's development of a policy to increase student access to filtered, chilled tap water. The goals of the project are listed below:

- 1. Increase district-wide support for adopting wellness policy language centered on increasing water access,
- 2. Increase school water access through installing water stations,
- 3. Increase student water consumption through water bottle giveaways and a promotion campaign, and
- 4. Develop a best practices document regarding water station installation linked to wellness policies.

This project uses an integrated strategy that changes the school environment to include greater schoolwide water access through water stations and water bottles. It also supports increased student water consumption through education and promotion.

### Water Stations

A water station combines a chilled, filtered water source with a water fountain and up to three water bottle filler spouts. This design increases the number of physical water access sites youth can use to obtain portable adequate servings of water in a timely fashion. Rather than only getting one drink, youth can fill a water bottle quickly and keep water with them throughout the day (see Image 2). We chose a station based on price, ease of installation, vandal-proof design, filter accessibility, and having a built-in water volume monitor.

### **Student Poster Contest & Education Campaign**

In the late spring of 2011, the three project schools participated in a poster and slogan contest. Students reviewed an educational health and water fact sheet. They entered artwork that encouraged others to drink water in order to improve their health. We displayed winning entries above the new water stations and on water bottles.



Image 2: Water station



Image 3: Winning poster and water bottle

## **Limitations, Challenges and Solutions**

#### Water Bottles

Upstream Public Health purchased water bottles BPAfree water bottles made of a clear, non-colored material. All students at the three schools received new, free water bottles decorated with art from the poster contest winners.

#### **Policy Development**

The District School Board updated its wellness policy to include Administrative Rules on water access in early Fall, 2011. It reads: "The district recognizes that children need an ongoing water supply to keep their bodies functioning optimally and to avoid dehydration. Therefore, the district will promote the consumption of water as an essential nutrient that plays a role in overall health and will provide all students and employees with access to clean and safe drinking water free of charge at all district facilities. Students will be permitted to carry water bottles while at school. Building Administrators are directed to develop individual school guidelines to implement this policy."

We encountered one key challenge with our water stations. At two schools, the filters had to be changed more frequently than expected (each filter is supposed to last for approximately 30,000 gallons). We learned that our schools have sediment in their pipes; although it is not toxic, it clogs up the sensitive filter. The District plumber installed a sieve in the plumbing before each unit and a separate sediment filter. We are still assessing if this is an adequate solution or if we will need to install something less sensitive. The units may generate more water splash than a typical fountain when there is high student traffic. Schools addressed this with "caution wet floor" signs and towels. We are in the process of evaluating the project's impact on student use of the water stations and student water consumption.

#### Acknowledgments

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#### Reference

[1] Wang Y.C. et. al. "Impact of Change in Sweetened Caloric Beverage Consumption on Energy Intake Among Children and Adolescents". Archives of Pediatrics and Adolescent Medicine. Vol. 163, No. 4, April 2009.

[2] Ngo, D. and R. Leman (2007). Oregon overweight, obesity, physical activity, and nutrition facts. Physical Activity and Nutrition Program Department of Human Services. www.healthoregon.org/hpcdp/ physicalactivityandnutrition.