

Earth Day Report
Facility Energy Consumption
& Waste Recycling Activities

April 8, 2014

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M.O.F.

Report Highlights

- Update on AUSD facility use of electricity, natural gas, and water consumption
- Update on AUSD “Go Green” recycling initiatives
- Plan and actions recommended to proceed toward AUSD’s conservation goals

AUSD Environmental Stewardship Goals

- AUSD's 2009 goals concerning energy and public utility use were as follows:
- Reduce consumption of energy by 5% annually for three years.
- Reduce water consumption by 10%

AUSD Environmental Stewardship Results Energy Use

Energy Use Change by Site -- Year Ending 06/2013						
Site	Year Ending 06/13			Year Ending 06/09		
	Electricity (kWh)	Natural Gas (Therms)	Total Energy (MBtu)	Electricity (kWh)	Natural Gas (Therms)	Total Energy (MBtu)
Alameda High	1,015,178	78,456	11,309	1,114,200	112,822	15,084
Alameda Gym	159,617	N/A	545	159,162	5,931	1,136
Alameda Swim Center	102,815	44,027	4,754	93,307	46,187	4,937
Bay Farm Elementary	201,595	2,167	905	96,391	6,748	1,004
Bridges Elementary	450,727	4,672	2,005	480,428	6,560	2,295
Chipman Middle	344,721	29,057	4,082	308,775	34,791	4,533
District Office	63,348	N/A	-523	N/A	N/A	0
Earhart Elementary	221,049	6,240	1,378	393,897	1,030	1,447
Edison Elementary	116,263	6,851	1,082	172,168	11,141	1,702
Encinal High	730,215	34,092	5,901	768,792	39,166	6,540
Encinal High Swim Center	130,660	29,501	3,396	71,497	N/A	830
Franklin Elementary	80,624	2,316	507	248,387	1,422	990
Haight Elementary	345,790	0	1,180	251,618	7,735	1,632
Lincoln Middle	670,638	19,731	4,261	720,466	22,384	4,697
Longfellow Elementary	120,090	19,274	2,337	137,471	32,843	3,753
Lum Elementary	239,284	12,962	2,113	370,311	10,446	2,308
Maya Lin Elementary	187,140	8,067	1,445	212,002	12,659	1,989
Otis Elementary	160,573	4,597	1,008	147,525	11,888	1,692
Paden Elementary	143,385	4,661	955	267,896	7,177	1,632
Store Room	24,885	3,944	479	148,491	3,931	900
Thompson Field	24,529	454	129	153,919	N/A	525
Warehouse	60,751	N/A	207	97,644	2,483	582
Wood Middle	214,701	7,838	1,516	161,794	11,053	1,657
Woodstock Elementary	211,865	13,060	2,029	72,215	17,808	2,027
Company Totals:		2013 TOTOAL	53,000		2009 TOTAL	63,892
			Difference Total		-17.04751769	

AUSD Environmental Stewardship Results Water Use

Water Use from 2009 to 2013												
Site	2012-2013			2011-2012			2010-2011			2009-2010		
	Water Use (CCF)	Irrigation Use (CCF)	Sewer Use (CCF)	Water Use (CCF)	Irrigation Use (CCF)	Sewer Use (CCF)	Water Use (CCF)	Irrigation Use (CCF)	Sewer Use (CCF)	Water Use (CCF)	Irrigation Use (CCF)	Sewer Use (CCF)
Alameda Gym	0	0	0	0	0	0	0	0	0	0	0	0
Alameda High	7,023	0	4,084	8,564	0	8,564	7,216	0	4,111	6,211	0	3,778
Alameda Swim Center	3,251	0	3,251	3,494	0	3,315	3,490	0	3,490	3,147	0	3,147
Bay Farm Elementary	702	5,681	702	477	5,522	476	522	4,496	521	585	3,869	885
Bridges Elementary	1,703	2,924	1,702	1,802	1,809	1,715	2,117	2,544	1,436	1,807	0	1,807
Chipman Middle	1,126	0	1,126	1,174	0	1,174	765	0	764	858	0	858
District Office	7,732	0	7,732	8,609	0	8,609	7,572	0	7,572	7,018	0	7,018
Earhart Elementary	6,097	0	6,097	5,994	0	4,253	4,988	0	4,988	4,521	0	829
Edison Elementary	1,448	0	1,448	1,330	0	1,330	1,159	0	1,159	1,036	1,733	962
Encinal High	3,029	5,912	3,019	2,814	5,098	2,814	2,721	0	2,721	2,700	0	2,700
Encinal High Swim Center	2,805	0	2,805	2,172	0	2,172	2,355	5,243	2,355	2,281	0	2,269
Franklin Elementary	388	0	388	335	0	335	401	0	401	334	0	334
Haight Elementary	1,620	0	824	1,559	0	778	1,393	0	1,393	1,637	0	921
Historic AHS	5,670	0	5,666	4,794	0	794	3,944	0	637	4,154	0	4,154
Lincoln Middle	6,362	0	1,601	6,605	0	6,603	6,116	0	6,116	6,122	0	6,122
Longfellow Elementary	1,410	0	1,410	1,258	0	1,258	815	0	815	983	0	983
Lum Elementary	3,167	0	3,158	3,423	0	3,410	2,790	0	2,779	2,957	5,100	2,957
Maya Lin Elementary	997	0	997	1,071	0	1,071	712	0	712	717	0	716
Otis Elementary	1,573	0	1,573	1,467	0	1,467	1,241	0	390	1,051	0	1,051
Paden Elementary	466	0	465	462	0	462	484	0	484	481	0	481
Store Room	0	0	0	0	0	0	0	0	0	0	0	0
Thompson Field	0	0	0	0	0	0	0	0	0	0	0	0
Warehouse	0	5	0	0	6	0	0	5	0	0	5	0
Wood Middle	0	0	0	0	0	0	0	0	0	0	0	0
Woodstock Elementary	50	0	50	0	0	0	36	0	36	0	0	0
Total	56,751	14,522	48,230	57,494	12,434	50,689	50,837	12,288	42,880	48,600	10,707	41,972
Annual Total	119,503			120,617			106,005			101,279		
% Increase 2009 - 2013							18%					

Goals for the Upcoming School Year

- Starting school year 2014/2015 MOF/AMP and Go Green will work with the schools and students on behavioral changes such as:
- Turning lights off when leaving room
- Turn water off
- Notifying MOF immediately of water leaks
- Effective February 2014, MOF has reduced watering by 20% in an effort to continue to work towards decreasing water consumption due to the current drought in California

Energy Usage for AUSD Primary Schools

Site	2013			2012			% Change
	Electricity (kWh)	Natural Gas (Therms)	Total Energy (MBtu)	Electricity (kWh)	Natural Gas (Therms)	Total Energy (MBtu)	
Bay Farm Elementary	201,595	2,167	905	204,868	1,938	893	+1.3%
Earhart Elementary	221,049	6,240	1,378	215,908	6,319	1,369	+0.7%
Edison Elementary	116,263	6,851	1,082	121,394	6,889	1,103	-1.9%
Franklin Elementary	80,624	2,316	507	77,201	2,816	545	-7.0%
Haight Elementary	345,790	0	1,180	352,958	16	1,206	-2.2%
Longfellow Elementary	120,090	19,274	2,337	116,351	12,883	1,685	+38.7%
Lum Elementary	239,284	12,962	2,113	215,154	10,551	1,789	+18.1%
Maya Lin Elementary	187,140	8,067	1,445	165,800	8,769	1,443	+0.2%
Otis Elementary	160,573	4,597	1,008	164,320	4,978	1,058	-4.8%
Paden Elementary	143,385	4,661	955	163,490	5,572	1,115	-14.3%
Ruby Bridges Elementary	450,727	4,672	2,005	473,323	4,080	2,023	-0.9%
Woodstock Elementary	211,865	13,060	2,029	184,885	10,173	1,648	+23.1%

Source: SPURR Report –School Project for Utility Rate Reduction

Energy Usage for AUSD Secondary Schools

Site	2013			2012			% Change
	Electricity (kWh)	Natural Gas (Therms)	Total Energy (MBtu)	Electricity (kWh)	Natural Gas (Therms)	Total Energy (MBtu)	
Chipman Middle	344,721	29,057	4,082	338,896	25,660	3,722	+9.7%
Lincoln Middle	670,638	19,731	4,261	616,187	16,848	3,787	+12.5%
Wood Middle	214,701	7,838	1,516	218,070	8,250	1,569	-3.4%
Alameda High	1,015,178	78,456	11,309	1,071,095	92,394	12,894	-12.3%
Encinal High	730,215	34,092	5,901	721,423	35,353	5,997	-1.6%
Alameda Gym	159,617	N/A	545	163,096	N/A	556	-2.1%
Thompson Field	24,529	454	129	37,030	488	175	-26.3%
Alameda Swim Center	102,815	44,027	4,754	104,487	40,643	4,421	+7.5%
Encinal High Swim Center	130,660	29,501	3,396	142,080	29,787	3,463	-1.9%

Source: SPURR Report –School Project for Utility Rate Reduction

Energy Usage for AUSD Administration Facilities

Site	2013			2012			% Change
	Electricity (kWh)	Natural Gas (Therms)	Total Energy (MBtu)	Electricity (kWh)	Natural Gas (Therms)	Total Energy (MBtu)	
FNS Warehouse	60,751	N/A	207	67,269	N/A	230	-9.7%
Maintenance Yard	24,885	3,944	479	37,034	4,322	559	-14.2%
District Office	161,933	N/A	2894				

Source: SPURR Report –School Project for Utility Rate Reduction

Note: Due to the District Office move in January 2013, no year-over-year analysis is available

Energy Costs for AUSD Primary Schools

Site	2013			2012			% Change
	Total Elec Cost	Natural Gas Cost	Total Energy Cost	Total Elec Cost	Natural Gas Cost	Total Energy Cost	
Bay Farm Elementary	\$28,101	\$2,140	\$30,241	\$27,969	\$2,033	\$30,001	+ .8%
Earhart Elementary	\$30,799	\$5,765	\$36,565	\$29,473	\$5,975	\$35,448	+3.1%
Edison Elementary	\$16,616	\$6,221	\$22,837	\$16,987	\$6,282	\$23,269	-1.9%
Franklin Elementary	\$11,554	\$2,151	\$13,705	\$10,855	\$2,796	\$13,651	+ .4%
Haight Elementary	\$48,239	\$95	\$48,334	\$48,213	\$236	\$48,449	- .2%
Longfellow Elementary	\$16,914	\$15,980	\$32,893	\$16,056	\$11,354	\$27,411	+20.0%
Lum Elementary	\$33,458	\$11,227	\$44,684	\$29,496	\$9,559	\$39,055	+14.4%
Maya Lin Elementary	\$26,101	\$7,220	\$33,321	\$22,666	\$7,822	\$30,487	+9.3%
Otis Elementary	\$22,522	\$4,221	\$26,743	\$22,579	\$4,696	\$27,275	-2.0%
Paden Elementary	\$21,772	\$4,450	\$26,222	\$22,346	\$5,287	\$27,633	-5.1%
Ruby Bridges Elementary	\$62,692	\$4,314	\$67,006	\$64,456	\$3,680	\$68,136	-1.7%
Woodstock Elementary	\$29,770	\$10,971	\$40,741	\$25,561	\$9,176	\$34,737	+17.3%

Source: SPURR Report –School Project for Utility Rate Reduction

Energy Costs for AUSD Secondary Schools

Site	2013			2012			% Change
	Total Elec Cost	Natural Gas Cost	Total Energy Cost	Total Elec Cost	Natural Gas Cost	Total Energy Cost	
Chipman Middle	\$47,978	\$23,141	\$71,119	\$46,183	\$21,062	\$67,245	+5.8%
Lincoln Middle	\$93,192	\$16,774	\$109,966	\$83,898	\$15,122	\$99,020	+11.1%
Wood Middle	\$29,926	\$6,884	\$36,810	\$29,764	\$7,464	\$37,228	-1.1%
Alameda High	\$141,022	\$53,529	\$194,551	\$145,722	\$65,446	\$211,167	-7.9%
Encinal High	\$101,712	\$29,471	\$131,183	\$98,426	\$31,246	\$129,671	+1.2%
Alameda Gym	\$22,271	N/A	\$22,271	\$22,291	N/A	\$22,291	-.1%
Thompson Field	\$3,643	\$458	\$4,101	\$5,275	\$506	\$5,781	-29.1%
Alameda Swim Center	\$14,388	\$34,608	\$48,996	\$14,322	\$33,312	\$47,634	+2.9%
Encinal High Swim Center	\$18,261	\$24,544	\$42,806	\$19,430	\$25,866	\$45,297	-5.5%

Source: SPURR Report –School Project for Utility Rate Reduction

Energy Costs for AUSD Administration Facilities

Site	2013			2012			% Change
	Total Elec Cost	Natural Gas Cost	Total Energy Cost	Total Elec Cost	Natural Gas Cost	Total Energy Cost	
FNS Warehouse	\$8,553	N/A	\$8,553	\$9,264	N/A	\$9,264	-7.7%
Maintenance Yard	\$3,684	\$3,419	\$7,103	\$3,780	\$3,897	\$7,677	-7.5%
District Office	\$23,991	N/A	\$23,991				

Source: SPURR Report –School Project for Utility Rate Reduction

Note: Due to the District Office move in January 2013, no year-over-year analysis is available

Water Usage for AUSD Primary Schools

Site	2013			2012			% Change
	Water Use (CCF)	Irrigation Use (CCF)	Sewer Use (CCF)	Water Use (CCF)	Irrigation Use (CCF)	Sewer Use (CCF)	
Bay Farm Elementary	702	5,681	702	477	5,522	476	8.6%
Earhart Elementary	6,097	0	6,097	8,564	0	8,564	-40.5%
Edison Elementary	1,448	0	1,448	1,258	0	1,258	13.1%
Franklin Elementary	388	0	388	335	0	335	13.7%
Haight Elementary	1,620	0	824	1,559	0	778	4.4%
Longfellow Elementary	1,410	0	1,410	1,330	0	1,330	5.7%
Lum Elementary	3,167	0	3,158	3,423	0	3,410	-8.0%
Maya Lin Elementary	997	0	997	1,071	0	1,071	-7.4%
Otis Elementary	1,573	0	1,573	1,467	0	1,467	6.7%
Paden Elementary	466	0	465	462	0	462	0.8%
Ruby Bridges Elementary	1,703	2,924	1,702	1,802	1,809	1,715	15.8%
Woodstock Elementary	50	0	50	90	0	87	-77.0%

Source: SPURR Report –School Project for Utility Rate Reduction

Water Usage for AUSD Secondary Schools

Site	2013			2012			% Change
	Water Use (CCF)	Irrigation Cost (CCF)	Sewer Use (CCF)	Water Use (CCF)	Irrigation Cost (CCF)	Sewer Use (CCF)	
Lincoln Middle	6,362	0	1,601	4,794	0	794	29.8%
Chipman Middle	1,126	0	1,126	1,174	0	1,174	-4.3%
Wood Middle	0	0	0	0	0	0	
Alameda High	7,023	0	4,084	5,994	0	4,253	7.7%
Encinal High	3,029	5,912	3,019	2,814	5,098	2,814	10.3%
Alameda Gym	0	0	0	0	0	0	
Thompson Field	0	0	0	0	0	0	
Alameda Swim Center	3,251	0	3,251	3,494	0	3,315	-4.7%
Encinal High Swim Center	2,805	0	2,805	2,172	0	2,172	22.6%

Source: SPURR Report –School Project for Utility Rate Reduction

Water Costs for AUSD Primary Schools

Site	2013			2012			% Change
	Sewer Cost	Irrigation Cost	Water Cost	Sewer Cost	Irrigation Cost	Water Cost	
	\$	\$	\$	\$	\$	\$	
Bay Farm Elementary	\$995	\$18,998	\$5,636	\$610	\$17,411	\$5,060	9.9%
Earhart Elementary	\$3,703	\$0	\$21,185	\$3,117	\$0	\$27,532	-23.1%
Edison Elementary	\$1,786	\$0	\$5,712	\$1,527	\$0	\$4,899	14.3%
Franklin Elementary	\$686	\$0	\$4,589	\$557	\$0	\$4,138	11.0%
Haight Elementary	\$1,125	\$0	\$6,570	\$1,019	\$0	\$6,003	8.7%
Longfellow Elementary	\$1,706	\$0	\$5,146	\$1,560	\$0	\$4,724	8.3%
Lum Elementary	\$3,347	\$0	\$13,445	\$3,763	\$0	\$14,797	-10.5%
Maya Lin Elementary	\$1,372	\$0	\$4,839	\$1,379	\$0	\$4,868	-0.6%
Otis Elementary	\$1,925	\$0	\$6,360	\$1,703	\$0	\$5,662	11.1%
Paden Elementary	\$743	\$0	\$5,226	\$701	\$0	\$4,907	6.0%
Ruby Bridges Elementary	\$2,056	\$11,734	\$12,047	\$1,947	\$6,274	\$11,863	22.3%
Woodstock Elementary	\$358	\$0	\$614	\$321	\$0	\$699	-4.9%

Source: SPURR Report –School Project for Utility Rate Reduction

Water Costs for AUSD Secondary Schools

Site	2013			2012			% Change
	Sewer Cost (\$)	Irrigation Cost (\$)	Water Cost (\$)	Sewer Cost (\$)	Irrigation Cost (\$)	Water Cost (\$)	
Lincoln Middle	\$1,956	\$0	\$24,908	\$1,030	\$0	\$18,265	28.2%
Chipman Middle	\$1,479	\$0	\$6,260	\$1,381	\$0	\$6,027	4.3%
Wood Middle	\$0	\$0	\$0	\$0	\$0	\$0	
Alameda High	\$4,913	\$0	\$27,096	\$4,755	\$0	\$21,795	17.1%
Encinal High	\$3,647	\$19,985	\$12,690	\$3,319	\$16,168	\$11,590	14.4%
Alameda Gym	\$0	\$0	\$0	\$0	\$0	\$0	
Thompson Field	\$0	\$0	\$0	\$0	\$0	\$0	
Alameda Swim Center	\$4,046	\$0	\$14,618	\$3,938	\$0	\$13,910	4.4%
Encinal High Swim Center	\$3,260	\$0	\$9,982	\$2,377	\$0	\$7,412	26.1%

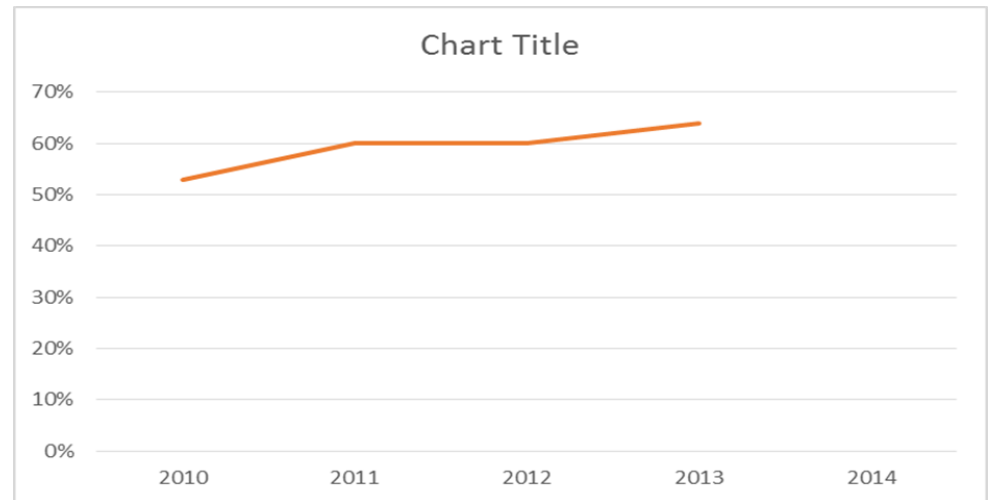
Source: SPURR Report –School Project for Utility Rate Reduction

AUSD Go Green

Recycling Goals & Achievements

Go Green Highlights

- In 2009 AUSD received a three-year grant from the Altamont Education Advisory Board for the Alameda Go Green Schools Challenge program.
- Increase recycling rate up past 70% diversion rate
- 2009 – 41% (District baseline)
- 2010 - 53%
- 2011 – 60%
- 2012 - 60%
- 2013 - 64%



AUSD Go Green Recycling Achievements – Primary Schools

Site	Students	2013 Trash Yardage	2013 Recycled Yardage	Diversion Rate
Bay Farm	464	192	432	69%
Earhart	584	384	786	67%
Edison	447	144	384	73%
Franklin	316	144	216	60%
Haight	383	192	768	80%
Longfellow/NEA	220	96	192	67%
Lum	468	384	432	53%
Maya Lin	264	288	672	70%
Otis	503	192	384	67%
Paden	345	144	336	70%
Ruby Ridges	602	384	768	67%
Average			68%	

AUSD Go Green Recycling Achievements

Secondary Schools & Administrative Facilities

Site	Students	2013 Trash Yardage	2013 Recycled Yardage	Diversion Rate
Academy/NEA	469	336	768	70%
Lincoln Middle	962	384	648	63%
Wood Middle	596	672	1,512	69%
Alameda High	1,841	672	880	57%
Encinal High	1,084	1008	1056	51%
Thompson Field	N/A	48	96	67%
Woodstock	N/A	336	288	46%
FNS Warehouse	N/A	144	240	63%
Maintenance Yard	N/A	62	192	76%
Average				70%

Go Green Goals and Achievements

- Wood and Lincoln Middle Schools have received grants and implemented on site “hydration stations”. Students can fill up a reusable bottle instead of buying bottled water, reducing the school’s carbon footprint.
- Students in 4th grade all over Alameda went on free field trips to the Davis St. Transfer Station to see the four Rs (Reduce, Reuse, Recycle and Rot/Compost) in action!
- Update:
- Students in 5th and 6th grade are working on “action projects” at their school. These projects include classroom waste audits and sheet mulching to make their school garden “bay friendly.”
- Applied for new Altamont grant. If granted will use fund toward waste prevention and job training.

Alameda Green Schools Goals and Achievements

- The green teams at Wood, Lincoln Middle School and Alameda High School received grants and implemented on site “hydration stations”. Students can fill up a reusable bottle instead of buying bottled water, reducing the school’s carbon footprint. 250 reusable bottles were handed out to Lincoln middle school students. An added challenge? At the end of this school, Lincoln Lions who still have their bottle get a prize!
- Students in 4th grade all over Alameda went on free field trips to the Davis St. Transfer Station to see the four Rs (Reduce, Reuse, Recycle and Rot/Compost) in action!
- Students in 5th and 6th grade are working on “action projects” at their school. These projects include classroom waste audits and sheet mulching to make their school garden “bay friendly.”

That's the approximate number of disposable plastic water bottles students at Lincoln have saved in the last 3 months by filling up a reusable bottle at the Hydration Station instead.



Students at LMS show off their new water bottles.
Thanks to project lead teachers, Tom Miro at LMS
and the green teams at WMS and AHS for their efforts on this go green initiative!



That's the number of Alameda 4th graders who have toured the Davis St. Transfer Station so far this school year.

AUSD students and educators learn first hand what happens to their recyclables, garbage and green waste.

This trip is available free to all Alameda County 4th graders and AUSD has an excellent record of attendance.



Student Action Projects sponsored by StopWaste.org

5th Grade

Waste Reduction Action Project

1. Measure your impact at school and at home by conducting waste audits.
2. Find out how much of that waste was recyclable material.
3. Share your findings with students and teachers at your school.
4. Collect and compare waste audit data audit throughout the year to track school wide improvement.



6th Grade Bay Friendly Garden Action Project

Students work on site to make improvements to their school garden so it uses less water and protects our local watershed from harmful pesticides and chemicals.

