

Earth Day Report and Facility Energy Consumption

April 14, 2015

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M.O.F.

Report Highlights & Stewardship Goals

Updates Provided on:

- AUSD's recycle program: *Alameda Green Schools Challenge*
- Bay Farm Elementary Recycling Program
- AUSD's use of electricity, natural gas, and water consumption
- Plans and actions recommended to continue to meet AUSD's conservation goals

Goals:

- Reduce energy consumption by 5% annually for 3 years
- Reduce water consumption by 25% for 2015/16 (state mandate)
- Continue to increase diversion rate



Alameda Green Schools Challenge

90% Solution

Alameda Green Schools Challenge

- Created in 2009 at 5 pilot schools (Bay Farm, Edison, Otis, Paden, and Chipman)
- Obtained multi-year grant for containers and equipment
- Full implementation district-wide in 2012
- Achieved 65% diversion in 3 years
- Golden Bell Award in 2014

2014 Diversion Rates by School

Academy/Adult School (Chipman)	70%
Alameda High	60%
Bay Farm	82%
Earhart	67%
Edison	77%
Encinal High	44%
Franklin	62%
Haight	80%
Island High	44%
Lincoln	64%
Lum	70%
Maya Lin	73%
NEA/ACLC (Woodstock)	46%
Otis	69%
Paden	73%
Ruby Bridges	60%
Wood	72%

90% Solution Project

- Goal to reach 90% diversion by 2017
- Obtained multi-year grant for Green Program Facilitator



Right-Sizing Project

- Increasing recycling and composting
- Reducing trash volumes
- Recommended changes will result in 75% diversion district-wide in 2015

Island High School

Increased recycling from 44% to 53%



Otis Elementary School

Increased recycling from 69% to 73%



Lincoln Middle School

Increased recycling from 64% to 78%



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In the beginning ...

Bay Farm School Getting to 90% Diversion

- **2008 Diversion Rate 20%**
- **2013 Diversion Rate 73%**
- **2014 Diversion Rate 82%**

With 578 students K-8, Bay Farm School currently has the highest diversion rate of all AUSD schools

In January 2014, Bay Farm was able to swap this 4 cubic yard landfill dumpster...



... for this 3 cubic yard landfill dumpster



And now ...

READY*SET*RECYCLE CHALLENGE

Bay Farm
School

What does it mean to be a Ready Set Recycle school?



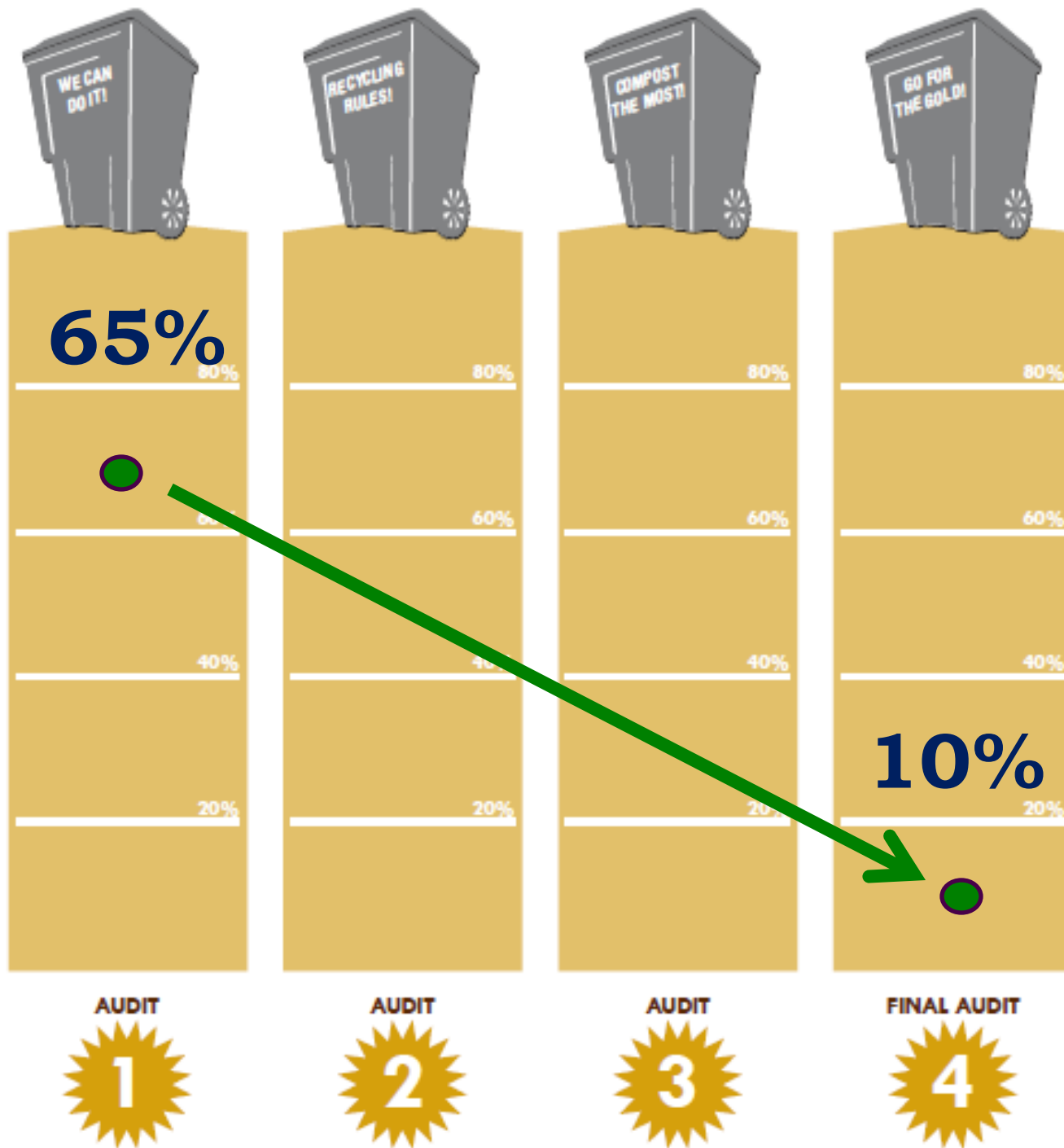
- **Stop Waste sends facilitators to conduct a series of student action projects.**
- **Your school works to reduce the amount of *good stuff** in your landfill trash to less than 10%**

**waste that could be recycled or composted*

October 2014

**Ms. Chaney's 5th graders conduct waste audit No. 1.
They share the results with the whole school.**







December 2014

Mr. Miller's 5th Graders conduct waste audit No. 2
We improved to 54% “good stuff” in our trash.



**Every classroom
and even the office
staff got a visit and
a “report card”
from a team of
students from Mr.
Miller’s class.**

**Students and
teachers find about
the “good stuff” in
their classroom
trash that could
have been recycled
or composted.**

**READY • SET • RECYCLE
CHALLENGE**

Your Class' Ready, Set, Recycle Report Card
Based on Your Classroom's LANDFILL WASTE AUDIT, December 11, 2014
by Mr. Miller's 5th grade class


Bay Farm's 5th Grade Classes are challenging our school to reduce the amount of recyclables and ~~compostables~~ in our landfill! Ms. Chaney's class reported that _____% of the recyclables and ~~compostables~~ could have been diverted to the landfill from their waste audit. Mr. Miller's class did a waste audit and below is their findings:

ROOM # _____ Teacher _____ Grade _____

5th Grade ~~Garbologist~~ Name(s) _____

Our Observations: What did we observe?
What did this class sort well or accurately?

- **Flimsy Plastic** (i.e. food Ziploc bags, food packaging)
Specifically, the most common type of flimsy plastic that we observed was/were _____.
- **Other Plastic** (i.e. laminated paper, school supply waste)
Specifically, the most common type of other plastic that we observed was/were _____.



Great Job sorting the right items in the landfill!
You can also become a **4Rs Student Action Hero** and Stop Waste More by taking even more action!

1.To reduce your waste more, instead of
_____ you could

January 2015

**Ms. Booth's 5th graders conduct waste audit No. 3.
So little trash, they had to bring out the gram scales!**



January 2015

The results are announced at a schoolwide Ready Set Recycle rally





**We have
improved from
54% to 24%
good stuff in
the landfill
trash!**

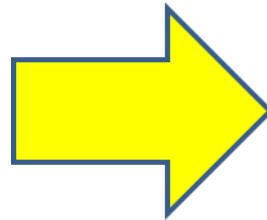
This is where we started...

And where we are now...

65%



24%



**Most schools in Alameda
County create about 5
bags of classroom waste
in 3 days...**



**And about 60% of the
stuff in those bags could
have been composted
or recycled.**



**Bay Farm School
classrooms, however,
create only about 1 bag
of waste in 3 days!**



**And less than 25% of that
waste could have been
recycled or composted!**



Time to say good-bye to these classroom trashcans...



**Say hello
to the
1 gallon
side car!**



Typical AUSD classroom set up



Bay Farm School classroom setup



**Thanks to the hard work of students and staff,
we are on our way to 90% diversion!**



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AUSD Environmental Stewardship Results Energy Use

Energy Use Change by Site -- Fiscal Year Ending 06/2014							
Site	Fiscal Year Ending 06/14			Fiscal Year Ending 06/13			% Chg
	Electricity (kWh)	Natural Gas (Therms)	Total Energy (MBtu)	Electricity (kWh)	Natural Gas (Therms)	Total Energy (MBtu)	
Alameda Gym	153,560	N/A	524	159,560	N/A	544	-3.8%
Alameda High	998,640	N/A	9,598	1,028,160	78,492	11,357	-15.5%
Alameda Swim Center	77,480	21,723	2,437	102,640	43,987	4,749	-48.7%
Bay Farm Elementary	205,800	2,003	902	201,360	2,167	904	-.1%
Chipman Middle	327,600	35,680	4,686	344,520	29,066	4,082	+14.8%
District Office (New)	278,149	N/A	1,364	N/A	N/A	412	+231.0%
Earhart Elementary	221,360	N/A	1,092	221,120	6,240	1,378	-20.7%
Edison Elementary	N/A	8,398	1,269	N/A	6,851	1,081	+17.4%
Encinal High	676,511	29,625	5,271	729,970	34,100	5,901	-10.7%
Encinal High Swim Center	120,360	34,801	3,891	131,080	29,472	3,394	+14.6%
Food Servs. Warehouse	61,432	N/A	210	61,777	N/A	211	-.6%
Franklin Elementary	87,560	1,994	498	79,560	2,316	503	-1.0%
Haight Elementary	358,720	N/A	1,224	346,520	0	1,182	+3.5%
Historic AHS	340,800	N/A	1,163	477,840	N/A	1,630	-28.7%
Lincoln Middle	618,800	18,957	4,007	670,800	19,732	4,262	-6.0%
Lum Elementary	231,240	9,870	1,776	239,720	12,962	2,114	-16.0%
Maintenance Yard	N/A	3,897	476	N/A	3,944	479	-.6%
Maya Lin Elementary	191,520	7,393	1,393	186,000	8,072	1,442	-3.4%
Otis Elementary	155,700	4,644	996	163,672	4,600	1,018	-2.2%
Paden Elementary	141,760	0	484	143,880	4,669	958	-49.5%
Ruby Bridges Elementary	427,200	3,782	1,836	451,520	4,671	2,008	-8.6%
Thompson Field	27,084	N/A	135	25,437	N/A	132	+1.8%
WCDC/500 Pacific Av	126,020	12,654	1,695	119,340	19,275	2,335	-27.4%
Wood Middle	344,730	8,329	2,009	278,520	7,815	1,732	+16.0%
Woodstock Elem./1900 3rd St	227,040	11,988	1,973	211,600	13,060	2,028	-2.7%
Total overall percentage change							2.1%

Energy Use Change by Site -- Printed by: UM Online/Alameda on 03/05/2015 at 9:18 AM -- Data accumulated according to date of invoice -- % Change based on previous year -- N/A indicates missing data. Note ** District Office in 2013 was only 6 months data. If we remove DO overall % use savings district wide is -7.4%

AUSD Environmental Stewardship Results Water Use

Water Use Change by Site -- Fiscal Year Ending 06/2014							
Site	Fiscal Year Ending 06/2014			Fiscal Year Ending 06/2013			% Chg
	Water (CCF)	Irrigation (CCF)	Sewer (CCF)	Water (CCF)	Irrigation (CCF)	Sewer (CCF)	
Alameda High	6,758	0	3,693	7,575	0	4,414	-13%
Alameda Swim Center	2,579	0	2,579	3,265	0	3,265	-21%
Bay Farm Elementary	407	5,290	407	713	5,765	713	-15%
Chipman Middle	1,162	0	1,162	1,131	0	1,131	3%
District Office (New)	385	0	384	122	0	122	215%
Earhart Elementary	6,693	0	6,693	6,372	0	6,372	5%
Edison Elementary	1,394	0	1,394	1,730	0	1,730	-19%
Encinal High	2,610	6,943	2,610	3,032	5,752	3,022	3%
Encinal High Swim Center	3,175	0	3,175	2,815	0	2,815	13%
Food Servs. Warehouse	0	8	0	0	5	0	60%
Franklin Elementary	530	0	530	335	0	335	58%
Haight Elementary	1,374	0	658	1,630	0	882	-19%
Historic AHS	92	0	88	166	0	161	-45%
Lincoln Middle	6,021	0	907	5,870	0	1,513	-6%
Lum Elementary	3,857	0	3,849	3,981	0	3,972	-3%
Maintenance Yard	57	0	57	50	0	50	14%
Maya Lin Elementary	810	0	810	1,017	0	1,017	-20%
Otis Elementary	1,118	0	1,118	2,041	0	2,041	-45%
Paden Elementary	413	0	413	472	0	471	-12%
Ruby Bridges Elementary	1,854	1,927	1,853	1,677	2,947	1,676	-11%
Thompson Field	4,813	0	4,813	3,676	0	3,676	31%
WCDC/500 Pacific Av	1,535	0	1,535	1,539	0	1,539	0%
Wood Middle	8,602	0	8,602	7,968	0	7,968	8%
Woodstock Elem./1900 3rd St	1,362	0	1,362	1,800	0	1,800	-24%
Total overall percentage change							6%

Site Utility Use Ranking -- Printed by: UM Online/Alameda on 03/05/2015 at 11:54 AM -- Data accumulated according to date of invoice -- N/A indicates missing data. Note ** District Office in 2013 was only 6 months data. If we remove DO overall % use savings district wide is -3%



Recommended Water Budget

Thank you for participating in our Landscape Irrigation Water Budget Program. The following is your customized water usage profiles for the last two years. EBMUD records indicate that this account primarily serves landscape irrigation. The graphical description compares your measured water usage versus your budgeted water usage for each billing period.

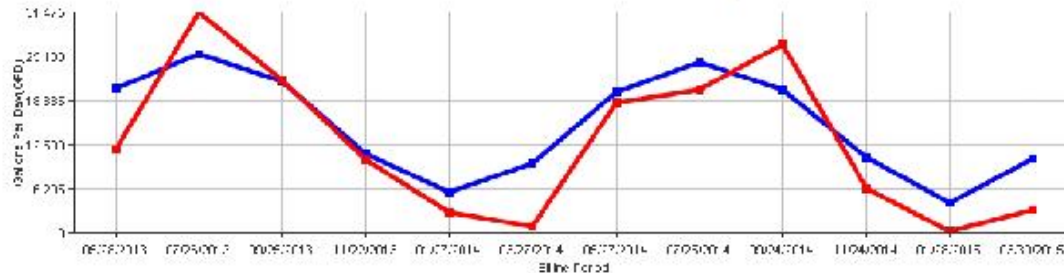
Customer Name: Alameda Unified Schl Dist
 Service Address: 210 Central Ave
 City: Alameda
 Account #: 52974900001
 Meter #: 31806770
 Est. Irrigated Area(sq. ft): 201829

Water Budget Summary	Used	Budgeted
Gallons used last 12 months	4,604,688	5,510,335
Gallons used previous year	4,792,436	5,730,497

Used: 9,397,124 Budget: 11,240,833 Percent: 84%
 Congratulations, meeting your water budget saved you \$ 9,092



Irrigated Area at 210 Central Ave



Billing Period	05/28/13	07/26/13	09/25/13	11/22/13	01/27/14	03/27/14	05/27/14	07/25/14	09/24/14	11/24/14	01/28/15	03/30/15
Budget(GPD)	20603	25673	21738	11236	5928	10001	20191	24351	20521	10786	4394	10601
Consumption(GPD)	11980	31479	21913	10536	2981	1014	18553	20551	26989	6462	334	3250
Evapotranspiration(ET)	9.99	12.04	10.54	5.18	3.11	4.69	9.79	11.42	9.95	5.23	2.27	5.14

*ET=Represents the estimated water need of cool season grass (in inches) for each billing period. The Water Budget Calculation does not use rain, typically irrigation systems can be turned off for the winter months of November, December, January, and February. The Maximum Allowable Water Budget, effective January 2010, is calculated using the new Model Efficient Landscape Ordinance from the State of California, Department of Water Resources (DWR). If you feel the irrigated area is not accurate or would like more information on this program, contact EBMUD at (510) 986-7615.

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Energy Consumption Factors

Variances that continue to effect conservation:

- Enrollment (increased 1% annually since 2009)
- Weather conditions (California severe drought)
- Increased summer programs usage
- Facility permit usage

Completed Repairs and Projects

Completed works that will improve energy conservation:

- Tinted windows at Maya Lin and Lincoln
- Food Services replaced aging equipment that is Energy Star rated
- Increased maintenance of HVAC to run more efficiently
- Adjusted sprinkler schedules to reduce water consumption
- Replacement of heater at Emma Hood Swim Center

Goals for the Upcoming School Year

School year 2015/2016 MOF/AMP and Go Green goals:

- Continue with our school awareness program (behavioral changes)
- Upgrade inadequate gas valves throughout district
- Installation of Hydrometer and sensors to provide real time water usage at sports fields
- Explore the use of water saving products to reduce water useage
- Continue to work with EBMUD on leak detection monitoring
- Implement Proposition 39 & Facilities Master Plan
- LED light replacement at recommended sites