

Windsor High School, Windsor, California

Converted Buses Teach Sustainability

Windsor Union School District (USD) in Sonoma County is committed to reducing greenhouse gas (GHG) emissions by creating a learning environment that “prepares students to be stewards of their natural resources.” The District’s eight schools partnered with the town of Windsor to reduce water usage, increase recycling, and use cleaner burning fuels in school buses.

In 2006 the State of California awarded the District its prestigious Governor's Award for Environmental and Economic Leadership. This acknowledged the District and town for their joint efforts to make environmental improvements in the public sector. Windsor High School represents the culmination of all of Windsor’s efforts.

How does Windsor High Promote Recycling?
The town negotiated a contract in 1998 with the disposal company to give free disposal service to school district facilities, a \$10,429 savings per month, under an agreement that holds schools accountable for aggressively recycling and educating students about recycling practices. A recent audit found “all classrooms have crates and the school’s quad is covered in blue carts for recycling food and beverage containers.” District recycling efforts helped the county to recycle 55.1% of materials.



Photo Credit: Windsor

Some of Windsor Union School District’s school buses use Compressed Natural Gas (CNG) fuel.

District Snapshot

1,700-student high school focused on conserving water, recycling, and using clean fuels

Climate Actions

- Uses recycled water for toilets and landscaping
- Retrofits school buses to run on biodiesel
- Rebuilds buses to run on compressed natural gas (CNG)
- Implemented extensive school recycling efforts
- Increased energy efficiency by retrofitting lights
- District’s recycling practices helped the county achieve a 55% landfill diversion rate

Cost of Climate Actions

- \$317,000 for bus replacement and retrofits
- \$172,400 for energy efficiency projects

Estimated Yearly Cost Savings

- \$36,000 for water
 - \$125,150 for recycling
 - \$71,800 in electricity
- Total Cost Savings: \$232,950

Estimated Yearly Greenhouse Gas Emission Reductions (CO₂E)

- 382 metric tons from energy reductions
- 4.5 metric tons from recycled water

"To serve our community we need to be a model for wise resource usage. When we converted our buses to biodiesel and CNG we were pleased and surprised when many residents called to thank us."

— Steven Herrington,
Superintendent,
Windsor Union School District



How Does Windsor Use Recycled Water?

Windsor High School was designed to use recycled water for toilets and landscaping. To make this possible, the town of Windsor waived nearly \$500,000 in sewer hook-up fees, ran a recycled water line to the school's property line and provides recycled water at no charge. The school district funded the installation of separate fresh and recycled water lines. The school calculates it saves 8,150 gallons per day (1.47 million gallons per year). This is in addition to irrigation for more than 20 acres of fields. The annual cost avoidance to the District is projected at \$36,000.

How Did Windsor Reduce Air Pollution From School Buses?

The lifetime diesel soot cancer risk for a resident of Sonoma County was 205 times greater than the Environmental Protection Agency's (EPA) acceptable level. To reduce air pollution from diesel fuel, the town provided incentive funding in 2005 to pay the cost differential for two school buses to run on biodiesel for a year. Based on this successful pilot, the District was competitive for an EPA grant that provided matching funds (\$182,977) to convert eight school buses to run on clean burning B100 biodiesel and purchase two new compressed natural gas (CNG) buses. Buses use 66,071 fewer gallons of higher polluting diesel fuel annually.

Windsor Union School District has set an amazing example for other school districts by promoting conservation and recycling. Windsor High saves over 386.5 metric tons of carbon dioxide a year. The District's active efforts to obtain funding and implement green actions reflects their motto to "prepare students to be stewards of their natural resources."



Photo Credit: Windsor

Windsor Union School District uses recycled water for its toilets and landscaping needs.



"Our 'Green Schools Initiative' has only just begun. We just adopted a CHPS resolution and all new District facilities will incorporate green design."

—Dan Wells,
Director of Maintenance and Operations
Windsor Union School District

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