How does the water cycle work...?

It's all about water CHANGING FORMS

Slide From the SAWS Grade 5 "Incredible Journey" PowerPoint Presentation
SAWS Water Education Program Annual Report

School Year: 2012/2013

August 1, 2012 through July 31, 2013

REPORT SUMMARY

This report presents an update on activities related to implementation of the Stockton Area Water Suppliers (SAWS) Water Education Program in the 2012/2013 school year. The report includes a summary, a full report, charts of data and statistics, participant feedback, an assembly program report and a pictorial appendix.

In the 2012/2013 school year, the SAWS Water Education Program continued to serve Stockton's elementary and middle school classrooms and after school programs. As part of a comprehensive outreach effort, the SAWS Water Education Program also presented workshops on the Delta College Campus and participated in numerous special events in San Joaquin County, including three AgVenture events, school farm days, Stockton's Earth Day Festival and a variety of local youth-oriented events and gatherings. Our standard program offers seven grade-level specific in-class presentations, an after-school program and water-themed, school-wide assemblies performed by the Zun Zun environmental education troupe. In the 2012/2013 school year, the SAWS Water Education Program reached a total of 24,479 students and participants; 19,748 through in-class, event and after school programs and 4,731 through the Zun Zun assembly program.

A summary of 2012/2013 Program highlights:

- The SAWS Water Education Program visited 62 Stockton area schools, presenting in 245 classrooms and after school venues for 8,466 students.
- SAWS sponsored 14 Zun Zun “Water Beat” assembly performances for 4,731 students in nine Stockton elementary schools.
- The Stockton East Water District hosted 10 facility tours of the Dr. Joe Waidhofer Drinking Water Treatment Plant for 302 attendees.
• SAWS sponsored 8 career/water awareness workshops at San Joaquin Delta College for 300 students.

• The SAWS Water Education Program participated in a variety of local, youth-oriented special events and promotional programs, reaching 10,680 attendees. These events included:
  o San Joaquin County’s AgVenture Programs (South County, Stockton & Lodi)
  o Lodi Literacy Fair
  o SJCOE Science Fair judging
  o Don Riggio Elementary’s “Delta Experience”
  o Manteca Unified School District’s “Planet Party Day”
  o Manteca Unified School District’s Farm Days
  o Mabel Barron Elementary’s “Spring Fun Day”
  o Tully Knoles Elementary’s “Spring Fun Day”
  o Stockton’s Earth Day Festival at Victory Park
  o Children/Youth Day at Pixie Woods
  o Bear Creek Community Church Summer Day Camp Water Festival

• Special presentations and workshops on water awareness, conservation, career path development and implementation of the SAWS Water Education Program were made for a variety of organizations and groups, including:
  o SJCOE CASEL Teacher’s Conference
  o Lincoln High School’s “Window on Your Future” career path development event
  o Delta College Reading for Science and Reading for Geography classes
Full Report

Water Education Program
2010/2011 SAWS WATER EDUCATION PROGRAM
HIGHLIGHTS & UPDATES

The SAWS In-Class Presentation Program:

The SAWS in-class presentations are in high demand in all four Stockton school districts. Invitations to book presentations for the 2012/2013 school year were sent to teachers and administrators via email in May 2012, just prior to the end of the school year. The presentation calendar was full by mid September, and a waiting list was established in October.

Teachers familiar with the program often coordinate our presentations with their lesson plans. Kinder/first grade teachers can use our popular “Water Cycle Story” presentation to reinforce weather and states of matter standards, while the second grade “H20 to Go!” presentation addresses gravity and motion standards through a variety of fun and exciting hands-on pumping activities. The “Water Matters” and “Incredible Journey” programs target science content standards for grades 3, 4 and 5. These presentations are similar, but adapted for grade level and specific content standards. Both focus on the water cycle, addressing a variety of science standards through fascinating facts and figures and a demonstration of the ratio of fresh to salt water on Planet Earth. During the “Water Matters” program, students perform a hands-on “scientific experiment” that demonstrates the properties of surface tension and cohesion, as well as concepts related to food chains and webs and environmental issues in our communities. The “Incredible Journey” program addresses similar science standards for grade 5. After a refresher on the water cycle, students participate in an active, social game from Project WET, embarking on the “Incredible Journey” of a water molecule in the water cycle, evaporating, condensing and precipitating around the room. During play, students make a beaded bracelet, with each bead representing a location and process of the water cycle. In both programs, students follow a comprehensive “Source to Tap” diagram, learning how water travels from the water cycle to their faucets at home. A water filtering demonstration gives students a glimpse of the processes involved in water treatment and distribution and provides information about local water sources and the agencies that sponsor the SAWS Water Education Program.

The “California Water” presentation, which covers the history, use and distribution of water in our state, is responsive to both fourth and sixth grade content standards and features a variety
of hands-on activities, including map interpretation and a role-playing game designed to introduce students to the concepts of water rights and legislation relating to our natural resources.

This year, the SAWS Water Education Program introduced a middle-school program entitled, "Our Watershed: We All Live Downstream." This presentation features hands-on activities using an "Enviroscape" model that helps students learn about storm water runoff, point and non-point source water pollution and how our actions can affect water quality in our communities.

Every student in every classroom we visit receives a water-saver pencil and a colorful, age appropriate workbook with information and activities pertaining to water conservation and awareness. As a thank you for inviting us to present, participating teachers receive a variety of gifts, including magnetic clips, seed packets, water activity guides, sponges, pocket hand sanitizers, crayon packs and other items that are useful in the classroom.

There is evidence that as Stockton's educational resources have diminished, our water education presentations have steadily gained favor. Teachers find value in our ability to connect content standards to water resources, the environment and conservation, and the combination of education and entertainment we provide makes learning exciting and fun. Our presentations can address numerous content standards in 60-90 minutes with little or no teacher prep; our programs provide an excellent introduction or follow up to standard curriculum for every grade level. We like to remind teachers that, in spite of budget cuts, students can still experience the benefit of community learning because SAWS sponsors in-class programs that "bring the field trip to the classroom."

**Water Treatment Plant Tours**

When the SAWS Water Education Program visits middle/high school and college classrooms (Grade 5 and up), we encourage teachers to schedule a visit to their local drinking water treatment plant for a facility tour. Tours for both the Dr. Joe Waidhofer Plant on East Main and the new Delta Water Supply Water Treatment Plant in North Stockton are currently available. When elementary and middle-school classes visit, we ask that the groups include at least one parent/adult chaperon for every five students. While the main purpose for this request is crowd control, we have found that parents touring the plant often learn more than their children do, and invariably leave with a greater appreciation for their community's water resources. College
classes and community groups are generally fascinated and impressed with our facilities and the treatment process; most citizens never take the time to consider the source and systems that provide them with drinking water. While school districts often lack funding for field trip transportation, some public and private schools are able to visit by using adult/parent chauffeurs and chaperons. One of the goals stated in this report last year was to increase the number of facility tours, and we are pleased to report that in the 2012/2013 school year tours of the Dr. Joe Waidhofer Drinking Water Treatment Plant on East Main Street increased by 80 percent. While this increase may be due to more funding availability for transportation, we have also noticed an uptick in interest from teachers in their community water supply. The SAWS Water Education Program presenters plan to continue to work toward increasing the number of facility tours in the future, as this type of presentation is valuable in raising public awareness and can provide an enlightening experience for students and community members, as well as those looking for career path possibilities.

After School Programs, AgVenture & Special Events:

The H2Olympics After School and Special Event Program: Due to scheduling difficulties in previous years, the SAWS Water Education Program no longer visits all SUSD campuses to present the H2Olympics After School Program. H2Olympics presentations are still offered to any school in the Stockton area as an after school or special event activity, but program facilitators and activity coordinators must now contact us to schedule their program directly; this way we can be sure they desire a presentation and will be prepared when we arrive. In the 2012/2013 school year, the H2Olympics program was used as an after school program, as a booth at school festivals and events, and to serve an entire grade level with hands-on activities.

Benefits of the SAWS H2Olympics Programs Include:

- Hands-on activities educate and entertain
- Format holds students’ attention because it provides an alternative to classroom learning structure
- Students are likely to take message home
- Parents often show up, may even participate
- Broad outreach to multiple grade levels (K-8): maximum contacts in minimum amount of time
Use of upper elementary and middle school helpers allows older students to work with/teach younger students: excellent learning environment for all.

Provides teachers, facilitators and activities coordinators with free, appropriate educational activities.

**San Joaquin County’s AgVenture Events:**

Every third grader in San Joaquin County is eligible to participate in this dynamic program sponsored by San Joaquin Farm Bureau and Select San Joaquin Foundation. AgVenture participants enjoy a day of fun while learning about the vast diversity of agriculture in San Joaquin County. This event exposes students to important concepts during their “day on the farm,” including nutritional values, agronomics, marketing, farm and crop production, the value of locally grown products and the role that producers, vendors and the purveyors of our natural resources play in bringing these commodities to the community. AgVenture’s unique format offers a meaningful and memorable experience for students and a special opportunity for the agricultural community to reach out to some of our most impressionable citizens. SAWS participation in these events allows us to promote our in-class, after school and assembly programs while sharing our message of water awareness and conservation with thousands of third graders and their teachers. Each AgVenture hosts between 3,500 and 4,000 third graders, and the SAWS booth hosts approximately 1,500 students during each event.

**Since 2010, the SEWD Board of Directors has donated $1,000 annually to AgVenture to help sustain this valuable program.**

**Zun Zun “Water Beat” Assemblies**

Stephen Snyder and Gwynne Snyder Cropsey are “Zun Zun,” a performing arts group that celebrates the environment through water-themed, interactive musical assemblies. In the 2012/2013 school year, SAWS sponsored 14 Zun Zun assemblies in nine Stockton area schools.

ZunZun's “Water Beat” show highlights the connection of the community to its watershed, focusing on water conservation and resource protection. In this 45 minute program, Zun Zun performs a number of skits using musical instruments, song and dance, audience participation
and humor for a truly memorable show. Topics covered include water conservation, watershed protection, water reclamation, and water pollution. Students and teachers are encouraged to participate, playing unique “water instruments” from around the world, joining in the Sprinkler, Swimmer, and Washing Machine dances and singing the “Save Some Water” song. Audience members are invited on stage to participate in hilarious activities like the “Toilet Game Show,” where students learn that fixing a leaking toilet may be the single greatest way to save water at home. Students do the Drought Limbo and participate in a crazy race that explains the purpose of storm drains and the potential threat of storm water pollution. Participants leave the assembly singing, dancing and chatting about the many facets of water covered in the performance. In the 2012/2013 school year, SAWS sponsored a “Zun Zun Tunes” music CD for every class that attended a Zun Zun performance.

*Zun Zun’s detailed annual report is included in the Assembly Program Report section of this report.*

**The SAWS Conservation Cottage Exhibit at the Children’s Museum of Stockton**

The Children’s Museum of Stockton is currently in operation under the management of its Board of Directors. The facility has expanded operating hours and added new features and exhibits, attracting more visitors than ever. In recent years, the SAWS Conservation Cottage has been upgraded and improved, and it, along with the SAWS Water Source Mural, continues to educate and entertain museum visitors year after year. In 2014, a “Water Burger” (a giant plastic hamburger designed by DWR specifically for water education) will be added to the exhibit to replace the aging computer game.

**SAWS Water Education Program and the Community**

The SAWS Water Education Program participates in and supplies hand-outs and materials for numerous community gatherings and other special activities and events in Stockton. The following is a list of some of the community events the SAWS Water Education Program staff participated in during the 2012/2013 school year:
Lodi Literacy Fair, Saturday August 25, 2012: SAWS sponsored a booth featuring color-your-own water saver buttons and water themed activities for children at this event promoting literacy in San Joaquin County, reaching approximately 1000 community members.

San Joaquin County AgVenture: The SAWS Water Education Program staffed a booth at each of the three AgVenture events in the 2012/2013 school year: November 7, 2012 (South San Joaquin County), January 24, 2013 (Stockton), and March 6, 2013 (Lodi). SAWS participation in AgVenture allows our staff to promote SAWS sponsored in-class, after school and assembly programs while sharing our message of water awareness and conservation with thousands of third grade students and their teachers. The Stockton East Water District Board of Directors was also a funding contributor to this year’s events. Each AgVenture event hosts between 2,500 and 4,000 third graders; the SAWS activity booths hosted an approximate combined total of 5,000 students at the three events.

Lincoln USD “Window on Your Future” February 20, 2013: SAWS educators participated in mock job interviews designed to prepare Lincoln High School students for entry into the job market. This event presents an opportunity for SAWS to share career path outreach with potential job seekers. SAWS Educators reached approximately 20 Lincoln High School juniors and seniors at this event.

San Joaquin County Science Fair Judging, February 1, March 2 and March 4, 2013: The SAWS Coordinator participated in exhibit judging at the annual San Joaquin County Science Fair, judging approximately 70 K-8 entries at this event.

Don Riggio Elementary School’s “Delta Experience” March 28, 2013: The SAWS Water Education Program participated in this lower-elementary school event that focuses on the Sacramento/San Joaquin Delta. The SAWS activities at this event reached approximately 180 students and their teachers.

MUSD “Planet Party Day,” April 4, 2013: The Conservation Coordinator hosted a hands-on water activity booth for this all-day event that focuses on science and math. Outreach at this event reached approximately 400 MUSD middle school students.

Manteca Unified School District’s Farm Days: In Spring 2013, SAWS sponsored an activity booth (H20lympics) at each of the three Weston Ranch elementary schools’ annual Farm Day events. The SAWS activity booth hosted an approximate combined total of 600 students at the three events.

Stockton’s Earth Day Festival, Sunday April 1, 2013: SAWS sponsored a booth featuring color-your-own water saver buttons and water themed activities for children at Stockton’s annual Earth Day event at Victory Park. The SAWS activities at this event reached approximately 2500 community members.

Children and Youth Day at Pixie Woods, Saturday May 18, 2013: The SAWS Water Education Program hosted an activity booth at this event, which is sponsored by the Stockton Family Resource and Referral Center. Children and their families
enjoy free admission to Pixie Woods and are able to engage in a variety of crafts and activities throughout the day. Those visiting the SAWS activity booth made color-your-own conservation themed buttons. The SAWS activities at this event reached approximately 1,000 people.

- **Lincoln Elementary Spring Fun Days: Tully Knoles Elementary, June 5, 2013; Mabel Barron Elementary, May 21, 2013:** SAWS sponsored a hands-on water activity booth (H20lympics) for these children’s festivals, reaching approximately 300 students during the two events.

- **Children’s Museum Benefit Bocce Challenge, Sunday June 9, 2013:** Each year, SAWS donates to and participates in the Children’s Museum Annual Bocce Challenge, an event that raises thousands of dollars for the Children’s Museum of Stockton. In 2013, the SAWS team won the Municipal Utilities Division trophy!

- **Bear Creek Community Church Summer Day Camp, July 2, 2013:** The SAWS Coordinator presented the SAWS H20lympics for 70 summer day camp attendees at Bear Creek Church on Lower Sacramento Road.

- **Water Treatment Plant Tours:** The SAWS Water Education Program and SEWD staff hosted 10 water treatment plant tours in the 2012/2013 school year for 300 attendees. Tours for classrooms (grade 5 and above) required one adult chaperon for every five students attending. A public tour of the Dr. Joe Waidhofer Drinking Water Treatment Plant, arranged by the Friends of the Lower Calaveras River advocacy group, was conducted in September 2013.

- **Community Based Programs:** SAWS visited and supplied water conservation materials for Special Day classrooms at Grant High School, Head Start and regional pre-school programs, SUSD’s “Project Live” programs for developmentally disabled adults, and other community programs requesting materials and resources.

- **Water Educator Training:** The SAWS Coordinator met with and shared ideas and resources with other Northern California water agencies.

- **DWR Water Education Committee:** The SAWS Coordinator attends bi-annual meetings of the DWR Water Education Committee, joining water educators from all over California to share resources and ideas for water conservation education and outreach.

- **Delta College “Reading for Science” classes:** During both the fall and spring semesters and summer session, the SAWS Coordinator made presentations on the water cycle, water treatment and distribution, and the Sacramento San Joaquin Delta for SJDC’s Reading for Science classes. Instructors at SJDC use our presentations to teach incoming community college students how to listen to a guest speaker, take notes and ask meaningful questions. These presentations also provide career path information to interested parties in attendance. In 2013, the SAWS Coordinator also presented information on curriculum preparation and content standards for Primary Education students at SJDC.
Looking Ahead:

As we embark upon our tenth year serving the Stockton area, the SAWS Water Education Program staff is proud to note that our outreach programs are well-known and respected in the community. Our presentations reach significant numbers of students with a variety of programs, and we participate in many high-profile youth oriented local events. In the 2012/2013 school year, staffing was reduced from three to two, with Mrs. Quilon functioning as the main presenter and Mrs. Coon managing the program and acting as back up. While the program continued to serve the community and receive excellent reviews from teachers and participants, scheduling was difficult without a backup presenter and we were chronically understaffed for outreach and events. In the summer of 2013, an additional part-time presenter, Suzi Kelly, joined our staff to facilitate scheduling and provide backup and event staffing. Mrs. Kelly was trained and presenting for K-5 by mid October 2013.

The Water Education Program staff will continue to work with programs like Project WET, CREEC, Project WILD, AIMS, Ag in the Classroom and other experiential learning curriculums to develop and incorporate more grade level appropriate, standards-based, hands-on activities into our presentations, and attend as many youth-oriented community events as possible to promote water awareness and conservation. We will also continue to offer the Zun Zun large-audience assembly program to selected Stockton area schools. The SAWS Coordinator is in the process of making additions and improvements to the Conservation Cottage Exhibit at the Children’s Museum of Stockton, and also hopes to commission an artist to paint a new wall mural at the Museum. There is a possibility of DWR funding for this project.

Conclusion

The SAWS Water Education Program is endorsed and approved by the Stockton, Lincoln, Lodi and Manteca school districts and is sanctioned by the San Joaquin County Office of Education. The program’s success is evidenced by the numbers: participation has increased steadily year after year. The most effective tool for program sustainability remains teacher-to-teacher recommendations; every year more teachers coordinate our presentations with their lesson plans and recommend us to their colleagues and acquaintances. This promotes a progressive learning approach, which is a major component of the overall plan: when we make multiple contacts,
seeing students year after year, we are building a comprehensive knowledge base that will make water conservation and awareness second nature for our future citizens, ultimately helping us achieve our goal of promoting effective, community-wide water conservation and awareness in Stockton. Evaluations from both teachers and students are always enthusiastic and positive (see Appendix section), and support for the program remains high because it reinforces grade specific content standards, coordinates seamlessly with curriculum, and provides a hands-on, memorable learning experience for students.

*Teacher and student comments and a photo gallery of presentations and activities are provided in the Feedback and Appendix sections of this report.*
Because we depend on teacher and student feedback to improve the SAWS Water Education Program, we leave a stamped, self-addressed postcard with every teacher we visit. Here's how some responded to our question:

“What did you like best about the program?”

- Our presenter! By far, the SAWS presenters are the best — including fee-based presenters! She had great classroom management skills ... held the kids’ interest, is patient, informative and structured. Mrs. Steyer, Grade 3, Bush Elementary
- The presentation was very well-organized and lines up with the Earth Science curriculum perfectly; local organization for real-world connection. Ms. Baumbach, Grade 5, Clairmont Elementary
- It brings to life our water unit for my students! Ms. Torrente, Grade 1, Brookside Elementary
- The students came away excited about what they learned, and wrote about it! Mr. Musto, Grade 2, Tully Knoles Elementary
- This was a perfectly balanced presentation in my opinion. It was academic in nature, yet “kid friendly” at the same time. Mr. Knight, Grade 4, Tully Knoles Elementary
- The program fits perfectly with the CCSS and 21st century skills our students need to learn. Ms. Won Jones, Grade 3, Manlio Silva Elementary
- The hands-on mapping activities were great! Ms. Rahe, Grade 6, August Elementary
- The excellent combination of interactive, listening and hands-on activities. Mrs. Maldonado-Meek, Grade 2, Tully Knoles Elementary
- The presenter really knew her material; she was animated and students were engaged by voice, manner, use of manipulatives, posters. This is the way students should learn. Mrs. Estarzahu, Grade 2, Bush Elementary
- Objectives are very clear. Program is engaging and has an adequate blend of listening and movement participation. Ms. Calhoun, Grade 1, Oakwood Elementary
- I liked the way the concepts were repeated to ensure understanding — each in a new and exciting way. Mrs. Kirchhof, Grade 1, Wagner-Holt Elementary
- The program was engaging and interactive; hands-on activities were fun and informative, materials were age appropriate. Ms. Copeland, Grade 2, TEAM Charter School
- The students are so engaged! Ms. Hall, Grade 1, Oakwood Elementary
- Hands-on, Hands-on, Hands-on! Ms. Heed, Grade 4, Bush Elementary
- The instructor asked questions at the end to connect to the content taught. Ms. Simental, Kinder, Pulliam Elementary
- The “Incredible Journey” game! Making the beaded water cycle bracelets made it exceptionally fun. Also, the visuals for states of matter were excellent. Ms. Frei, Grade 5, Sierra Christian Elementary
- The visuals and demonstrations were excellent. The instructor had 100% student interest and the objectives and content closely followed our science standards. Ms. Winchell, Grade 4, Great Valley Elementary
- I liked everything about it! Ms. West, Grade 2, Tully Knoles Elementary
Teachers often have students write to thank us for visiting. Here are some of their comments:

- I learned that aqueducts are built waterways, that our water comes from the rain, and that we should save water by taking shorter showers and using less water in the yard. Victor, Grade 4, St. Luke CES
- You told us that everyone needs water and that it is our most precious resource. Riley, Grade 5, John Muir Elementary
- I learned that Southern California doesn’t have much water so they get some from Northern California. Faith, Grade 4, Bush Elementary
- When we took our field trip to Columbia, we remembered what you taught us about how water was used for gold mining there during the gold rush. John, Grade 4, St. Luke CES
- I learned about the water tank and how the water goes to my house. Dion, Grade 2, Davis Elementary
- When we played the “Incredible Journey” game, I was stuck in groundwater for a long time. I learned that I got stuck there because the sun does not shine underground, so water can’t evaporate and make a cloud until it bubbles to the surface. I loved that game! Sareen, Grade 5, Clairmont Elementary
- It’s kind of weird but cool that we use the same water over and over again! Ashley, Grade 3, Oakwood Elementary
- I enjoyed the “Incredible Journey” game where you made it fun to learn about the water cycle. Thank you so much for coming to our classroom! Ariana, Grade 5, Elkhorn School
- Thank you for coming! Because of you, I got interested in water and I am using it in my science project! Joe, Grade 6, August Elementary
- I loved the water games we played outside! You are a good water explainer! Nicole, Grade 2, Davis Elementary
- You told us that all the water that is here today was here four billion years ago. I didn’t know that. Wow! Jackson, Grade 5, Bush Elementary
- I learned to brush my teeth with the water off! Savanny, Grade 1, Manlio Silva Elementary
- When the water steams, it turns to vapor and vapor goes to the clouds. When the clouds are full it rains. You told us not to put junk in the lake or the river. Nicholas, Grade 2, Victory Elementary
- Thank you for all the information and the pencils and the coloring book. Now I know how the water gets to my house. It is awesome! Elijah, Grade 3, Podesta Ranch Elementary
- You showed us the drippy faucet in our classroom. We measured the drips and it wasted one gallon of water in 5 hours. That’s over 4 gallons of water wasted every day! We are going to ask the custodian to fix it! Caitlin, Grade 3, Bush Elementary
- We learned that water is very old. I know there are three states of matter: solid-ice, liquid-drink/swim/bath, and gas-steam. Mafayla, Grade 3, Tully Knolles Elementary
Dear Mrs. Keys,
I like to learn about water. Thank you for teaching us about it. I like the science experiments and we also learn here in our class. Thank you for coming to our class.

Love,
Matthew

--

Mrs. Shilling
John Peterson
Kellye

--

Mr. Mathew
Linda
Pion
Miriam
Nocle
Mrs. Shilling

--

WHEN GET ENOUGH WATER

1. Condensation

Forms Clouds

2. Evaporation

--

LAND

Bucket
Statistics
## SAWS Water Education Program
### Students Participating: All Outreach Programs, All Providers
#### Comparison by School Year (SY)

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<th>In-Class/Assembly</th>
<th>SY 05/06</th>
<th>SY 06/07</th>
<th>SY 07/08</th>
<th>SY 08/09</th>
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<th>SY 10/11</th>
<th>SY 11/12</th>
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- 46 GWM assemblies performed in the 2007/2008 school year covered under the 2007/2008 agreement with SYRCL. One presenter (KC)
- 54 GWM assemblies performed in the 2008/2009 school year covered under the 2007/2008 agreement with SYRCL. Two Presenters (KC & SW)
- 15 Zun Zun assemblies performed in 09/10 and 10/11 school years covered under agreement with Zun Zun. Three presenters (KC, SW & CT)
- 16 Zun Zun assemblies performed in 11/12 covered under agreement with Zun Zun. Three presenters (KC, SW & MQ)
- 14 Zun Zun assemblies performed in 12/13 covered under agreement with Zun Zun. Two presenters (KC & MQ)
## SAWS Water Education Program Presentation/Event Breakdown
### School Year: 2012/2013

### By Presentation Type

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<th># of Presentations</th>
<th># of Students or Attendees</th>
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### By Grade

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<tr>
<td><strong>Totals</strong></td>
<td><strong>288</strong></td>
<td><strong>19748</strong></td>
<td><strong>100%</strong></td>
</tr>
</tbody>
</table>

### By Presenter

<table>
<thead>
<tr>
<th>Presenter</th>
<th>Venues</th>
<th>Students</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Kristin (KC)</td>
<td>100</td>
<td>12891</td>
<td>65%</td>
</tr>
<tr>
<td>Maria (MQ)</td>
<td>188</td>
<td>6857</td>
<td>35%</td>
</tr>
<tr>
<td><strong>Totals</strong></td>
<td><strong>288</strong></td>
<td><strong>19748</strong></td>
<td><strong>100%</strong></td>
</tr>
</tbody>
</table>

### By School District

<table>
<thead>
<tr>
<th>District</th>
<th>Students</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Stockton USD</td>
<td>2845</td>
<td>14%</td>
</tr>
<tr>
<td>Lodi USD</td>
<td>2248</td>
<td>11%</td>
</tr>
<tr>
<td>Lincoln USD</td>
<td>2778</td>
<td>14%</td>
</tr>
<tr>
<td>Manteca USD</td>
<td>911</td>
<td>5%</td>
</tr>
<tr>
<td>Aspire/Charter</td>
<td>670</td>
<td>3%</td>
</tr>
<tr>
<td>Private</td>
<td>396</td>
<td>2%</td>
</tr>
<tr>
<td>All/Other**</td>
<td>9900</td>
<td>50%</td>
</tr>
<tr>
<td><strong>Totals</strong></td>
<td><strong>19748</strong></td>
<td><strong>100%</strong></td>
</tr>
</tbody>
</table>

### By Water Provider

<table>
<thead>
<tr>
<th>Provider</th>
<th>Students</th>
<th># of Students</th>
<th>T1%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cal Water</td>
<td>3306</td>
<td>3000</td>
<td>91%</td>
</tr>
<tr>
<td>City of Stockton</td>
<td>4992</td>
<td>4832</td>
<td>97%</td>
</tr>
<tr>
<td>Unincorporated/SJ County</td>
<td>1150</td>
<td>1150</td>
<td>100%</td>
</tr>
<tr>
<td><strong>All</strong></td>
<td><strong>10300</strong></td>
<td><strong>8982</strong></td>
<td><strong>45%</strong></td>
</tr>
<tr>
<td><strong>Totals</strong></td>
<td><strong>19748</strong></td>
<td><strong>8982</strong></td>
<td><strong>45%</strong></td>
</tr>
</tbody>
</table>

* T1 = Title 1 Students: Schools/students eligible for Title 1 Free Lunch Program
** Students or children reached through city or county wide events: unable to determine district, provider, grade or Title 1 status
FINAL REPORT 2012-2013 School Year
July 1, 2013

ZunZun performed assemblies for nine schools in the Stockton Area Water Suppliers (SAWS) service area in the 2012-2013 school year. ZunZun performed for approximately 4,731 students and 304 teachers this year. The musical assemblies were a celebration of water and introduced students to the topics of water conservation, clean water, watershed pollution prevention and watershed awareness. The assemblies were in Spanish and English, depending on the language spoken by audience members. All assemblies included California State Education standards in Science, Math, History-Social Science, Language Arts and English Language Development, and Fine Arts so that they easily tied into classroom curriculum.

Included in this final report are the following:
- Outreach
- State Standards
- Performances
- Evaluations
- Final Performance Schedule

Enclosed with this report, please find:
- "H2O Go with the Flow" dvd/cd and Pre and Post Assembly Activity Sheets
- Summary of the Completed Electronic Evaluations
- Sample of the newsletter for school newspaper or parent letter

OUTREACH
A list of target schools was provided by Kristin Coon, who also made preliminary contact with schools to determine their interest in the assembly program.

Once the assembly coordinator was determined (by Ms. Coon or ZunZun), we phoned or emailed the contact person at each school site to provide them with additional details about the assembly program. ZunZun followed up by phone and email until each school
booked or declined the assemblies. All schools booked directly with ZunZun, who provided an updated performance schedule to Kristin Coon monthly.

Prior to each scheduled assembly, we emailed a confirmation letter with assembly details to the contact person at each school. We also emailed pre and post assembly questions to be distributed to the teachers for use before and after the performance. A sample of these activities is included with this report. Also we sent a newsletter article that goes in the parent newsletter at every school. The newsletter helps remind kids and parents of ways to save water and prevent watershed pollution and lets parents know about the SAWS sponsored assemblies.

At least one week before the scheduled performance, we called schools to again confirm show times and school location. We have made a point of not only confirming with our contact person but also with the front desk school staff at every school to make sure everyone knows the assembly is happening!

**STATE CONTENT STANDARDS**

In addition to being an extremely fun water education experience, ZunZun assemblies cover a large number of California State Content Standards for grades K-8. Because we use music and musical instruments, they meet many Visual and Performing Arts Standards. As the assemblies are about water issues, they cover Science Content Standards. Students are learning new vocabulary and words, so they are meeting many Language Arts and English Language Development Standards. We introduce instruments from around the world, which meets many standards in History-Social Science Standards. Finally, we use both Spanish and English which meets English Language Development Standards and World Language Content Standards. Most importantly, the assemblies are designed to help students feel empowered to make changes in their daily lives and the lives of their families that help prevent wasting water and prevent pollution. The assemblies encourage proactivity.

A few specific examples of State Content Standards in Science, Language Arts, and Visual and Performing Arts met in our shows are as follows:

**Science:** Water education for all grade levels is included in every assembly. (i.e: Grade 3 physical science i.e, i.f.; Grade 5, earth sciences 3a, 3b, 3c) Education standards regarding water on earth, evaporation, properties of a solid, liquid and a gas, water present in the form of salt and fresh water, etc. are addressed.
**Language Arts:** Use of rhythm and rhyme to remember a concept. Learning new words such as “runoff” and “drought” and seeing/hearing a description while repeating a rhyme that reiterates the definition. (See CA Content Standards, Reading Standards-Craft and Structure, Key Ideas and Details Integration and Knowledge of Ideas. Also Speaking and Listening Standards for grades K-6).

**Visual and Performing Arts:** As students sing and perform with us in the assembly, they are not only hearing music (All grades, Music Standards 1.1-1.5), but performing it (Grade 2, Music Standards, 2.1, 2.2 for example).

Because all students learn differently, ZunZun strives to use as many different types of learning tools as possible in the assemblies, so students are learning **visually, musically, physically, scientifically, mathematically,** and **verbally.** Students are thinking things through, using movements and singing throughout. So many standards are contained in the assemblies it would be a very long list to include them all here.

**PERFORMANCES**
Assemblies are 45 minutes in length, except when schools had time constraints due to recess or lunch, which was rare. Topics covered this year were: **sustainability, drought tolerant plants, native plants, California rain fall patterns, aspects of California state content standards for water science, water conservation, watershed pollution prevention and clearly explained steps students can take to save water and prevent watershed pollution.** At most schools the assemblies were in English and Spanish, sometimes more Spanish than English. This year’s assembly included the following segments:

**Rain-Stick Music:** Showing different sizes of rain-sticks, made from cactus and recycled cardboard tubes, we are able to show different levels of rainfall in our region of Northern California. A simple song about rain, spilled out for younger grades (R.A.I.N.) is sung as we get volunteers to perform on first a small rain-stick (drought year) then medium size (average rainfall) and then a 10 foot rain-stick to represent a very rainy year. We discuss that we do not live in a rainforest or desert, but in a place where rainfall fluctuates a lot, and droughts and low rainfall will always be a part of our weather patterns, as will the years when flooding is possible.

**Drought Tolerant plants.** We talk about plant adaptations to low rainfall such as, thick leathery leaves, deep roots and tiny hairs to collect mist and dew. We then get student volunteers to act out these adaptations with dance moves accompanied by the Bolivian musical instrument **ronrocco.** The end of the dance sequence has the volunteer
dancers reaching for the sun for photosynthesis. We finish up the segment with suggestions for drought tolerant planting in yards and also talk about proper ways to water plants to limit evaporation and wasting of water (watering in morning or late afternoon). We talk about the California native plants that thrive in out watershed.

**Water Saving Dance**—Through a series of movements accompanied by *cajon* drum we illustrate simple ways to save water at home. Movements are done initially silently, and then discussed in detail. The dance movements are divided into water usage and water savings. We sing with audience “Wash your hair-five minute shower, brush you teeth-with the faucet off, wash your hands-turn the drip off, wash your clothes-with the washer full.” Then we divide the whole audience into two groups (water users and water savers) to slowly model the movements of dance. We then select 10 volunteers to dance the full dance demonstrating usage and saving water. We begin slow with aid of teachers and then do a faster version. Dance movements take concentration and coordination and it is hoped that students continue to practice dance back in classroom or at home.

**Drip Drop**: With Brazilian percussion accompaniment we demonstrate the levels of water wasted with a drippy, leaky faucet. To the song “Drip drop has got to stop, stop the drip drip” we show a 5 minute leak (pint to 3.5 cups) 2 hour leak (5 gallons) and a 24 hour leak (60 gallons). Volunteers from the audience play percussion on these containers as we sing. We then ask the audience to turn off the drip (modeling with their hands), and call up a volunteer to be a plumber for the stubborn drip that won’t turn off. That volunteer bangs on a loud *timbale* drum until the drip is fixed. Audience replies with a hearty “Thank You!” as the drip is finally fixed and water is no longer wasted. This segment is a great live action “word problem” in math which can be re-used in the classroom to practice multiplication and measurements and time related math equations.

**Storm Drain Game Show**: We used four buckets with an item inside to show what things can pollute the watershed through the storm drain. We covered oil pollution and reminded students about biking and walking instead of using the car. We also covered soap and car washing and reminded students to keep soap suds out of the storm drain. We also covered garbage and alternatives to using plastic bags and showed students how to tie any plastic they do throw away in a knot so the plastic does not fly out of the landfill. As always, we use a large photo of a storm drain to show students and help them understand the difference between a storm drain and the sewer system.

**H2O Go With the Flow**: As a final celebration of the great work kids are doing towards sustainability, watershed pollution prevention and water conservation we sing “H2O Go With the Flow”. Students who had an assembly last year always know the song
and hand movements right away. We remind them of the water science facts used in the song (parts of a watershed, watershed is land and the water draining through the land, water in it's three forms solid liquid gas) and we teach them some water use dances (the sprinkler, the swimmer). Then the whole school stands up and does all of those movements with the song. When students sit down we present each class with the dvd/cd which has follow up activities inside. The classes were always VERY excited to receive the gifts for their classrooms! We thanked Stockton Area Water Suppliers for providing the cd/dvds and the assemblies for the schools!

EVALUATIONS
We had much fewer responses with our electronic evaluations this year than ever before. We only received 9 evaluations, as opposed to 77 last year when we used paper evaluations. We believe this is due in part to our loss of an office coordinator during the school year. She usually sends reminders to people to have the evaluations done, but did not do so this year. We recommend that SAWS revert to paper evaluations. It seems that for Stockton, paper might be the only way to get an adequate number of survey results. We would like to discuss preferred option with Kristin Coon. The paper-free option was worth a try!

The evaluation feedback was overwhelmingly positive with all evaluations saying they would like SAWS to continue with this or a similar program in the future.

A sampling of feedback from the electronic evaluations is as follows:

Showing 4 text responses
No responses selected
A little coloring booklet or bookmark, or something like that, that the kids could take home. The songs were great. I haven't checked the disc yet, but would love to have the words to reinforce the messages with the students.
2/24/2013 9:05 AMView Responses
What a wonderful assembly!!! The presenters did a dynamic job educating the students on water conservation and kept them engaged the entire time. Thank you so much for coming out to our school!!!
2/11/2013 11:01 AMView Responses
The performers were fantastic and the students thouroughly enjoyed this program!
2/8/2013 4:00 PMView Responses
It would be great if you could bring a small platform to the school site so the students in the back could see the volunteers at the front of the multipurpose
room. I know it would be too time-consuming for students to get on/off the stage, so maybe each site could prepare a platform or for the volunteers ahead of time. Other than that, it was fantastic! A platform would make it outstanding!

POSSIBILITIES FOR NEXT YEAR

Some ideas for next year are...

**Common Core Curriculum**: As California begins to adopt the Common Core Standards for classroom curriculum, we will make the use of the standards apparent to teachers and educators while performing the assemblies. We will compare the assembly content to the Common Core guidelines and make the standards we use available to educators. California plans to implement Common Core by the 2014-15 school year.

**Paper Evaluations or Electronic?** We are seeing far fewer evaluations returning with the electronic evaluations than we did when we handed out paper ones. There seems to be a *psychology* involved with seeing the paper in front of you to do the evaluation verses going to the computer to type one up.

**Delta Watershed Birds** - A song about the diversity of bird life in the Delta watershed and how they are affected by storm drain runoff. We would like to expand the watershed pollution prevention message for next year's assembly.

**Save 20 gallons a day dance** - We demonstrate ways to save 20 gallons a day through a series of "dance" movements. We introduced this dance last year with just ten kids performing it. This year, whole school will try out movements. Would be nice to follow this up with our dvd/cd pack in Spanish and English so that they could continue to use this at home and at school. Will send link to video and website for "Saving 20 gallons a day".

**School Staff Outreach**: If SAWS is interested, we would be happy to hand out information about storm drain pollution prevention to the janitorial staff at each school or program we visit.

We look forward to working with SAWS staff on these ideas and others we create for the upcoming 2013-14 school year.
## FINAL PERFORMANCE SCHEDULE

<table>
<thead>
<tr>
<th>DATE</th>
<th>SCHOOL</th>
<th># of Shows</th>
<th>TIMES</th>
<th># of Students</th>
</tr>
</thead>
<tbody>
<tr>
<td>2/6</td>
<td>August</td>
<td>2</td>
<td>9:45 &amp; 1:00</td>
<td>650</td>
</tr>
<tr>
<td>2/7</td>
<td>Manilo Silva</td>
<td>2</td>
<td>8:30 &amp; 9:30</td>
<td>780</td>
</tr>
<tr>
<td>2/7</td>
<td>Marshall</td>
<td>1</td>
<td>1:15</td>
<td>350</td>
</tr>
<tr>
<td>2/8</td>
<td>Madison</td>
<td>2</td>
<td>12:00 &amp; 12:50</td>
<td>750</td>
</tr>
<tr>
<td>2/9</td>
<td>Taft</td>
<td>1</td>
<td>8:15</td>
<td>501</td>
</tr>
<tr>
<td>4/25</td>
<td>Westwood</td>
<td>2</td>
<td>8:40 &amp; 9:40</td>
<td>585</td>
</tr>
<tr>
<td>4/25</td>
<td>Wagner Holt</td>
<td>1</td>
<td>1:15</td>
<td>300</td>
</tr>
<tr>
<td>4/26</td>
<td>Oakwood</td>
<td>2</td>
<td>8:30 &amp; 9:30</td>
<td>590</td>
</tr>
<tr>
<td>4/26</td>
<td>Ansel Adams</td>
<td>1</td>
<td>1:30</td>
<td>225</td>
</tr>
</tbody>
</table>

9 Schools  
4,731 students
Did your child come home from school recently talking about a giant rain stick or musical rainstorm? Maybe they walked in the door and started singing “H2O, Go with the Flow!” while doing a crazy dance. If so they are just sharing with you what they learned by attending ZunZun’s latest water awareness assembly.

The Stockton Area Water Suppliers (SAWS) sponsor water awareness assemblies for local schools. The assemblies are performed by the musical group, ZunZun, and teach students about sustainability, watershed protection, conservation, water science and water awareness in a fun and interactive way. By using musical instruments from all over the world ZunZun teaches students simple songs and dances to reinforce important messages about water. Ask your child what they learned and don’t be surprised if they break into song and dance routines as they tell you how to save water around the house.

This year, SAWS have also provided each teacher with a fun water education DVD, “H2O Go with the Flow” to use as a follow up in their classroom. To learn more about the DVD, go to www.h2ogowiththeflow.info/.

If you would like more information about ways to use water wisely or the SAWS’ School Education Program, please visit www.SEWD.net and click on “water conservation.” You can contact ZunZun at www.zunjuntunes.com. It is always a pleasure to work with your wonderful school community!
Thanks so much for inviting ZunZun to perform at your school! Here are some pre & post-assembly activities you can do with your students to help retain the information presented in the shows. You can even distribute the materials to students to take home and share with their families!

**WATER FOOTPRINT ACTIVITY**

Your "water footprint" is how much water you use in a day. Think about how many times the following activities happen in your house everyday and then add up the totals. Maybe have your teacher do his or her totals for the class first!

<table>
<thead>
<tr>
<th>Activity</th>
<th>Gallons of Water Used</th>
<th>Times Per Day</th>
<th>Daily Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Taking a Bath</td>
<td>35 gallons</td>
<td>X</td>
<td></td>
</tr>
<tr>
<td>Taking a Shower</td>
<td>2.5 gallons/min low flow</td>
<td>X</td>
<td></td>
</tr>
<tr>
<td></td>
<td>5 gallons/min regular showerhead</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Teeth Brushing</td>
<td>1 gallon</td>
<td>X</td>
<td></td>
</tr>
<tr>
<td></td>
<td>1 cup if water turned off!</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Hands/Face Washing</td>
<td>1 gallon</td>
<td>X</td>
<td></td>
</tr>
<tr>
<td>Dishwashing</td>
<td>20 gallons/load</td>
<td>X</td>
<td></td>
</tr>
<tr>
<td></td>
<td>5 gallons/load</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Clothes Washing Machine</td>
<td>10 gallons/load</td>
<td>X</td>
<td></td>
</tr>
<tr>
<td></td>
<td>By Hand</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Toilet Flush</td>
<td>3 gallons/flush</td>
<td>X</td>
<td></td>
</tr>
<tr>
<td>Leaking Toilet</td>
<td>60 gallons/day</td>
<td>X</td>
<td></td>
</tr>
<tr>
<td>Glasses of Water Drunk</td>
<td>8 oz/glass (1/16 gallon)</td>
<td>X</td>
<td></td>
</tr>
</tbody>
</table>

*Be sure to count your other family members, too!*

**GRAND TOTAL =**

---

**TEST YOUR TOILET FOR LEAKS!**

Ask mom or dad first, then, put 6-10 drops of blue food coloring in the toilet tank. Wait 20 mins (don't flush!) and check for blue water in the toilet bowl. Blue water in the bowl? Your toilet is leaking! Visit our website, www.zunzuntunes.com for how to fix it!
Here are some fun other fun activities that you might like to try at school or at home!

**Basura Batucada Band**
Your class can create a band from recycled things! Visit www.zunzuntunes.com and click on the "Kid Zone" to see the names of instruments and what recycled items to use to make them.

**Visit Your Local Wildlands—See the Watershed**
Visiting some of the wildlands near our homes and the watershed in our area can be amazing. We can see animals who depend on a clean watershed and get a chance to slow down. Need help finding a good place to visit? We would be happy to help. E-mail us at zunzun@zunzuntunes.com and we'll look at a map with you to help make it happen!

For further information, questions, or help with any of these activities, feel free to contact us!

ZunZun  
P.O. Box 2951  
Santa Cruz, CA 95063  
(831) 426-0684  
Email: zunzun@zunzuntunes.com  
Web: www.zunzuntunes.com
The SAWS Programs
Combining Academic Value and Entertainment

"H2O To Go!"
Gravity, Motion & Machines

"California Water"
California’s Water History, Rights & Distribution
Charting & Mapping Activities
The SAWS Programs
Combining Academic Value and Entertainment

“The Incredible Journey”
The water cycle in depth, illustrated by an interactive game

The water treatment process and a filtering demonstration
The SAWS Programs
Combining Academic Value and Entertainment

Enviroscope
Model
Stormwater & the Environment

Treatment Plant Tours
A Firsthand Look at the Water Treatment Process

“Water Cycle Story”
Primary Grades Intro to the Water Cycle & States of Matter
Educating the Community

We Are Everywhere!

We show up at events related to children and the environment

Special Events

After School

Farm Days
Raising Awareness
SAWS at the Children's Museum of Stockton

The SAWS Conservation Cottage: Sponsored by SAWS and a grant from the Dept of Water Resources, the exhibit teaches children about water conservation through hands-on activities.

The Water Source Mural: Traces water's journey from its snowmelt source to the drinking fountain.