



Mission Springs Water District

LIVINGWISE® PROGRAM SUMMARY REPORT

SPONSORED BY:



SUBMITTED BY:
RESOURCE ACTION PROGRAMS®



2009 - 2010

Mission Springs Water District LivingWise Program

Sponsored by:



Program Summary Report 2009 - 2010

Submitted By:

Resource Action Programs®



July 2010

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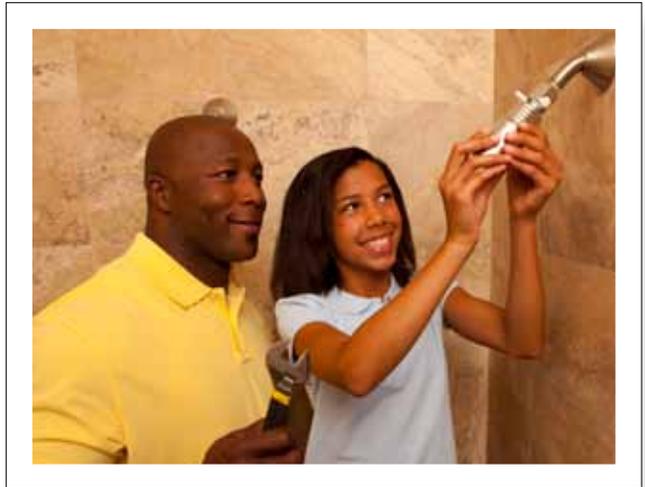
This report summarizes the 2009-2010 Mission Springs Water District LivingWise Program which was requested and implemented by teachers at Desert Springs Middle School. The program was used by three hundred eleven (311) sixth-grade students, teachers, and their families, and was funded by Southern California Edison, Southern California Gas Company, and Mission Springs Water District.

The program is a fully implemented, multi-resource efficiency-education program designed to facilitate installation of efficiency measures in homes and build knowledge of environmental issues.

The program yields a variety of measurable energy and water savings results using the best messengers - students. The program delivers a proven blend of teacher-designed classroom activities

with hands-on home projects to install high-efficiency devices and introduce resource-conscious behavior to students and their families. Both educational studies and utility evaluations prove the importance of addressing various learning styles to

maximize learning and the adoption of new behaviors. A critical element of this approach is the actual use of the new knowledge through reporting. The reporting function, provides reinforcement of new concepts while increasing participation and persistence. An overview of the results from the program appears below, with greater detail in the appendices.



The program delivered a proven blend of teacher-designed classroom activities with hands-on home projects to install high-efficiency devices .

"In my opinion, the thing the students like best about the materials/program was taking the kits home for use."

Tanya Niwa, Teacher
Desert Springs Middle School

Participant Satisfaction: A successful program excites and engages participants. Students, teachers and parents/guardians are all asked to evaluate the program and provide personal comments. Responses were unanimously positive and reveal a high level of parent/guardian involvement in the activities. Specifically:

- **50% of participating teachers indicated that parents supported the program.**
- **100% of participating teachers indicated they would recommend this program to other colleagues.**
- **81% of participating students gave the program a rating of good or great.**

(A summary of responses can be found in Appendix C, Teacher Evaluation Data)



Knowledge Gained: Identical surveys were taken by students prior to the program and again upon program completion to measure knowledge gained. Scores and subject knowledge improved from **64% to 74%**.

Data Obtained: A Home Check-Up was performed by students and their families, collecting household demographic and usage data along with program participation information.

- **46% reported that their family homes were owned.**
 - **29% reported that their water was heated by electricity.**
 - **67% reported that their home has a dishwasher.**
- (A summary of responses can be found in Appendix B, Home Check-Up)

Measures Installed: Students completed retrofit Home Activities as part of the program, and reported the measures they installed in their own homes. Specifically:

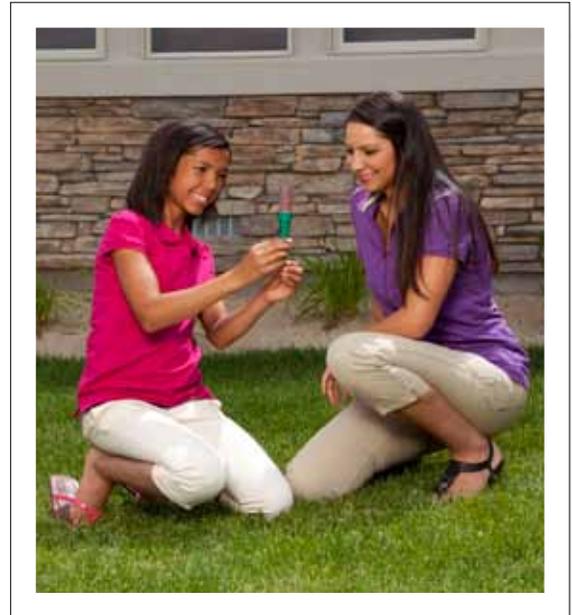
- **71% reported they installed the high-efficiency showerhead.**
 - **74% reported they installed the CFL.**
- (A summary of responses can be found in Appendix B, Home Activities)

Energy and Water Savings Results: In addition to educating students and their parents/guardians, the primary program goal for utility sponsors is to generate cost effective energy and water savings. Student Home Surveys not only provided the data used in Projected Resource Savings, but also reinforced the learning benefits.

Projected Resource Savings			
<small>(A list of assumptions and formulas used for these calculations can be found in Appendix A)</small>			
Projected Annual Savings		Projected Ten Year Savings	
4,798,427	gallons of water saved	43,206,136	gallons of water saved
21,810	therms of gas saved	198,321	therms of gas saved
193,969	kWh electricity saved	1,704,296	kWh electricity saved
4,798,427	gallons wastewater saved	43,206,136	gallons wastewater saved
Projected Average Annual Savings per Home		Projected Average Ten Year Savings per Home	
15,429	gallons of water saved	138,926	gallons of water saved
70	therms of gas saved	638	therms of gas saved
624	kWh electricity saved	5,480	kWh electricity saved
15,429	gallons wastewater saved	138,926	gallons wastewater saved

For more than sixteen years, Resource Action Programs (RAP) has designed and implemented resource efficiency and education programs – changing household energy and water use while delivering significant, measurable resource savings for program sponsors. All RAP Programs feature a proven blend of innovative education, comprehensive implementation services, and hands-on activities to put new knowledge to work in students' homes.

RAP Programs serve more than 300,000 households each year through elementary school, middle school, and adult programs. Our fifty person staff manages the implementation process and program oversight for nearly 200 individual programs annually. Recognized nationally as a leader in energy and water efficiency education and program design, RAP has a strong reputation for providing a high level of client service to its sponsors as part of a wide range of conservation and resource efficiency solutions for municipalities, utilities, states, community agencies and corporations.



RAP Programs serve more than 300,000 households each year through elementary school, middle school, and adult programs.

All aspects of program design and implementation is completed from the Program Center in Sparks, Nevada. These include graphic and web design, print production, warehousing and distribution, kit production, marketing, program tracking, data tabulation and reporting.

The school-based LivingWise Program is fully implemented and designed to generate immediate and long-term savings by bringing interactive “real world” education home with motivated students. The program staff identifies and enrolls students and teachers within the designated service territory. Enrolled participants receive educational materials designed to build knowledge and demonstrate simple ways to save, by not only changing habits, but also changing devices. Materials support state and national educational standards, which allow the program to easily fit into teachers' existing schedules and requirements.

The program begins with classroom discussions teaching the importance of using energy and water efficiently, followed by hands-on, creative problem solving. Next, participants take home a LivingWise Kit that contains high-efficiency measures. With the help of their parents/guardians, they install the measures in their home and complete a Home Survey. The LivingWise staff tabulates all responses, including Home Survey information, teacher responses, student input, parent/guardian responses, and generates a Program Summary Report. By installing and monitoring the new efficiency measures in their own homes, students are able to measure what they learned with actual energy, water, and monetary savings! These savings benefit both the participating student households and their communities.

Each participant receives classroom materials and a LivingWise Kit containing efficiency measures for their homes to perform the hands-on activities. Modifications were made to select materials which incorporated Southern California Edison, Southern California Gas Company, and Mission Springs Water District's logos and color scheme.

Each student/teacher receives:

Student Guide

Student Workbook

Program Introduction Letter Parent/Guardian*

Home Survey Scantron Form

Certificate of Achievement

LivingWise Kit containing:

- High-Efficiency Showerhead*
- Kitchen Aerator*
- Bathroom Aerator*
- Compact Fluorescent Lamp
- Filtritone Alarm*
- Digital Thermometer*
- Rain/Drip Gauge*
- Toilet Leak Detector Tablets*
- Flow Rate Test Bag
- Natural Resource Fact Chart
- Mini Tape Measure
- Educational Stickers/Magnets
- Parent/Guardian Comment Card

"GetWise" Wristband

Unlimited Interactive Program Website Access

Toll-Free HELP Line

***Materials / Installation Instructions
Provided in English and Spanish**

Each teacher/classroom receives:

Teacher Book

Step-by-Step Program Checklist

Lesson Plans

Program Video (VHS and DVD)

Program Evaluation

Supplemental Activities*

California State Education Standards
Correlation Chart

Pre/Post Scantron Survey Answer Keys

Classroom Electricity, Water, and Natural Gas Posters

Self-Addressed Postage-Paid Envelope





PROGRAM **IMPLEMENTATION**

The 2009-2010 Mission Springs Water District LivingWise Program followed this comprehensive implementation schedule:

1. Identification of California State Education Standards & Benchmarks
2. Curriculum development and refinement (completed annually)
3. Curriculum correlation to California State Education Standards & Benchmarks
4. Materials modification to incorporate Southern California Edison, Southern California Gas Company, and Mission Springs Water District logos and color scheme
5. Incentive program development
6. Teacher / school identification - with Southern California Edison, Southern California Gas Company, and Mission Springs Water District approval
7. Teacher outreach and program introduction
8. Teachers enrolled in the program individually
9. Implementation dates scheduled with teachers
10. Program material delivered to coincide with desired implementation date
11. Delivery confirmation
12. Periodic contact to ensure implementation and teacher satisfaction
13. Program completion incentive offered
14. Results collection
15. Program completion incentive delivered to qualifying participants
16. Thank-you cards sent to participating teachers
17. Data analysis
18. Program Summary Report

Participating teachers are free to implement the program to coincide with their lesson plans and class schedules. The next table is a comprehensive list of sixth-grade classrooms that participated during the 2009-2010 school year.



School	Teacher	Teachers	Students
Desert Springs Middle School	Leann Hoelscher	1	74
Desert Springs Middle School	Kari Gunkel	1	110
Desert Springs Middle School	Jason Yasuda	1	43
Desert Springs Middle School	Tanya Niwa	1	80

<i>Totals</i>	4	307
<i>Total Participants</i>	311	

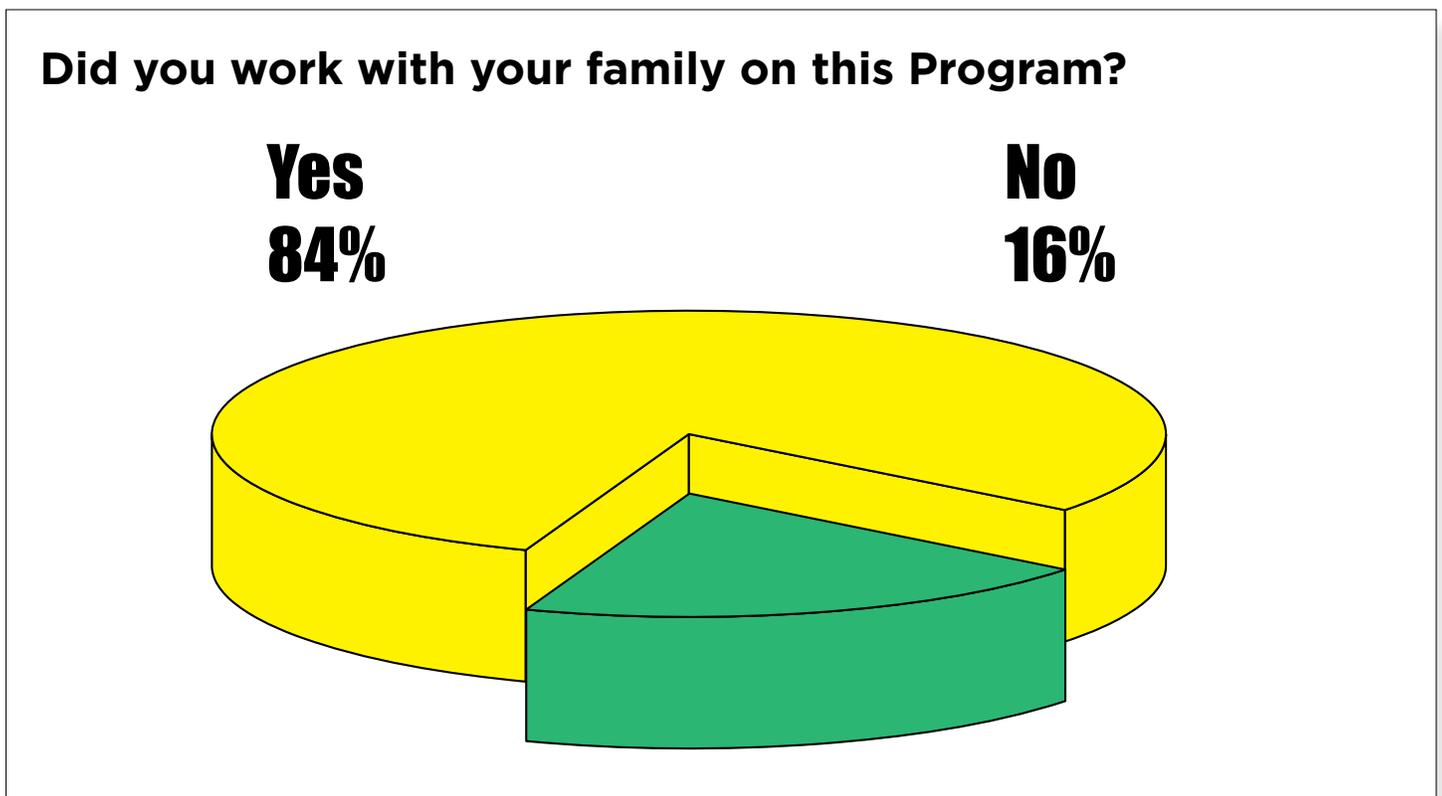


The Mission Springs Water District LivingWise Program has had a significant impact within the community. As illustrated below, the program successfully educated a portion of the community about energy and water efficiency while generating resource savings through the installation of efficiency measures in homes. Home Survey information was collected to track savings and provide household consumption and audit data to sponsors. Program evaluations and comments were collected from teachers, students, and parents/guardians. The following program elements were used to collect this data:

A. Home Survey and Retrofits

Upon completion of the program, participating families are asked to complete a Home Survey to assess their resource use, verify product installation, provide demographic information and measure participation rates. A few samples of questions asked are below while a complete summary of all responses is included in the appendices.

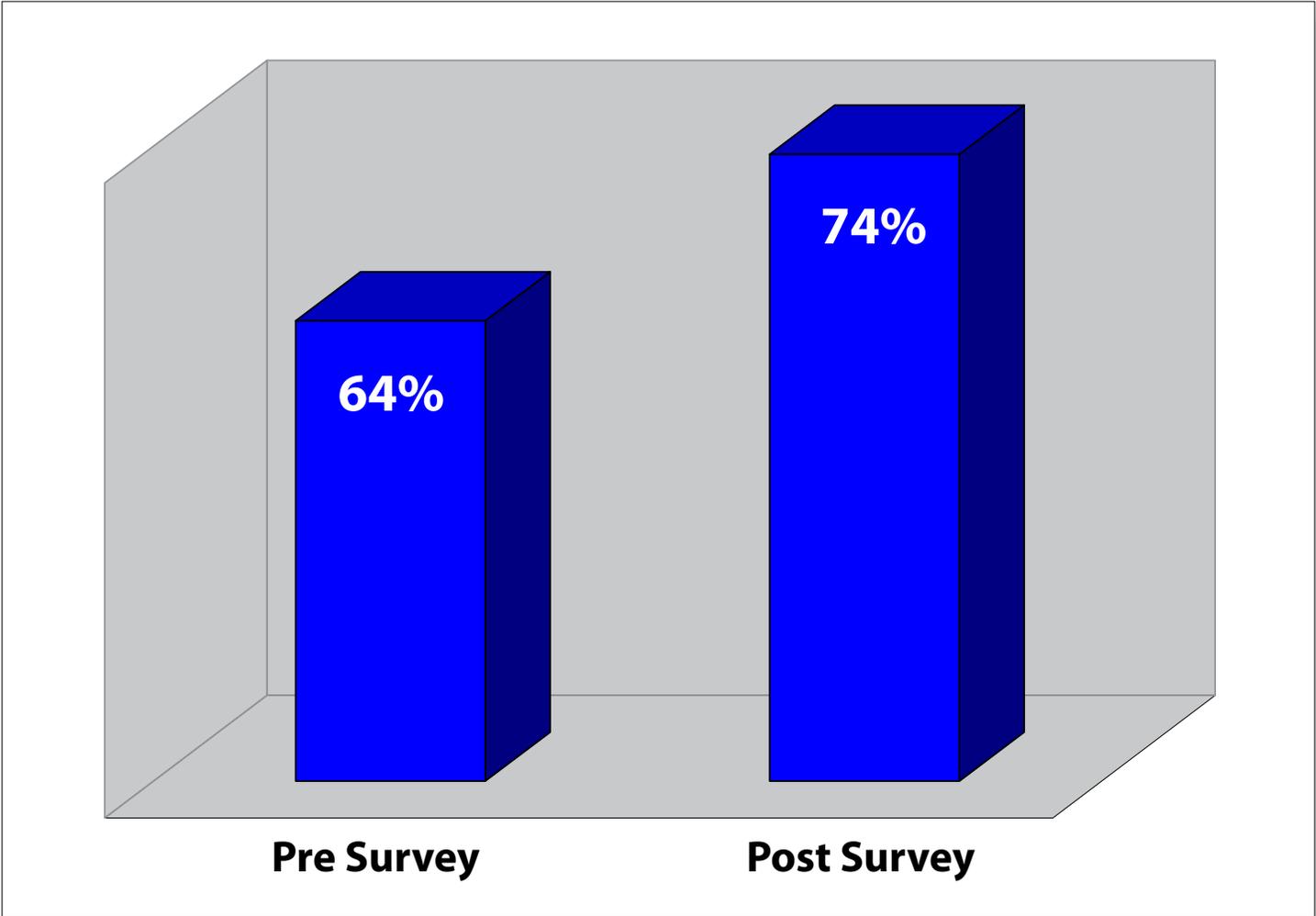
- Did your family install the new high-efficiency showerhead?** **Yes - 71%**
- Did your family install the Compact Fluorescent Lamp (CFL)?** **Yes - 74%**
- Did you work with your family on this Program?** **Yes - 84%**



B. Knowledge Gained

On the Home Survey students were asked to complete ten questions before the program was introduced and then again after it was completed to determine the knowledge gained through the program. The average student answered **6.4** questions correctly prior to being involved in the program and then improved to answer **7.4** questions correctly following participation.

Scores improved from 64% to 74%





C. Energy and Water Savings Summary

As part of the program, parents/guardians and students installed resource efficiency measures in their homes. They also measured the pre-existing devices to calculate savings that they generated. Using the family habits collected from the Home Survey as the basis for this calculation, three hundred eleven (311) households are expected to save the following resource totals. Savings from these actions and new behaviors will continue for many years to come.

Projected Resource Savings		
Number of Participants:	311	
	<u>Annual</u>	<u>Lifetime</u>
Reduction from showerhead retrofit: Product Life: 10 years	3,842,801 15,909 123,756	38,428,006 gallons 159,092 therms 1,237,559 kWh
Reduction from kitchen aerator retrofit: Product Life: 5 years	473,585 1,961 15,252	2,367,923 gallons 9,803 therms 76,258 kWh
Reduction from bathroom aerator retrofit: Product Life: 5 years	482,041 1,996 15,524	2,410,207 gallons 9,978 therms 77,620 kWh
Reduction from air filter alarm: Product Life: 10 years	13,565 1,945	135,651 kWh 19,447 therms
Reduction from compact fluorescent lamp (CFL): Product Life: 10,000 hours	25,872	177,208 kWh
TOTAL PROGRAM SAVINGS:	4,798,427 21,810 193,969	43,206,136 gallons 198,321 therms 1,704,296 kWh
TOTAL PROGRAM SAVINGS PER HOUSEHOLD:	15,429 70 624	138,926 gallons 638 therms 5,480 kWh

D. Participant Response

Program improvements are based on participant feedback received from each program. Students, teachers, and parents/guardians are each asked to evaluate relevant aspects of the program. Each response is reviewed for pertinent information to both the program and the program sponsor. The following is a sample of feedback collected during the program.

Teacher Response

(A summary of responses can be found in Appendix C)

75% of participating teachers indicated they would conduct the program again given the opportunity.

100% of participating teachers indicated they would recommend the program to their colleagues.

In my opinion, the thing the students like best about the materials/program was:

"...taking the kits home for use."

Tanya Niwa, Desert Springs Middle School

"...checking to see how much they could save."

Leann Hoelscher, Desert Springs Middle School

"...most liked getting something. Some lost interest when they saw it wasn't toys. Some wanted to do the experiments. A lot of the parents would not allow students to do activities."

Jason Yasuda, Desert Springs Middle School

In the future, one thing I would change would be:

"...there needs to be a zero option for question 13 on scantron form."

Jason Yasuda, Desert Springs Middle School

"...some of the questions need more options."

Leann Hoelscher, Desert Springs Middle School



Parent/Guardian Comments: From both a utility and teacher perspective, parent/guardian involvement with program activities and their children is of paramount interest. When parents/guardians take an active role in their child’s education it helps the schools and strengthens the educational process considerably. When students successfully engage their families in the retrofit and home efficiency projects, utility efficiency messages have been powerfully delivered to two generations in the same household. The program is a catalyst for this family interaction, which is evidenced by the parent/guardian comments which are received each year. An excerpt is presented below.

Parent/Guardian Response

What comments would you like to express to your child’s program sponsor?

“Great way to introduce ways to save our planet’s resources”
Araceli Alduenda, Desert Springs Middle School

E. Program Enhancements

In addition to increasing resource awareness and efficiency, the program strengthens bonds between sponsors and their communities. The program has been designed from start to finish with this in mind. Some of the steps taken to ensure our sponsors receive the greatest possible exposure are as follows:

Promotion of Sponsor Programs: Program materials can be used to publicize and boost enrollment in additional efficiency program opportunities. This option was not used however, LivingWise can easily promote residential programs such as toilet replacement or other programs.

Custom Branding: Each LivingWise Kit was labeled with the Southern California Edison, Southern California Gas Company, and Mission Springs Water District logo. In addition to the LivingWise Kit, the Introduction to Parent/ Guardian Letter and Teacher Program Evaluation featured sponsor branding.

ATTN: PARENT



Congratulations!

Your child has been selected to participate in the exciting LivingWise® Resource Action Program! Due to the generosity of **Mission Springs Water District, Southern California Edison, and Southern California Gas Company**, this program is being provided to your child's school at NO COST. Your child will be learning easy ways to use water and energy more efficiently in your home. Improving your home efficiency will help YOU save money on your home utility bills! However, the success of the program will depend on your involvement and support.

Here are a few key aspects of the program and ways you can help:

- Your child will be given a LivingWise Kit, which includes high quality, high performance products that utilize the latest efficiency technology. This kit is valued at over \$60.00, and you can find many of the products at retailers such as Bed Bath and Beyond® and Camping World®. Please help your child install these products in your home as not every person has the chance to receive this kit free of charge.
- Your child will receive homework assignments to go with the classroom instruction, which include studying the water and energy use in your home. These projects are designed to highlight the potential benefits of switching to the new, high quality, high performance products that have been provided in the kit. Some of the activities will require your assistance or supervision. All materials and instructions are provided, and additional program support can be obtained from your child's teacher or by calling the Resource Action Programs Information Center toll-free at 1-888-GET-WISE.
- Help your child fill out the Household Report Card. This will help you and your child realize how much energy you are saving as a family!
- The Resource Action Team and **Mission Springs Water District, Southern California Edison, and Southern California Gas Company** would love to hear from you. Once you and your child have completed the program, please take a moment to fill out the parent survey card inside the kit. When you're done, just drop it into your mail box - we'll take care of the postage!

The LivingWise program will be a positive experience for your entire family. Not only will it allow your child the chance to be a leader in your home and community, but also your family can benefit from lower utility bills! Thank you for your participation, and thank you to the sponsors for making this program available.

Remember, You Can Make A Difference!





The LivingWise program is jointly funded by the Mission Springs Water District and California utility customers. The program is administered by Southern California Edison and Southern California Gas Company (The Gas Company(SG)) under the auspices of the California Public Utilities Commission, and the Mission Springs Water District through a contract awarded to Resource Action Programs. California customers who choose to participate in this program are not obligated to purchase any additional services offered by the contractor. The trademarks used herein are the property of their respective owners. The Mission Springs Water District, Southern California Edison, and Southern California Gas Company make no warranty, whether express or implied, including warranty of merchantability or fitness for any particular purpose, use or application of selected goods and services.

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PROGRAM EVALUATION

In an effort to improve our program, we would like your assessment of the LivingWise® Program. Please take a few moments to fill out this evaluation form. Upon completion, please return the form in the self-addressed return envelope along with the results you collected. Don't forget to enroll for next year using the form on the back of this sheet.

School: _____
Teacher: _____

Please check the box that best describes your opinion:

	STRONGLY AGREE	AGREE	DISAGREE	STRONGLY DISAGREE
1. The materials were attractive and easy to use.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2. The materials and activities were well received by students.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
3. The materials were clearly written and well organized.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
4. The conservation tools inside the kit were easy for students to use.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
5. Students indicated that their parents supported the program.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
6. If you had the opportunity, would you conduct this program again?	<input type="checkbox"/> YES			<input type="checkbox"/> NO
7. Would you recommend this program to other colleagues?	<input type="checkbox"/> YES			<input type="checkbox"/> NO

In my opinion, the thing the students like best about the materials/program was:

In the future, one thing I would change would be:

PLEASE SIGN BELOW

Total number of students participating in the program: _____
Total number of Scantron forms returned: _____
Teacher Signature: _____ Date: _____





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Projected Savings from CFL Retrofit

Average length of use:	1460 hours per year ³
Product life:	10,000 hours ¹
Average incandescent light bulb uses:	100 watts per hour
Compact fluorescent light bulb uses:	23 watts per hour
Energy saved per year	112 kWh
Energy saved over life expectancy:	770 kWh

Installation / participation rate of:	74%	²
Number of Participants	311	²

Reduction from compact fluorescent light bulb:

Annual kWh:	25,872 kWh
Lifetime kWh:	177,208 kWh

¹ Provided by manufacturer.
² Data reported by program participants.
³ Assumption (4 hours per day)

Projected Savings from FilterTone Retrofit

Annual energy use by air conditioner, heat pump or furnace:	2,796 kWh ⁴
Projected increase in efficiency:	3% ³
Product life	10 years ¹
Energy saved per year:	84 kWh per year
Energy saved over life expectancy:	839 kWh

Annual energy use by air conditioner, heat pump or furnace:	650 therms ³
Projected increase in efficiency:	1.85% ³
Product life	10 years ¹
Energy saved per year:	12 therms per year
Energy saved over life expectancy:	120 therms per year

Installation / participation rate of:	52%	²
Number of Participants	311	²

Total reduction from FilterTone[®] alarm:

Annual:	13,565 kWh
Lifetime:	135,651 kWh

Annual:	1,945 therms
Lifetime:	19,447 therms

¹ Provided by manufacturer.

² Data reported by program participants.

³ Reichmuth P.E., Howard. (1999). Engineering Review and Savings Estimates for the 'Filtertone' Filter Restriction Alarm.

⁴(2010, July 7). Retrieved July 7, 2010, from U.S. Department of Energy, Energy Information Administration Residential Energy Consumption Web site:

<http://www.eia.doe.gov/emeu/recs/recs2001/enduse2001/enduse2001.html>

Projected Savings from Showerhead Retrofit

Average household size:	2.98 people ³
Average length of use:	8.00 minutes per day ⁴
Product life:	10.00 years ¹
Average showerhead has a flow rate of:	4.00 gallons per minute ⁴
Oxygenics showerhead has flow rate of:	2.00 gallons per minute ¹
Flow reduction:	2.00 gallons per minute

Water:

Average showerhead requires:	95.36 gallons per day
Retrofit showerhead requires:	47.68 gallons per day
Showerhead produces an annual reduction of:	17,403.20 gallons
Showerhead produces a lifetime reduction of:	174,032 gallons

Gas:

Average showerhead requires:	0.56 therms per day
Retrofit showerhead requires:	0.28 therms per day
% of water heated by gas:	71% ²
Showerhead produces an annual reduction of:	72 therms
Showerhead produces a lifetime reduction of:	720 therms

Electricity:

Average showerhead requires:	10.59 kWh per day
Retrofit showerhead requires:	5.29 kWh per day
% of water heated by electricity:	29% ²
Showerhead produces an annual reduction of:	560 kWh
Showerhead produces a lifetime reduction of:	5,605 kWh

Installation / participation rate of:	71% ²
Number of Participants	311 ²

Total reduction from showerhead retrofit:

Annual:	3,842,801 gallons
	15,909 therms
	123,756 kWh
Lifetime:	38,428,006 gallons
	159,092 therms
	1,237,559 kWh

¹ Provided by manufacturer.

² Data reported by program participants.

³(2010, July 7). Retrieved July 7, 2010, from U.S. Census Bureau State and County Quick Facts Web site: <http://quickfacts.census.gov/qfd/states/06/06065.html>

⁴(2001). In Southern California Edison Evaluation of 2000-2001 School Programs Ridge & Associates.

Projected Savings from Bathroom Aerator Retrofit

Average household size:	2.98 people ³
Average length of use:	2.50 minutes per day ⁴
Product life:	5.00 years ¹
Average bathroom aerator has a flow rate of:	2.00 gallons per minute ⁴
Retrofit bathroom aerator has flow rate of:	1.00 gallons per minute ¹
Flow reduction:	1.00 gallons per minute

Water:

Average bathroom aerator requires:	14.90 gallons per day
Retrofit bathroom aerator requires:	7.45 gallons per day
Retrofit bathroom aerator produces an annual reduction of:	2,719 gallons
Retrofit bathroom aerator produces a lifetime reduction of:	13,596 gallons

Gas:

Average bathroom aerator requires:	0.09 therms per day
Retrofit bathroom aerator requires:	0.04 therms per day
% of water heated by gas:	71% ²
Retrofit bathroom aerator produces an annual reduction of:	11 therms
Retrofit bathroom aerator produces a lifetime reduction of:	56 therms

Electricity:

Average bathroom aerator requires:	1.65 kWh per day
Retrofit bathroom aerator requires:	0.83 kWh per day
% of water heated by electricity:	29% ²
Retrofit bathroom aerator produces an annual reduction of:	88 kWh
Retrofit bathroom aerator produces a lifetime reduction of:	438 kWh

Installation / participation rate of:	57% ²
Number of Participants	311 ²

Total reduction from bathroom aerator retrofit:

Annual:	482,041 gallons
	1,996 therms
	15,524 kWh
Lifetime:	2,410,207 gallons
	9,978 therms
	77,620 kWh

¹ Provided by manufacturer.

² Data reported by program participants.

³(2010, July 7). Retrieved July 7, 2010, from U.S. Census Bureau State and County Quick Facts Web site: <http://quickfacts.census.gov/qfd/states/06/06065.html>

⁴(2001). In Southern California Edison Evaluation of 2000-2001 School Programs Ridge & Associates.

Projected Savings from Kitchen Aerator Retrofit

Average household size:	2.98 people ³
Average length of use:	2.50 minutes per day ⁴
Product life:	5.00 years ¹
Average kitchen aerator has a flow rate of:	2.50 gallons per minute ⁴
Retrofit kitchen aerator has flow rate of:	1.50 gallons per minute ¹
Flow reduction:	1.00 gallons per minute

Water:

Average kitchen aerator requires:	18.63 gallons per day
Retrofit kitchen aerator requires:	11.18 gallons per day
Retrofit kitchen aerator produces an annual reduction of:	2,719 gallons
Retrofit kitchen aerator produces a lifetime reduction of:	13,596 gallons

Gas:

Average kitchen aerator requires:	0.11 therms per day
Retrofit kitchen aerator requires:	0.07 therms per day
% of water heated by gas:	71% ²
Retrofit kitchen aerator produces an annual reduction of:	11 therms
Retrofit kitchen aerator produces a lifetime reduction of:	56 therms

Electricity:

Average kitchen aerator requires:	2.07 kWh per day
Retrofit kitchen aerator requires:	1.24 kWh per day
% of water heated by electricity:	29% ²
Retrofit kitchen aerator produces an annual reduction of:	88 kWh
Retrofit kitchen aerator produces a lifetime reduction of:	438 kWh

Installation / participation rate of:	56% ²
Number of Participants	311 ²

Total reduction from kitchen aerator retrofit:

Annual:	473,585 gallons
	1,961 therms
	15,252 kWh
Lifetime:	2,367,923 gallons
	9,803 therms
	76,258 kWh

¹ Provided by manufacturer.

² Data reported by program participants.

³(2010, July 7). Retrieved July 7, 2010, from U.S. Census Bureau State and County Quick Facts Web site: <http://quickfacts.census.gov/qfd/states/06/06065.html>

⁴(2001). In Southern California Edison Evaluation of 2000-2001 School Programs Ridge & Associates.

Home Survey and Retrofit Data

Home Check-Up

1 What type of home do you live in?

Single family home	70%
Multi-family (5-20 units)	12%
Multi-family (2-4 units)	16%
Multi-family (21+ units)	2%

2 Was your home built before 1992?

Yes	41%
No	59%

3 Is your home owned or rented?

Owned	46%
Rented	54%

4 How many kids live in your home?

1	7%
2	30%
3	27%
4	24%
5+	13%

5 How many adults live in your home?

1	14%
2	59%
3	18%
4	5%
5+	4%

6 What is the main source of heat in your home?

Natural Gas Furnace	54%
Propane	4%
Heating Oil	0%
Electric Heater	32%
Wood	2%
Other	8%

7 Does your home have a programmable thermostat?

Yes	72%
No	28%

8 Does your home have a dishwasher?

Yes	67%
No	33%

9 How many half bathrooms are in your home?

0	86%
1	10%
2	4%
3	0%
4+	0%

10 How many full bathrooms are in your home?

1	28%
2	66%
3	6%
4	0%
5+	0%

11 How many toilets are in your home?

1	21%
2	71%
3	7%
4	0%
5+	0%

12 How is your water heated?

Natural Gas	71%
Electricity	29%

13 How many incandescent bulbs (non CFLs) are in your home?

1	9%
2	5%
3	6%
4	5%
5	3%
6	8%
7	3%
8	5%
9	5%
10	6%
11	1%
12	6%
13	2%
14	2%
15	2%
16	2%
17	2%
18	2%
19	2%
20	2%
21	1%
22	0%
23	1%
24+	18%

Home Activities

1 What is the flow rate of your old showerhead?

0 - 1.0 gpm	12%
1.1 - 1.5 gpm	11%
1.6 - 2.0 gpm	24%
2.1 - 2.5 gpm	19%
2.6 - 3.0 gpm	19%
3.1+ gpm	15%

2 What is the flow rate of your old bathroom aerator?

0 - 1.0 gpm	20%
1.1 - 1.5 gpm	17%
1.6 - 2.0 gpm	25%
2.1 - 2.5 gpm	16%
2.6 - 3.0 gpm	16%
3.1+ gpm	6%

3 What is the flow rate of your old kitchen aerator?

0 - 1.0 gpm	13%
1.1 - 1.5 gpm	21%
1.6 - 2.0 gpm	23%
2.1 - 2.5 gpm	19%
2.6 - 3.0 gpm	19%
3.1+ gpm	6%

4 Did your family install the new high efficiency showerhead?

Yes	71%
No	29%

5 If you answered yes to question 4, what is the flow rate of your new showerhead?

0 - 1.0 gpm	34%
1.1 - 1.5 gpm	36%
1.6 - 2.0 gpm	29%

6 Was your toilet leaking?

Yes	24%
No	76%

7 Did your family install the bathroom aerator?

Yes	57%
No	43%

8 If you answered yes to question 7, what is the flow rate of your new bathroom aerator?	0 - 0.5 gpm	40%
	0.6 - 1.0 gpm	60%
9 Did your family install the kitchen aerator?	Yes	56%
	No	44%
10 If you answered yes to question 9, what is the flow rate of your new kitchen aerator?	0 - 1.0 gpm	45%
	1.1 - 1.5 gpm	55%
11 Did your home have any water leaks?	Yes	26%
	No	74%
12 Did your family change the way they water outdoors?	Yes	56%
	No	44%
13 Did your family lower your water heater settings?	Yes	58%
	No	42%
14 Did your family raise the temperature on your refrigerator?	Yes	30%
	No	70%
15 Did your family turn down the thermostat in winter for heating?	Yes	53%
	No	47%
16 Did your family turn up the thermostat in summer for cooling?	Yes	63%
	No	37%
17 Did your family install the Filbertone® Alarm?	Yes	52%
	No	48%
18 What was the wattage of the incandescent bulb you replaced?	60	29%
	75	22%
	100	11%
	Other	38%

19 Did your family install the Compact Fluorescent Lamp (CFL)?	Yes	74%
	No	26%
20 Did you work with your family on this program?	Yes	84%
	No	16%
21 Did your family change the way they use water?	Yes	81%
	No	19%
22 Did your family change the way they use energy?	Yes	83%
	No	17%
23 How would you rate the LivingWise® program?	Great	52%
	Pretty good	29%
	Okay	16%
	Not so good	3%

Teacher Evaluation Data

1 The materials were attractive and easy to use.

Strongly Agree	75%
Agree	25%
Disagree	0%
Strongly Disagree	0%

2 The materials and activities were well received by students.

Strongly Agree	50%
Agree	50%
Disagree	0%
Strongly Disagree	0%

3 The materials were clearly written and well organized.

Strongly Agree	75%
Agree	25%
Disagree	0%
Strongly Disagree	0%

4 The conservation technologies were easy for students to use.

Strongly Agree	50%
Agree	50%
Disagree	0%
Strongly Disagree	0%

5 Students indicated that their parents supported the program.

Strongly Agree	50%
Agree	0%
Disagree	50%
Strongly Disagree	0%

6 If you had the opportunity, would you conduct this program again?

Yes	75%
No	25%

7 Would you recommend this program to other colleagues?

Yes	100%
No	0%



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