



# SWES SOUNDS

THE UNIVERSITY OF  
**ARIZONA**  
COLLEGE OF AGRICULTURE  
AND LIFE SCIENCES

The Heartbeat of the Department of Soil, Water & Environmental Science

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## ***TONES FROM THE TOOTH***

One hundred years ago in May 1908 President Theodore (Teddy) Roosevelt hosted the first-ever governor's conference in the White House. The group (of more than 350) consisted of most of the President's cabinet, all nine Supreme Court Justices, members of Congress, industrialists, labor leaders, and scientists. At this gathering, President Roosevelt addressed a very important issue of natural resource conservation.



"We have become great because of the lavish use of our resources and we have just reason to be proud of our growth. But the time has come to inquire seriously what will happen when our forests are gone, when the coal, iron, the oil, and the gas are exhausted. We must handle the water, the wood, the grasses so that we will hand them to our children and our children's children in better and not worse shape than we got them (Rasenberger, 2008)."

Roosevelt was certainly on the right track (in my view) with his comments in 1908 and these points are certainly very relevant today. It is interesting to consider what has actually been done to address the concerns highlighted by Roosevelt over the past 100 years in the United States, how critical these same issues are for us still, and our capacity to effectively deal with them.

We certainly need the science, technology, and understanding of natural systems and our interaction with them as we pursue in this department. But we also need the effective political capacity to integrate good science with policy and societal action. To Roosevelt's credit, he consistently had the conviction and courage to speak out and effectively deal with conservation and environmental issues.

**Jeffrey C. Silvertooth**  
Department Head

Reference:

Rasenberger, J. 2008. 1908. Smithsonian. January 2008, p. 42-50.

## **SWES REPORT CARD:**

### **GRANTS**

**C. Rensing** (PI), H. Jost, S. Ravishankar and S. Franke. Survival of highly copper resistant pathogenic isolates on copper alloy surfaces. 2007-2008. International Copper Association. \$75,000.

### **PUBLICATIONS:**

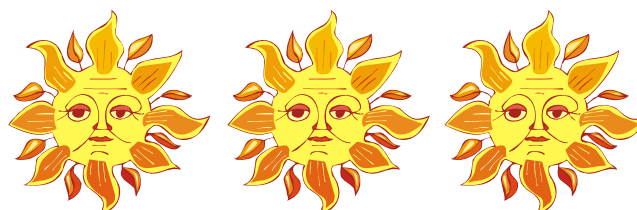
**M.L. Brusseau**, H. Janousek, A. Muraio, and G. Schnaar. 2008. Synchrotron X-ray Microtomography and Interfacial Partitioning Tracer Test Measurements of NAPL-water Interfacial Areas. *Water Res. Res.*, Vol. 44, W01411, doi:10.1029/2006WR005517.

T.B. Boving, W.J. Blanford, J.E. McCray, C.E. Divine, and **M.L. Brusseau**. 2008. Comparison of Line-Drive and Push-Pull Flushing Schemes. *Ground Water Monitoring & Remediation*, 28, 75-86.

**Crimmins, M.A.** and T.M. Crimmins. 2008. Monitoring Plant Phenology Using Digital Repeat Photography. *Environmental Management*. 10.1007/s00267-008-9086-6.

Baggay, I., W. Liu, **C. Rensing**, N.J. Blackburn and M. McEvoy. 2007. Substrate-linked conformational change in the periplasmic component of a Cu(I)/Ag(I) efflux system. *J. Biol. Chem.* 282: 35695-35702.

**Sinclair, R.** Boone, S.A., Greenberg, D., Keim, P, **Gerba, C.P.** 2008. Persistence of Category A Select Agents in the Environment. *Appl. Environ. Microbiol.* 74:555-563.



**PRESENTATIONS:**

**Y. Bashan.** Plant growth-promoting bacteria: from isolation to application. Special seminar, Department of Microbiology, Synthetic Genomics Inc., La Jolla, CA, Feb. 25-26.

**C. Rensing.** Love hurts: holding hands with copper. University of California at Santa Cruz. Dec 4.

**J. Silvertooth.** Evaluation of Soil-Plant-Water Relations in Irrigated Cotton. Beltwide Cotton Conference. Jan 8-11.

**J. Silvertooth.** Crop Phenology and Nutrient Uptake Patterns in Irrigated Chiles. New Mexico Crop Production Association. Jan 21-22.

**J. Silvertooth.** Growth, Development, and Nutrient Uptake Patterns in Irrigated Chile. New Mexico Chile Conference. Feb 5.

**UNDERGRADUATES IN ACTION:**



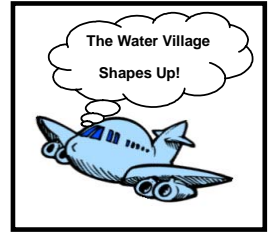
Students from a SWES 201 lab collect and process soil samples on a recent field trip near Star Pass.



**PLANE TALK FROM ERL**

**Ian Pepper, Director**

The Water Village continues to take shape. The third building which is “Real-Time Monitoring and Sensor Development” is now complete and we are beginning to work on the fourth building which will house “Low Energy Technology for Wastewater Treatment.” All of these buildings are now focusing on the theme of “Smart Water.” This involves new wastewater treatment technology, water reuse, dual distribution systems for potable and reused water, smart distribution systems, contaminant dispersion and transport, and contaminant inactivation or elimination. Currently the faculty involved are: Chris Choi (ABE), Jim Field (CHEE), Chuck Gerba (SWES), Kevin Lansey (CEE), and Ian Pepper (SWES/ERL). Together we are working to obtain major funding from several federal agencies.



**BUSINESS OFFICE**

**Eddie Camacho**



The Facilities Management Key Desk will be closed on FRIDAY, MARCH 21, 2008 while moving to its new location at 1533 East Helen Street. There will be no keys issued during this closure.

The Key Desk will be open for business to the campus community at 7:00 AM on MONDAY, MARCH 24, 2008.

**COMMENCEMENT DEADLINE**

Inclusion in the Commencement Program depends on whether we have the following forms in the Degree Certification Office by the deadline:

**Masters/Specialists students:**

• The 'Master's Plan of Study' form must be in the Graduate Degree certification office by 5:00pm on Friday, April 4th in order to insure that the student's name will be in the program.

**Doctoral Students:**

• The 'Advancement to Candidacy' form for May 2008 graduates must be in this office by 5:00pm on Friday, April 4th in order to insure that the student's name will be in the program.

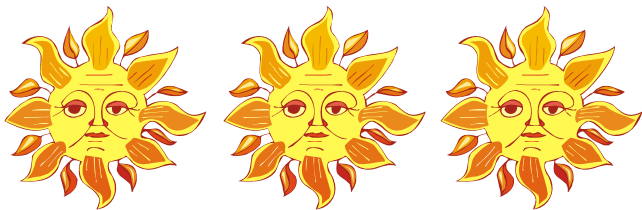
Students whose forms are received after this time will still be able to graduate in May, but their names will NOT be in the program since the program will have already been sent to the printer.

## SOLAR ENERGY

### SOLAR CONCERT

The 2nd Annual Solar Rock Concert will be held on March 29 from Noon – 5:00pm at Himmel Park (1000 N. Tucson Blvd.). This concert is 100% solar powered. GeoInnovations, a local company is providing the “juice”. Local bands and community leaders will be taking part. State Rep. Steve Farley; Mayor Bob Walkup; City of Tucson Solar Energy Coordinator, Bruce Plenk; water harvesting expert, Brad Lancaster and Dr. Jonathan Overpeck will all be participating. They will be talking about the policies and science surrounding global climate change and how it pertains to Southern Arizona. The bands Mirror Image, Monterrey and Paul Revere will be playing. These three bands are high school bands and have won the Arizona Daily Star Battle of the Bands. In addition, Spirit Familia and Arthur Migliazza will be performing. There will also be kid’s activities, a raffle and a CFL exchange made possible by TEP.

If you have questions or would like more information, please see Richard Rushforth.

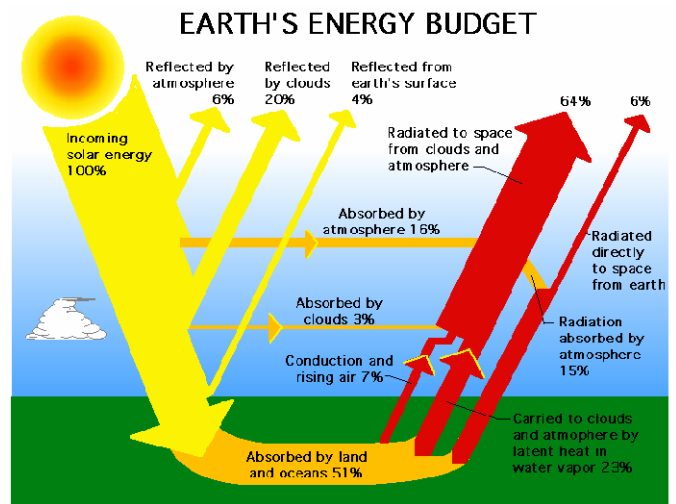


### TAX CREDITS

Did you know that the U.S. House passed a measure (236-182) on Wednesday Feb. 27 called the “Renewable Energy and Energy Conservation Tax Act of 2008” This act creates new tax credits and extends some existing tax credits for wind and solar energy as well as home energy efficiency. The measure now needs approval by the Senate and possible override of a veto threatened by President Bush.

Some parts of the measure include switching \$18 billion in tax incentives away from big oil companies to boost incentives for renewable energy and energy efficiency projects. Existing tax credits for energy-efficiency home improvements would be extended for two years. Credits for wind farms which currently receive a 35% production tax credit for would be extended until 2011, and companies would get a new tax credit of 50 cents/gallon for cellulosic ethanol fuels through 2010.

### SOLAR ENERGY BUDGET



### FOOD FOR THOUGHT

A word is not a crystal, transparent and unchanging; it is the skin of a living thought and may vary greatly in color and content according to the circumstances and the time in which it is used.

Oliver Wendell Holmes, Jr. (1841-1935)

Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
<h1>March 2008</h1> 						1
2	3 Seminar TBA 3:00 Marley 230	4	5	6	7 ETRs Due at Noon TODAY	8
9	10 Seminar Gary Parkin Ontario, Canada 3:00 Marley 230	11	12	13	14 	15  First Day of Spring Break!
16  Palm Sunday	17  No Seminar – Spring Break!	18	19	20	21 ETRs Due at Noon TODAY	22
23  Easter Sunday	24 Seminar Syreeta Miles, pH.D. Student 3:00 Marley 230	25 Faculty Meeting 11:00-12:00 FCS 219	26	27	28 	29
30	31 Seminar TBA 3:00 Marley 230					

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