### University of Arizona Water Resources Research Center

**Annual Report 2012** 

# Appendix B

Section 1-Funded Grant Projects				
Grant title	Funder			
Arizona Water Festivals / STEM Academies, Arizona Project WET	Towns of Gilbert and Payson; Cities of Avondale, Chandler, Flagstaff and Yuma; Graham and Yavapai counties; Other sponsors: Intel, Kohls, Carrolo Engineers, SCA Tissues, National Project WET, EPCOR Water, Global Water Management, Liberty Water, Prescott College, Central Arizona Project, Arizona Hydrological Society, Arizona-Sonora Desert Museum, Thomas Brown Foundation.			
Arizona Water Festivals Building and Effective Education Model	Arizona Department of Environmental Quality			
Arizona Project WET Tucson Education Program	City of Tucson			
Connecting Environmental Water Needs to Arizona Water Planning	Nina M. Mason Pulliam Trust			
Connecting Water Conservation and Environmental Stewardship in the Colorado River Basin	Walton Family Foundation			
Conserve to Enhance: Applying Innovative Mechanisms to Secure Water for the Environment	USDI / Bureau of Reclamation / Cooperative Ecosystem Studies Unit			
Dredging Influences on Canal Water Quality	Arizona Department of Agriculture / Specialty Crop Block Grant			
Incorporating Climate Information and Stakeholder Engagement in Groundwater Resources Planning and Management	NOAA			
Laurel Clark Earth Camp: Using NASA Data to Teach Teens, Teachers, and the Public about Planet Earth through Programs and Interactive Displays	Arizona-Sonora Desert Museum (sub-contract from NASA grant)			
Supporting Watershed Management Planning	USDI / Bureau of Reclamation / WaterSmart / Desert Landscape Conservation Cooperative			
The Nature Conservancy-Arizona Project WET Education Partnership	The Nature Conservancy			
Transboundary Aquifer Assessment Program	USGS			
U.S. Geological Survey Water Resources Discipline and the University of Arizona Water Resources Research Center, Intergovernmental Agreement	USGS			
Utility Guide to Rainwater/Stormwater Harvesting as an Adaptive Response to Climate Change	USDI / Bureau of Reclamation / WaterSmart / Desert Landscape Conservation Cooperative			
WRRA FY 2011 Annual Application under Section, State Center & Information Transfer	USGS / NIWR			
Water Education in Pinal County Arizona	Abbott Fund			





College of Agriculture & Life Sciences

Section 2-104b Water Research Grants					
Title	PI	University	Amount		
2011					
Characterization of Chelating Agents in Non-regulated Water Sources on Navajo Lands	J. Ingram	NAU	\$10,000		
The Effectiveness of Constructed Wetlands for Wastewater Treatment in a Semi-arid Climate	L. Turnbull & D. Childers	ASU	\$10,000		
Iodinated Disinfection By-product Formation from Water Reuse Practices	S. Snyder	UA	\$9,886		
2012					
Fate of Emerging Nanoparticle Contaminants during Aquifer Recharge with Treated Wastewater	R. Sierra	UA	\$10,450		
Does Increasing Solids Retention Time in the Wastewater Treatment Process Affect the Persistence of Antibiotic Resistance Genes?	C. Rock	UA	\$7,300		
Toxicity of Emerging Contaminants in an Effluent Dependent Stream: the Role of Suspended Solids and Sediments	D. Quanrud	UA	\$10,000		
2013					
Discrimination-Inference to Reduce Expected Cost Technique (DIRECT): A New Framework for Water Management and Stakeholder Negotiation	P. Ferre	UA	\$9,024		
Do Simple Carbon Additions Reduce Resistance To Antibiotics in Environmental Bacteria?	J. McLain	UA	\$10,000		
Sequential Advanced Oxidation and Soil-Aquifer Treatment for Management of Trace Organics in Treated Wastewater	E. Saez	UA	\$10,000		
Extraction Methods for Engineered Nanoparticles From Aqueous Environmental Samples	P. Westerhoff	ASU	\$10,000		

Section 3-Tucso	Section 3-Tucson Conserve to Enhance Advisory Board			
Name	Affiliation			
Christopher Avery	City of Tucson, Attorney's Office			
Emily Brott	Sonoran Institute			
Leslie Ethen	City of Tucson, Office of Conservation and Sustainable Development			
Diana Rhoades	City of Tucson, Councilor Romero, Ward 1			
Kendall Kroesen	Tucson Audubon Society			
Grant McCormick	University of Arizona, Campus Planning			
Amy McCoy, PhD	Ecosystem Economics			
Daniel Ransom	Tucson Water			
Candice Rupprecht	University of Arizona, WRRC			
Lisa Shipek	Watershed Management Group			
Karen Wilson	Pima County Wastewater Reclamation			
Claire Zucker	Pima Association of Governments, Sustainable Environment Program			

Section 4-WRR	Section 4-WRRC-WSP Co-Sponsored Events				
People	Affiliation	Date	Title	Co-Sponsors	
Rosalind Bark	CSIRO, Australia	3-Dec-12	Estimating the Value of Water for Nature: the Case of Australia's Murray- Darling River	School of Earth & Environnmental Sciences, Dept of Soil, Water & Environmental Science, WEES, WRRC	
Karen Bakker	University of British Columbia, Vancouver, BC	19-0ct-12	Water Privatization and the Global Water Crisis	Renewable Energy Network, School of Geography and Development, WRRC, WSP,WEES	
Kathy Jacobs	Energy and Environment Division, White House Office of Science and Technology Policy	17-Feb-12	Connecting Science and Decision- making: Building a Foundation for Adaptation through the National Climate Assessment	Institute of the Environment, Soil, Water and Environmental Science, WSP,WRRC	
Shane Snyder, Ian Pepper	Chemical and Environmental Engineering; Soil, Water and Environmental Science	29-0ct-12	Workshop: Monitoring for Reliability and Process Control of Water Reuse Applications Process Control of Potable Reuse Applications	WaterReuse Foundation grant project launch, WRRC	

#### **Section 5-WSP STUDENT FELLOWS GRADUATE STUDENTS FELLOWSHIPS FY13 Full Name** Title/Topic Department Degree HWR Improved Predictive Tools for Water Availability Following Forest Disturbance Joel Biederman PhD Jake Davis ChEE Electrochemical Processes for Removing Dissolved Minerals from Potable PhD Water SIE A Data-Driven Method for Robust Water Allocation under Uncertainty PhD David Love Zachary Sugg Geography & Regional Governing the Unseen: A Comparative Analysis of Arizona and Texas PhD Development Groundwater Institutions **UNDERGRADUATE STUDENT FELLOWSHIPS FY13 Full Name** Title/Topic Department Degree Samantha McEntire HWR Under-standing Salinity Stress in Citrus BS Determining Soil Hydraulic Conductivity from Cosmic-Ray Neutron Data Adam Karczynski HWR BS (Accelerated MS) Aaron Zhang ChEE 1) Microbial Fuel Cells and 2) Corrosion Testing of Water Delivery Pipelines for BS the Tucson City Water System ChEE Use of Wastewater to Provide Nutrients for Algal Growth as Biofuel BS Stephanie Ruehl **SWES DAY POSTER/PRESENTATION AWARDS, March 2012** Department Title/Topic **Full Name** Degree Juliana Gil-Loaiza SWES Scaling Phystostabilization from Greenhouse to Field-Scale at the Iron King MS Mine-Humboldt Smelter Superfund Site Corin M. Hammond SWES Biogeochemical Transformation of Metal(loid)s during Phytostabilization Iron MS King Mine Tailings, Dewey-Humboldt, AZ **SOUTHERN ARIZONA REGIONAL SCIENCE & ENGINEERING FAIR AWARDS, March 2012** - ..... 1

Full Name	School	Title/Topic	
Sumedha Ravishankar & Sirtaj Singh	Empire High School, Tucson	The Affects of Growing <i>Chlamydomonas reinharditii</i> in Municipal Secondary Effluent Wastewater on Biomass Yield For Biofuel Production	
Emerson Patricio & Dayanara Sixkiller	Baboquivari High School, Sells	Babosphere	
Stephen Yao	University High School, Tucson	Effect on Infiltration by Air Pressure and Air FlowTucson	

Section 6-APW Facilitations				
Date	Title	Location		
February 15, 2012	Water Audit Conclusions and Recommendations	Mountainside Middle School Students Present Results to City of Scottsdale Water Department, Mountainside Middle School, Scottsdale, Arizona		
February 25, 2012	Sid the Science Kid Event	SRP and ASU KAET-TV, Arizona Falls, Phoenix, Arizona, (co-facilitated)		
March 9, 2012	Water Investigations Program Preserve Day	43 Liberty Traditional Charter School students at Hassayampa River Preserve, Surprise, Arizona		
March 28, 2012	Water Investigations Program Preserve Day	43 CREST High and Villa de Paz students at Hassayampa River Preserve, Surprise, Arizona		
March 29, 2012	Water Investigations Program Preserve Day	97 Centennial Middle School students at Hassayampa River Preserve, Surprise, Arizona		
April 4-5, 2012	Water Investigations Program Preserve Day	31 Bright Beginnings students at Hassayampa River Preserve, Surprise, Arizona		
April 4-5, 2012	Water Investigations Program Preserve Day	290 Mountainside Middle School students at Hassayampa River Preserve, Surprise, Arizona		
April 12, 2012	Water Investigations Program Preserve Day	144 Garden Lakes Middle School students at Hassayampa River Preserve, Surprise, Arizona		
April 25, 2012	Water Investigations Program Preserve Day	125 Frye and Ryan 6th grade students at Hassayampa River Preserve, Surprise, Arizona		
May 2, 2012	Water Investigations Program Preserve Day	125 Payne Junior High students at Hassayampa River Preserve, Surprise, Arizona		
May 3, 2012	Water Investigations Program Preserve Day	150 Heritage 6th grade students at Hassayampa River Preserve, Surprise, Arizona		
May 4, 2012	Water Investigations Program Preserve Day	156 Canyon Leadership Academy 8th grade and Finley Farms 6th grade students at Hassayampa River Preserve, Surprise, Arizona		
May 8, 2012	Middle School Student Presentation on their School Water Audit	Tucson Water decision-makers at Miles K-8 School, Tucson, Arizona		
May 11, 2012	Water Investigations Program Preserve Day	100 Copper King 6th grade students at Hassayampa River Preserve, Surprise, Arizona		
May 15-16, 2012	School Water Audit Program (SWAP) Symposium	Middle School Students Present Results of their School Water Audit, Phoenix College, Phoenix, Arizona		
June 6, 2012	Water Investigations Program Debrief	First year middle school teachers, Phoenix, Arizona		
June 18, 2012	Sixth Grade Curriculum Enhancement	Teacher Focus Group, Tucson and Flowing Wells School Districts, UA Environmental Research Lab, Tucson, Arizona		
December 14, 2012	Water Audit Program	60 Orangedale Junior High Prep Academy students, auditing SRP's PERA Club, Phoenix, Arizona		

Section 7-Water Inve	stigation	s Program Student Mentor Scientists, 2012
Name	Degree	Department
Amber Pantel	BA	Plant Science
Ann Nguyen	BA	Chemistry
Brandon Watkins	MA	Agricultural Education
Cynthia Fastje	BA	Molecular and Cellular Biology
Isabel-Rose Babasa	BA	Psychology
Julia Leone	BA	Psychology
Kearsten Jensen	BA	Animal Science
Kirstin Neff	MS	Hydrology and Water Resources
Sandy Lee	BS	Pre-Pharmacy
Yiran (Kate) Li	BS	Chemical Engineering & Molecular and Cellular Biology
Cassie Fausel	MA	Agricultural Education
Stephan Przybylowicz	MA	Library Science
Tomas Goode	BA	Hydrogeology and Geophysics
Sapana Lohani	BA	School of Natural Resources and the Environment
Candice Morrison	PhD	Environmental Science
Bridgette Pena	BS	Molecular and Cellular Biology
Monica Ramirez-Andreotta	PhD	Environmental Science
Katie Stoll	BS	Chemical Engineering
Markie Dipple	PhD	Veterinary Science
Hannah Douglas	BA	Chemistry
Ramsey Coronado	MA	Hydrology and Water Resources

Section 8-APW Water Festival Volunteer Training				
Date	Training Location	City		
February 7, 2012	Tucson Water	Tucson		
February 14, 2012	Orangedale Academy	Phoenix		
February 16, 2012	Orangedale Academy	Phoenix		
March 19, 2012	Gilbert Public Works	Gilbert		
April 1, 2012	Nogales High School	Nogales		
April 18, 2012	Anthem Elementary School	Florence		
April 18, 2012	Water Resources Research Center	Tucson		
September 5, 2012	Arizona Water Festival NAU Preservice Teacher Volunteer Training	Flagstaff		
September 6, 2012	Arizona Water Festival – Flagstaff Volunteer Training	Flagstaff		
September 12, 2012	Verde Valley Teachers, Deadhorse Ranch State Park	Cottonwood		
September 17, 2012	Payson High School	Payson		
September 22, 2012	Chandler Unified School District,	Chandler		
September 26, 2012	Fox Glenn Park Facilitation	Flagstaff		
October 10, 2012	Verde Valley Volunteer Training	Cottonwood		
October 25, 2012	Deadhorse Ranch State Park	Cottonwood		
November 14, 2012	Yuma Crossing Park	Yuma		

	Speaker(s)	Title	
January 18, 2012	Amy McCoy, Senior Associate, Ecosystem Economics	The Cornerstones Report: Market-based Responses to Arizona's Water Sustainability Challenges	
January 25, 2012	Cindy Dyballa, Project Manager, Alliance for Water Efficiency	Water Efficiency: Making the Link to Watershed Health	
February 8, 2012	Patrick Hartley, Sr. Director of Planning and Camila Thorndike, Director of Outreach, Imagine Greater Tucson	Choices and Tradeoffs: Deciding the Future of Our Region – An Interactive Presentation	
February 15, 2012	Tom Poulson, Civil Engineer/Planner, US Bureau of Reclamation, Phoenix	Reverse Osmosis Concentrate Management through Wetlands	
February 21, 2012	Osvel Hinojosa Huerta, Director del Programa de Agua y Humedales, Pronatura Noroeste, San Luis Río Colorado, Sonora, MX	The Binational Restoration of the Colorado River Delta, Mexico	
February 29, 2012	Hans Huth, Senior Hydrologist, Arizona Department of Environmental Quality	The Arizona-Sonora Border Region: Water Quality Challenges and Priorities for the EPA Border 2012 (2020) Program	
March 21, 2012	Monica Ramirez-Andreotta, M.P.A., Ph.D. Candidate, Department of Soil, Water and Environmental Science, University of Arizona	Gardenroots: The Dewey-Humboldt, Arizona Garden Project	
April 19, 2012	Rosalind Bark, Ph.D., CSIRO Ecosystem Sciences, Australia	Valuing the Multi-benefits of the Murray-Darling Basin Plan Using an Ecosystem Service Framework	
April 26, 2012	Anthony (Tony) Willardson, Executive Director, Western States Water Council	Water Needs and Strategies for a Sustainable Future: Managing Uncertainty	
May 9, 2012	Joanna Nadeau, Research Analyst, Water Resources Research Center, University of Arizona	Exploring Strategies for Managing Water and the Environment in an Arid Land	
May 17, 2012	Tony Sedgwick, landowner and 2012 recipient of the National Wetlands Award for Landowner Stewardship; President of Santa Fe Ranch	Las Lagunas de Anza - The Story of the Transformation of a Dump into Lovely Wetlands in the City of Nogales, Arizona	
August 24, 2012 Debbie Colodner, Director of Conservation Education and Science, Arizona-Sonora Desert Museum; Kerry Schwartz, Arizona Cooperative Extension Specialist and Director, Arizona Project WET, WRRC, University of Arizona; Sanlyn Buxner, Education Specialist, College of Education and Planetary Science Institute, University of Arizona		Power of Perspective: Using NASA Data to Engage Teachers, Students and the Public in Learning about Planet Earth through Earth Camp Programs	
September 5, 2012	Jennifer McCloskey, Area Manager, Bureau of Reclamation, Yuma Area Office	Managing the Colorado River: A Balancing Act	
September 25, 2012   Peter Dillon, Stream Leader, Sustainable Water Solutions Urban     Water Theme, Water for a Healthy Country Flagship Program,   CSIRO Land and Water, Glen Osmond, SA, Australia		Governance Measures to Effectively Manage Groundwater Storage	
October 17, 2012	Val Little, Director, Water CASA	INT-N-EXT Water Use Study, Tucson	
November 14, 2012	Dr. Kim Ogden, Professor, UA Department of Chemical & Environmental Engineering	Biofuel Production and Water in the Southwest	
November 16, 2012William L. Andreen, Edgar L. Clarkson Professor of Law, University of Alabama School of LawSuccess and Backlash the Clean Water Act		Success and Backlash: The Remarkable (Continuing) Story of the Clean Water Act	
November 20, 2012	Arizona Cooperative Extension 2012 Summer Externs (Jessica Ackley, Jill Hamilton, Madalyn Hemminghaus, Erika LaPlante, Bakbergen Turibekov)	2012 Summer Extern Update: County Sustainability Projects that Improve the Lives of Arizonans	
November 29, 2012	Sharon Megdal, Director, Water Resources Research Center, Specialist and Professor, Department of Soil, Water and Environmental Science, The University of Arizona	Searching for Water Solutions: Experiences from My Sabbatical and Other Travels	
December 6, 2012	Emily Brott, Sonoran Institute; Lisa Shipek, Watershed Management Group; Candice Rupprecht, WRRC	WRRC Tucson Conserve to Enhance Workshop for Funding Local Enhancement Projects	

#### Section 10-PUBLICATIONS

- Al-Mashaqbeh, Othman A., A.M. Ghrair and S.B. Megdal, Grey Water Reuse for Agricultural Purposes in the Jordan Valley: Household Survey Results in Deir Alla, Water, No. 4, August 2012. Available at http://www.mdpi.com/2073-4441/4/3/580
- Cavigelli, Michel A., S.J. Del Grosso, M.A. Liebig, C.S. Snyder, P.E. Fixen, R.T. Venterea, A.B. Leytem, J.E. McLain and D.B. Watts, US Agricultural Nitrous Oxide Emissions: Context, Status, and Trends, Frontiers in Ecology and the Environment, Vol. 10, December 2012. Available at http://dx.doi. org/10.1890/120054
- Choate Xiu, Brittany, L. Edwards, K. Mott Lacroix and J. Nadeau, Arizona Environmental Flows and Water Demand Bulletin: Central Arizona Region, Water Resources Research Center, August 2012. Available at https://wrrc.arizona.edu/sites/wrrc.arizona.edu/files/science\_bulletin\_central\_web\_0.pdf
- Choate Xiu, Brittany, L. Edwards, K. Mott Lacroix and J. Nadeau, Arizona Environmental Flows and Water Demand Bulletin: Colorado River Region, Water Resources Research Center, August 2012. Available at https://wrrc.arizona.edu/sites/wrrc.arizona.edu/files/science\_bulletin\_CO\_river\_final-web.pdf
- Choate Xiu, Brittany, L. Edwards, K. Mott Lacroix and J. Nadeau, Arizona Environmental Flows and Water Demand Bulletin: North/Northeastern Arizona Region, Water Resources Research Center, August 2012. Available at https://wrrc.arizona.edu/sites/wrrc.arizona.edu/files/science\_bulletin\_NNE\_final-web\_0.pdf
- Choate Xiu, Brittany, L. Edwards, K. Mott Lacroix and J. Nadeau, Arizona Environmental Flows and Water Demand Bulletin: Southeastern Arizona Region, Water Resources Research Center, August 2012. Available at https://wrrc.arizona.edu/sites/wrrc.arizona.edu/files/science\_bulletin\_SEAZ\_web\_0.pdf
- dos Santos, Plácido, The Transboundary Aquifer Assessment Program (TAAP) in Arizona-Sonora / Programa para la Evaluación de Acuíferos Transfronterizos en Sonora-Arizona. Water Resources Research Center, Summer 2012. Available at http://wrrc.arizona.edu/sites/wrrc.arizona.edu/files/pdfs/TAAP%20 Brochure%20Final%2023April2013.pdf

Eden, Susanna and K. Mitchell, Food Safety Concerns Drive Research, Arizona Water Resource, Water Resources Research Center, Fall 2012.

- Eden, Susanna, S.B. Megdal, C. Scott and M. Lamberton, Water-Energy Interdependencies and the Central Arizona Project, The Water-Energy Nexus in the American West, Edited by Douglas S. Kenney and R. Wilkinson, Edward Elgar Publishing, February 2012.
- Gallo, Erika L., K.A. Lohse, P.D. Brooks, J.C. McIntosh, T. Meixner and J.E.T. McLain, Quantifying the Effects of Stream Channels on Storm Water Quality in a Semi-arid Urban Environment, Journal of Hydrology, Vol. 470-471, November 2012. Available at http://www.sciencedirect.com/science/article/pii/ S0022169412007263
- Hubler, David K., J.C. Baygents, C. Mackay, S.B. Megdal and J. Farrell, Evaluating Economic Impacts of Semiconductor Manufacturing in Water-Limited Regions, Journal of the American Water Works Association, Vol. 104, No. 2, February 2012. Available at http://www.awwa.org/files/Publications/Journal/2012/ February/PDFs/JAW201202hubler\_es.pdf
- Isaak, Marissa T., Tragedy of the Commons Game, Arizona Water Resource, Water Resources Research Center, Winter 2012.
- Kabiri-Badr, Leila, J.E.T., McLain, C.M. Rock, A. Alum and M. Abbaszadegan, Isolation of Bacteroides from Fish and Human Fecal Samples for Identification of Unique Molecular Markers, Journal of Water and Health, January 2012.
- Liebig, Mark A., X. Dong, J.E. McLain and C.J. Dell, Greenhouse Gas Flux from Managed Grasslands, Managing Agricultural Greenhouse Gases: Coordinated Agricultural Research through GRACEnet to Address our Changing Climate, Edited by Mark A. Liebig, A.J. Franzluebbers and R.F. Follet, Academic Press, San Diego, CA, June 2012.
- McEvoy, Jamie and P. dos Santos, Building Bridges, Wetlands, and Water Sustainability: Lessons from an Arizona-Baja California Sur Partnership, Arizona Water Resource, Water Resources Research Center, Fall 2012.
- McLain, Jean E.T., Communicating Your Talents to Prospective Employers: Effective Presentation Techniques, CSA (Crops, Soils, Agronomy) News, Journal for ASA-CSA-SSSA. February 2012.
- McLain, Jean, The Decision Process in Changing Jobs, CSA (Crops, Soils, Agronomy) News, Journal for ASA-CSA-SSSA.
- McLain, Jean E.T., Book Review, Treated Wastewater in Agriculture: Use and Impacts on the Soil Environments and Crops, Edited by Guy J. Levy, P. Fine and A. Bar-Tal, Wiley-Blackwell, Oxford, UK, Crop Science Society of America, Available at https://www.crops.org/publications/book-reviews/view/32.
- McLain, Jean, WRRC Hosts Scientists from the Royal Scientific Society of Jordan for Gray Water Workshop, Arizona Water Resource, Water Resources Research Center, Fall 2012.
- Megdal, Sharon B., The Value of Getting Out in the Field and Sharing Experiences, Arizona Water Resource, Water Resources Research Center, Winter 2012.
- Megdal, Sharon B., Arizona's Experience a Model for Groundwater Governance, Arizona Water Resource, Water Resources Research Center, Spring 2012.
- Megdal, Sharon B., Arizona Groundwater Management, The Water Report, No. 104, Edited by David Moonet and D. Light, Envirotech Publications, Eugene, OR, October 2012. Available at http://www.thewaterreport.com/
- Megdal, Sharon B., Better Understanding Needed of Link Between Water Conservation and Rates, Arizona Water Resource, Water Resources Research Center, Summer 2012.
- Megdal, Sharon B., Groundwater Use and Re-use in the Transboundary Santa Cruz River Basin, World Water Development Report 4, Vol. 2, March 2012. Available at http://www.unesco.org/new/en/natural-sciences/environment/water/wwap/wwdr/wwdr4-2012/
- Megdal, Sharon B., Israel Water Management Program Provides Rich Learning Experience, Arizona Water Resource, Water Resources Research Center, Fall 2012.
- Megdal, Sharon B., The Colorado River Basin Water Supply and Demand Study: A Call to Action, Arizona Water Resource, Water Resources Research Center,

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- Megdal, Sharon B., The Role of the Public and Private Sectors in Water Provision in Arizona, USA, Water International, Vol. 37, No. 2, March 2012. Available at http://www.tandfonline.com/doi/pdf/10.1080/02508060.2012.662732
- Megdal, Sharon B., R.G. Varady, P.L. Vandervoet and C.A. Scott, Water Allocation Under Uncertainty: Groundwater and Effluent in the United States-Mexico Transboundary Santa Cruz River Basin, United Nations World Water Development Report, 4th Edition. UNESCO-IHE and Earthscan, London, UK. March 2012. Available at http://www.unesco.org/new/en/natural-sciences/environment/water/wwap/wwdr/wwdr4-2012/
- Megdal, Sharon B. and J. Nadeau, Water Planning for Growing Southwestern Communities, Design with the Desert: Conservation and Sustainable Development, Edited by Richard Malloy, J. Brock, A. Floyd, M. Livingston and R.H. Webb, CRC Press/Taylor & Francis Group, London, UK, 2013.
- Mitchell, Katharine, National Climate Assessment Foresees Alarming Impacts on Southwest, Arizona Water Resource, Water Resources Research Center, Winter 2013.
- Nadeau, Joanna, S.B. Megdal, C. Rupprecht, B. Choate Xiu, E. Brott and L. Shipek, Testing the Waters: Tucson Links Water Conservation with Environmental Benefits, Journal AWWA (American Water Works Association), February 2012. Available at https://wrrc.arizona.edu/sites/wrrc.arizona.edu/files/ TestingTheWaters.pdf

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- Nadeau, Joanna, S.B. Megdal, G. Anderson, B. Choate Xiu and L. Edwards, Arizona Environmental Water Needs Methodology Guidebook, Water Resources Research Center, November 2012. Available at https://wrrc.arizona.edu/sites/wrrc.arizona.edu/files/Guidebook%20PDF.pdf
- Nadeau, Joanna B., Mexico Visit Strengthens Understanding of Shared Environmental Interests, Arizona Water Resource, Water Resources Research Center, Spring 2012.
- Prietto, Jacob, STEM Refocuses Water Education in Arizona, Arizona Water Resource, Water Resources Research Center, Summer 2012.

Przybylowicz, Stephan, Interview with Tom Buschatzke Assistant Director of ADWR, Arizona Water Resource, Water Resources Research Center, Winter 2012. Rock, Channah, C. Graf, C. Scott, J. McLain and S.B. Megdal, Arizona Blue Ribbon Panel on Water Sustainability, Arizona Cooperative Extension, University of

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- Rock, Channah, J. McLain and D. Gerrity, Common Terminology of Water Recycling, Arizona Cooperative Extension, University of Arizona, May 2012. Available at https://wrrc.arizona.edu/sites/wrrc.arizona.edu/files/az1569\_Published.pdf
- Rock, Channah, J. McLain and D. Gerrity, Water Recycling FAQs, Arizona Cooperative Extension, University of Arizona, May 2012.
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- Schwartz, Kerry, and H. Thomas-Hilburn and C. Rupprecht, The Water Investigations Program Inspires Tomorrow's Scientists and Engineers, Arizona Water Resource, Water Resources Research Center, Summer 2012.

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- Scott, Chris A. S.B. Megdal, L.A. Oroz, J. Callegary and P. Vandervoet, Climate Change and Population Growth Impacts on the Transboundary Santa Cruz Aquifer, Climate Research, Vol. 51, No. 2, March 2012. Available at http://www.int-res.com/articles/cr2012/51/c051p159.pdf
- Thomas-Hilburn, Holly and K. Schwartz, Leadership Training in Action: The Nogales Water Festival, Arizona Water Resource, Water Resources Research Center, Summer 2012.

Unger, Irene M., K.W. Goyne, A.C. Kennedy, R.J. Kremer, J.E.T. McLain and C.F. Williams, Antibiotic Effects on Microbial Community Characteristics in Soils under Conservation Management Practices, Soil Science Society of America Journal, Vol. 77, No. 1, November 2012. Available at https://www.soils.org/ publications/sssaj/articles/77/1/100

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Witte, Becky, S. Eden, P. dos Santos and J.S. Esqueda, Border Water Source of Conflict and Cooperation, Arroyo, Water Resources Research Center, 2012. Witte, Becky, New Members Share Thoughts and Goals for CAWCD Board, Arizona Water Resource, Water Resources Research Center, Winter 2013.

#### Section 11-PRESENTATIONS

January 2012, Choate Xiu, Brittany, Conserve to Enhance, Environmental Science Careers Class, University of Arizona, Tucson, AZ.

January 6, 2012, Megdal, Sharon B., Water Policy Considerations Associated with Meeting Future Water Demands, Farm Foundation Round Table, Sedona, AZ. January 11, 2012, Lien, Aaron, Conserve to Enhance: Linking Water Conservation to the Environment, Sonoran Institute Rocky Mountain Programs Webinar,

hosted by Sonoran Institute, Tucson, AZ.

January 12, 2012, Lien, Aaron, Conserve to Enhance: Linking Water Conservation to the Environment, Utah Water Conservation Forum (via teleconference) Salt Lake City, UT.

- January 19, 2012, Megdal, Sharon B., Interview, Horizon, KAET PBS TV8, Phoenix, AZ.
- January 20, 2012, Megdal, Sharon B., Interview, Arizona Week, KUAT PBS TV6, Tucson, AZ.
- January 23, 2012, Megdal, Sharon B., Conference Host and Moderator, Urbanization, Uncertainty and Water: Planning for Arizona's Second Hundred Years, 2012 Annual Conference of the Water Resources Research Center, The University of Arizona, Tucson, AZ.
- January 23, 2012, Megdal, Sharon B., Interview, Bill Buckmaster Show, KVOI Radio, Tucson, AZ.
- January 26, 2012, Megdal, Sharon B., Uncertainty and Sustainable Water Management in Arizona; Water Company Regulation, Water Pricing and Conservation; and Quantifying and Funding Water for the Environment, Thomas R. Brown Foundation Teacher Workshop, The Economics of Water, Tucson, AZ.
- February 2, 2012, Rupprecht, Candice, and Brittany. Choate, Connecting the Environment to Arizona Water Planning, Little Colorado River Winter Watershed Conference, Show Low, AZ.
- February 11, 2012, Rupprecht, Candice, and Kelly Mott Lacroix, Connecting the Environment to Arizona Water Planning, CWAG (Citizens Water Advisory Group) Meeting, Prescott, AZ.
- February 13, 2012, Mott Lacroix, Kelly, Connecting the Environment to Arizona Water Planning, Santa Cruz Groundwater Users Advisory Council meeting, Nogales, AZ.
- February 13, 2012, Mott Lacroix, Kelly, Connecting the Environment to Arizona Water Planning, Tucson Groundwater Users Advisory Council meeting, Tucson, AZ.
- February 15, 2012, McLain, Jean E., Public Health Safety of Reclaimed Municipal Wastewater: Current Research, Invited Presentation, Arizona State University School of Sustainability SOS 326, Tempe, AZ.
- February 21, 2012, Lien, Aaron, February 23, 2012, Conserve to Enhance: Linking Water Conservation to the Environment, presentation at the Environmental Protection Agency WaterSmart Webinar, by phone.
- February 25, 2012, Thomas-Hilburn, Holly, Water festival preparatory workshop, Gilbert, AZ.
- March 1, 2012, Megdal, Sharon B., Competition for Water Resources in Arizona: Shared Waters and Shared Borders, Department of Geography, The Hebrew University of Jerusalem, Mt. Scopus, Jerusalem, Israel.
- March 14, 2012, Megdal, Sharon B., Water banking in Arizona and the Lower Colorado River Basin, Session CS1.4 on IWRM Through the Lens of Water Security, Adaptive Water Management and International Legal Instruments for Good Governance, also serve as leader for discussion table, World Water Forum, Marseille, France.
- March 14, 2012, Megdal, Sharon B., Table Discussion Leader, U.S.-MX Transboundary Aquifer Assessment, Session 1.5.1 on Why does Water Law matter to you? Exploring Local to Global Perspectives, World Water Forum, Marseille, France.
- March 15, 2012, Megdal, Sharon B., Commentary, Groundwater Governance: From National and Regional Needs to Global Solutions, Side Event on the Good Groundwater Governance GEF-FAO-UNESCO and others international project, World Water Forum, Marseille, France.
- March 15, 2012, Megdal, Sharon B., Transboundary Aquifer Assessment along the United States-Mexico Border as an Opportunity for Water Cooperation, Session 1.5.3, Strengthening International Cooperation for the Sustainable and Peaceful Management of Transboundary Aquifers, World Water Forum, Marseille, France.
- March 18, 2012, Megdal, Sharon B., Presentation, Arizona and Israeli Water Policy: Some Similarities and Differences, Department of Agricultural Economics and Management Seminar, The Hebrew University of Jerusalem, Rehovot, Israel.
- March 22, 2012, Megdal, Sharon B., Presentation, Overview of Arizona Water Management, Arava Institute, Israel.
- March 26, 2012, Megdal, Sharon B., Introduction to Arizona Water Resources, Massar High School Environmental Science Class, Lilian Daniel, Instructor, Nazareth, Israel.
- March 28, 2012, Nadeau, Joanna, Assessing the Role of the Environment as Water Customer, The International Symposium of the Flora of Arid Zones; Gomez Palacio, MX.
- March 29, 2012, Eden, Susanna, Session co-organizer, Developing a Southwestern Research Agenda for Rainwater and Stormwater Harvesting Methodologies for Green Infrastructure and Low Impact Development, AridLID Conference, Tucson, AZ.
- March 29, 2012, Lien, Aaron, Conserve to Enhance: a Tool for Linking Green Infrastructure, Water Conservation, and Consumer Education, AridLID Conference, Tucson, AZ.
- March 30, 2012, Mott Lacroix, Kelly, Connecting the Environment to Arizona Water Planning, Arizona Riparian Council Meeting, Safford, AZ.
- April 18, 2012, Nadeau, Joanna, Connecting Environmental Water Needs to Arizona Water Planning, SW Tribal Climate Change Network Call.
- April 18-20, 2012, Megdal, Sharon B. Participant and Session Rapporteur, GEF Project "Groundwater Governance: A Global Framework for Country Action" UNESCO First Regional Consultation: Latin America and the Caribbean Region, Montevideo, Uruguay.
- April 21, 2012, Schwartz, Kerry, (with Arizona-Sonora Desert Museum) NASA Earth Camp Educator Workshop.
- April 26, 2012, Lien, Aaron, C2E, Carpe Diem West Healthy Headwaters Working Group, Phoenix, AZ.
- April 26, 2012, Megdal, Sharon B., Meeting Arizona's Future Water Demands Under Decentralized Governance, CSIRO, Adelaide, South Australia.
- April 27, 2012, Rupprecht, Candice, C2E and EnWaP projects, Coconino Plateau Water Advisory Committee, Flagstaff, AZ.
- April 27, 2012, Megdal, Sharon B., The Importance of Institutional Asymmetries to the Development of Binational Aquifer Assessment Programs: The Arizona-Sonora Experience, The Centre for Comparative Water Policies and Laws, The University of South Australia, Adelaide, South Australia.
- May 1, 2012, Mott Lacroix, Kelly, Assessing and Addressing Ecological Water Needs in Arizona, Madrean Conference, Tucson, AZ.

- May 1, 2012, Megdal, Sharon B., Water Banking and Groundwater Management in Arizona, CSIRO, Canberra, ACT, Australia.
- May 2, 2012, Megdal, Sharon B., Water Banking and Groundwater Management in Arizona, Murray-Darling Basin Authority, Canberra, ACT, Australia.
- May 2-4, 2012, Mott Lacroix, Kelly, Environmental Water Demands and Water Planning, Arizona Water Association Conference, Phoenix, AZ.
- May 2-4, 2012, McLain, Jean, Establishing the Public Health Safety of Recycled Municipal Wastewater: Current Research, Water and Wastewater Management Summit, Las Vegas, NV.
- May 9, 2012, Nadeau, Joanna, Exploring Strategies for Managing Water and the Environment in an Arid Land, Water Resources Research Center Brownbag Seminar, Tucson, AZ.
- May 14, 2012, dos Santos, Plácido, La Gestión del Agua en el Estado de Arizona (Water Management in the State of Arizona.) For visitors from the Universidad Autónoma de Chapingo, Durango, Mexico. Water Resources Research Center, Tucson, AZ.
- May 14, 2012, dos Santos, Plácido, El Reciclaje y la Recarga de Aguas Residuales Tratadas en Arizona (The Reuse and Recharge of Treated Wastewater in Arizona.) For visitors from the Universidad Autónoma de Chapingo, Durango, Mexico. Water Resources Research Center, Tucson, AZ.
- May 20-24, 2012, McLain, Jean, Panelist, Water Recycling, Reuse, and Sustainability: the Need for a New Water Supply Paradigm, National Water Conference. Portland, OR.
- May 20, 2012, Nadeau, Joanna, Conserve to Enhance, Association of Natural Resources Environmental Professionals (ANREP) Biannual Conference, Hendersonville, NC.
- May 30, 2012, Schwartz, Kerry, (with Arizona-Sonora Desert Museum), NASA Earth Camp Educator Workshop, Tucson, AZ.
- June 1, 2012, Megdal, Sharon B., General Rapporteur, Expert Workshop on Water Security: Managing Risks and Tradeoffs in Selected River Basins, Organization for Economic Co-operation and Development Working Party on Biodiversity, Water and Ecosystems, OECD, Paris, France.
- June 4, 2012 Candice Rupprecht, Water and Its Impact on People, Planet, and Profit, Tempe USD Sustainability Conference, Tempe, AZ.
- June 4, 2012, Megdal, Sharon B., Scientific Cooperation in Water Sciences. Science, Networks, Consciousness in the Mediterranean Basin, organized by the French Academy of Sciences and UNESCO, UNESCO, Paris, France.
- June 4, 2012, Megdal, Sharon B., Panelist, Science, Networks, Consciousness in the Mediterranean Basin, organized by the French Academy of Sciences and UNESCO, UNESCO, Paris, France.
- June 6, 2012, Cleveland, Jenna, Anne Audrey, Jackie Moxley, Susanna Eden, WaterSmart Water Harvest Assessment Tool, Arizona Municipal Water Users Association, Tucson, AZ.
- June 6, 2012, McLain, Jean, Exploring Environmental and Public Health Impacts of Reclaimed Water: Is It Safe?, Pinal County Cooperative Extension, Tucson, AZ.
- June 8, 2012, Megdal, Sharon B.,Co-presenter (with James Callegary), U.S.-MX Transboundary Aquifer Assessment Program Status Update, James Callegary, Christopher Scott, Sharon Megdal and Plácido dos Santos, Joint meeting of the Water Committee and the Environment Committee of the Arizona-Mexico Commission, Tucson, AZ.
- June 10-14, 2012, Mott Lacroix, Kelly, Poster, Environment in Arizona Water Planning, AWWA ACE, Dallas, TX.
- June 18-22, 2012, Schwartz, Kerry, (with Arizona-Sonora Desert Museum) NASA Earth Camp Educator Workshop.
- June 26-28, 2012, Schwartz, Kerry, and Candice Rupprecht, Water Investigations Program, 2012-2013 Teacher Cohort Training in Phoenix, AZ.
- July 11, 2012, Nadeau, Joanna, and Kelly Mott Lacroix, EnWaP, Gila Watershed Partnership, Tucson, AZ.
- July 17, 2012, Megdal, Sharon B., Perspectives on Governance and Institutions: The Search for Solutions, 2012 UCOWR/NIWR Annual Conference, Santa Fe, NM.
- July 18, 2012, Megdal, Building, Maintaining and Strengthening the Bridge, Bridging Science and Application, Plenary Session, 2012 UCOWR/NIWR Annual Conference, Santa Fe, NM, co-organizer of session.
- July 30, 2012, McLain, Jean, Opening Ceremony of Water Quality degree program, Centro de Investigación Científica de Yucatán (CICY) Water Sciences Unit, Mérida México.
- August 9, 2012, Megdal, Sharon B., Roundtable Expert, Water Science and Management, 2012 Udall Scholar Orientation, Udall Foundation, Tucson, AZ. August 20, 2012, Thomas Hilburn, Holly, Water Scene Investigators, Paradise Valley, AZ.
- August 27, 2012, Megdal, Sharon B., Perspectives on Governance and Institutions: The Search for Solutions, Pima Association of Governments Watershed Subcommittee, Tucson, AZ.
- September 10, 2012, McLain, Jean, Minimal Production of Algal Toxins in Recycled Water Retention Ponds, 27th Annual WateReuse Symposium, Hollywood, FL.
- September 12, 2012, Megdal, Presentation, The Role of Conservation in Water Management, Undergraduate Seminar for Neurosciences-Cognitive Sciences Majors, The University of Arizona, Tucson, AZ.
- September 18, 2012, Cleveland, Jenna, (with Jackie Moxley and Susanna Eden), Workshop Instructor, Using Low Impact Development and Smartscape to create Sustainable Landscapes, Arizona Hydrologic Society Symposium, Phoenix, AZ.
- September 19, 2012, McLain, Jean, Effective Presentation Techniques, guest lecture, SWES696a, Tucson, AZ.
- September 19, 2012, Megdal, Sharon B., Panelist, Expert panel following Tucson premiere of the movie Watershed, Tucson, AZ.
- September 20, 2012, Mott Lacroix, Kelly, The Environmental Water Needs Program, Arizona Hydrological Society, Tucson, AZ.
- September 21, 2012, Megdal, Sharon B, Water Management and Policy in Arizona and the Colorado River Basin: Searching for Solutions, Wiseguise Luncheon, Scottsdale, AZ.
- September 27-28, 2012, Megdal, Sharon B. Co-chair, Innovation and Water Technology Track, Binational Border Water Resources Summit: Past, Present and

Future, Ciudad Juarez, Chihuahua, Mexico and El Paso, TX.

September 28, 2012, Mott Lacroix, Kelly, The Environmental Water Needs Program, Coconino Plateau Water Advisory Council, Flagstaff, AZ.

September 28, 2012, Mott Lacroix, Kelly, The Environmental Water Needs Program, Old Concho Water Users Association and Irrigation District, Concho, AZ.

September 29-30, 2012, dos Santos, Plácido, The U.S.-Mexico Transboundary Aquifer Assessment Program (TAAP): Focus on the Arizona-Sonora collaboration.

The Binational Assessment of the Santa Cruz and San Pedro Aquifers, IBWC Border Water Resources Summit, El Paso, TX.

- October 2012, Mott Lacroix, Kelly, Introduction to EnWaP, Environmental Engineering Seminar, University of Arizona, Tucson, AZ.
- October 1-4, 2012, Megdal, Sharon B., Moderator and Host, Grey Water Use Information Exchange, Water Resources Research Center, Tucson, AZ
- October 1-4, 2012, Schwartz, Kerry, WSI: Students Achieving Real Water Savings, Water Smart Innovations Conference, Las Vegas, NV.
- October 4, 2012, Eden, Susanna, Arizona Water Resources, Green Valley Gardeners, Green Valley, AZ.
- October 4, 2012, Eden, Susanna, Assessment of Decision Support Activities, guest lecture, SWES 415/515, Tucson, AZ.
- October 7, 2012, Megdal, Sharon B. Presentation, Water Management in Arizona and the Lower Colorado River Basin: Searching for Solutions, Ministry of Water and Irrigation, Amman, Jordan.
- October 8, 2012, Megdal, Sharon B., (with Robert Varady), Co-facilitator for a breakout session on "General Policies and Principles for Groundwater Governance, The GEF Project on Global Groundwater Governance: Groundwater Policy and Governance, Third Regional Consultation, GEF Groundwater Governance Project, Amman, Jordan.
- October 11, 2012, Rupprecht, Candice and Brittany Choate, EnWaP and C2E, Clean Colorado River Sustainability Coalition (CCRSCo) meeting, Lake Havasu City, AZ.
- October 11, 2012, Rupprecht, Candice and Brittany Choate, C2E and EnWaP, Colorado River Regional Sewer Coalition, Lake Havasu City, AZ.
- October 12, 2012, McLain, Jean, co-chair (with Lynn Joens, Veterinary Science and Microbiology) and moderator, University of Arizona Food Safety Consortium Annual Meeting, Omni Tucson Resort, Tucson, AZ.
- October 17, 2012, Rupprecht, Candice and Aaron Lien, Interview: Arizona Green Plumber Radio Show, Tucson AZ, http://www.blogtalkradio.com/ thearizonagreenplumber/2012/10/17/the-arizona-green-plumber-talks-to-u-of-a-wrrc.
- October 18, 2012, Eden, Susanna, An Introduction to Incorporating Climate Information and Stakeholder Engagement in Groundwater Resources Planning and Management - A Project for NOAA Climate and Societal Interactions Sectoral Applications Research Program/Water Resource Management, Project Kickoff Workshop, Tucson, AZ.
- October 20, 2012, Schwartz, Kerry, Water Investigations Program, 2012-2013 Teacher Cohort Training, Phoenix, AZ.
- October 21, 2012, McLain, Jean, Trends in Bacterial Antibiotic Resistance in Soils Following Long-Term Biosolids Application ASA-CSA-SSSA Annual Meetings, Cincinnati, OH.
- October 27, 2012, Rupprecht Candice and Pam Justice, APW STEM Academy Training, Phoenix, AZ.
- October 31, 2012, dos Santos, Plácido, La Gestión del Agua en el Estado de Arizona (Water Management in the State of Arizona.) For visiting dignitaries from the Municipality of La Paz, Baja California Sur, Mexico. Water Resources Research Center, Tucson, AZ.
- October 31, 2012, dos Santos, Plácido, El Reciclaje y la Recarga de Aguas Residuales Tratadas en Arizona (The Reuse and Recharge of Treated Wastewater in Arizona.) For visiting dignitaries from the Municipality of La Paz, Baja California Sur, Mexico. Water Resources Research Center, Tucson, AZ.
- November 1, 2012, Rupprecht, Candice, APW Water Scene Investigation and C2E, 6th Annual North Texas Regional Water Conservation Symposium, Irving, TX. November 3, 2012, Schwartz, Kerry, (with Arizona-Sonora Desert Museum), NASA Earth Camp Educator Workshop, Tucson, AZ.
- November 3-11, 2012, Megdal, Sharon B., organizer and leader, Israel Water Management Program, tour, meetings and lectures, Israel. (Related media interview aired February 2, 2013 in Israel on IBA the Israeli English news station.)
- November 12-15, 2012, Megdal, Sharon B., (Ayoup Ghrair and Othman Almashaqbeh, co-authors), Grey Water Reuse for Agricultural Purposes at Gore-Deir Alla in the Jordan Valley, Deserts and Desertification Conference, Ben Gurion University, Sede Boqer, Israel.
- November 12-15, 2012, Megdal, Sharon B., Water Management in Arizona and the Lower Colorado River Basin (USA): Good Practices and Long-term Challenges (Session Organizer, Chair and Presenter), Deserts and Desertification Conference, Ben Gurion University, Sede Boger, Israel.
- November 12-15, 2012, Megdal, Sharon B., (Alice Aureli and Robert Varady, co-authors), Developing a Framework for Groundwater Governance; Deserts and Desertification Conference, Ben Gurion University, Sede Boger, Israel.
- November 12-15, 2012, Megdal, Sharon B., Fostering International Collaboration through the IALC (International Arid Lands Consortium) Seed Grant Program, Drylands, Deserts and Desertification Conference, Ben Gurion University, Sede Boger, Israel.
- November 13, 2012, Megdal, Sharon B., Interview by Patricia Golan, Drylands, Deserts and Desertification Conference, Ben Gurion University, Sede Boqer, Israel.
- November 16, 2012, Choate Xiu, Brittany, EnWaP, Northern Arizona Municipal Water Users Association Technical Advisory Committee, Prescott, AZ.
- November 26, 2012, Eden, Susanna, Arizona Water Resources, Tucson Garden Club, Tucson, AZ.
- November 29, 2012, Megdal, Sharon B., Searching for Water Solutions: Experiences from My Sabbatical and Other Travels, Water Resources Research Center Brown Bag Seminar, Tucson, AZ.
- December 1, 2012, Justice, Pam, Earn Your Water Wings, First of a series with twelve sessions for Gilbert and Scottsdale teachers.
- December 3, 2012, McLain, Jean, Soil microbial activity within resource islands on semi-arid hillslopes, American Geophysical Union (AGU) Meeting, San Francisco, CA.

- December 6, 2012, Schwartz, Kerry, Creating Connection to Foster Action: a Hook for Effective STEM Integration, National Science Teachers Association Regional Conference, Phoenix, AZ.
- December 7, 2012, Schwartz, Kerry, and Holly Thomas-Hilburn, Developing Critical Thinkers through the WIP: Connecting Classroom Practice to Real-world Application, National Science Teachers Association Regional Conference, Phoenix, AZ.
- December 7, 2012, Megdal, Sharon B., Israel Water Management Program, Water Resources Research Center External Advisory Committee Meeting, Nina Mason Pulliam Audubon Center, Phoenix, AZ.
- December 8, 2012, Schwartz, Kerry, and Debra Colodner, The Power of Perspective in Scientific Inquiry: Laurel Clark Earth Camp for Educators, National Science Teachers Association Regional Conference, Phoenix, AZ.
- December 8, 2012, Schwartz, Kerry and Mary Ann Stoll, Creating Connections to Foster Action: A Hook for Effective STEM Integration, National Science Teachers Association Regional Conference, Phoenix, AZ.

December 10, 2012, Megdal, Sharon B., How Recharge and Water Banking Help Arizona Achieve its Water Management Goals, Visitors from Chile, Tucson, AZ.

December 28, 2012, Megdal, Sharon B., Interview by Sheila Wilensky, "'Immersed in water': Sharon Megdal dives into policy and environmental issues," Arizona Jewish Post, pp. 12, 17, also available on line at http://azjewishpost.com/2012/immersed-in-water-sharon-megdal-dives-into-policy-and-environmental-issues/.

	Name	Major	Degree	Grad Date
	GRADUATES			
1	Banister, Kathryn	Planning	M.S.	May-14
2	Chan, David	Watershed Management	M.S.	Aug-14
3	Choate, Brittany	SWES	M.S	Dec-12
4	Cleveland, Jenna	Planning	M.S	Dec-13
5	Cusimano, Jeremy	SWES	M.S	May-13
6	Fausel, Cassandra	Ag Education	M.A.E.	May-13
7	Hulshof, Catherine	Ecology	Ph.D.	Dec-12
8	Mitchell, Katharine	Planning	M.S.	May-13
9	Mott Lacroiz, Kelly	Arid Lands	Ph.D.	Aug-13
10	Prietto, Jacob	Hydrology	M.S.	May-14
11	Richards, Hunter	AREC	M.S.	May-13
12	Rogers, Pratt	Mining Geol/Geophys Engr	Ph.D.	Jun-12
13	Tuttle, Koiya	SWES	M.S.	Dec-13
14	Witte, Becky	Hydrology	M.S.	May-13
	UNDERGRADUATES		-	May-14
1	Edwards, Leah	Env & WR Economics	B.S.	May-14
2	Fosnot, Spencer	Molecular and Cellular Biology	B.S.	May-13
3	Malott, Elissa	Microbiology	B.S.	Dec-13
4	McClain, Grace	Public Health	B.S.	May-13
5	Obergh, Victoria	Physiology	B.S.	May-13
6	Picazzo, Martin	MIS Eller	B.S. & B.A.	
7	Reuter, Rochelle	Geography	B.A.	May-13
8	Watanabe, Lisa	Studio Art	B.A. & B.FA.	
	APW STUDENTS			
1	Assimacopoulos, Aikaterina	Molecular and Cellular Biology	B.S.	May-15
2	Clark, Jennifer	Education	B.A.	May-13
3	Dehn, Michael	Ag & Resource Economics	MS	Aug-13
4	DeWalt, Emily	Public Health	B.S.	May-14
5	Gonzales, Stephanie	Political Science	B.A.	May-14
6	Hamilton, Jillian	Env & WR Economics	B.S.	May-13
7	Hansen, Lisa M.	Engineering Management	B.S.	May-13
8	Hapeman, Laura K.	Education	M.A.	May-13
9	Jondall, Kelsea R.	Education	B.A.	May-14
10	Pena, Bridgette	Molecular and Cellular Biology	B.S.	May-14
11	Plesniak, Kelly	Aricultural Education	B.A.	May-13
12	Prescott, Alex	Env Hydro & WR, Mathematics	B.S. & B.A.	May-13
	VOLUNTEERS			
1	Doung, Alanna	Law	J.D.	
2	Joe, Valerisa	Microbiology	B.S.	

## Section 13-SELECTED

Me	lia Recognition
1	The Israel Water Management Program was covered by the English language TV news in Israel in a program aired on February 2, 2013. http:// vimeo.com/57014686
2	Sharon B. Megdal was quoted in SCIENCE VOL 338 7 DECEMBER 2012 www.sciencemag.org
3	Conserve to Enhance featured in article, CONSERVATION, Pilot program makes saving water fun, by Elena Acoba in The Arizona Daily Star, which was picked up by the Scoop.it page for UA College of Agriculture and Life Sciences: http://www.scoop.it/t/cals-in-the-news
4	An interview with Candice Rupprecht by The Nature Conservancy "Wild About Water! The Nature Conservancy and Arizona Project WET Team Up, posted on TNC's website (http://www.nature.org/ourinitiatives/regions/northamerica/unitedstates/arizona/arizona-candice-rupprecht-qa.xml) and was featured as video of the week by TNC on Facebook, March 2012. https://www.facebook.com/thenatureconservancy
5	Article about Arizona Project WET's student field trip near Wickenburg, Water-education program teaches kids about source of life, by Shaun McKinnon in the Arizona Republic, April 28, 2012. http://www.azcentral.com/community/chandler/articles/2012/04/30/20120430water-education-program-teaches-kids.html
6	Candice Rupprecht, and Aaron Lien were interviewed for Arizona Green Plumber Radio Show, October 17, 2012, http://www.blogtalkradio.com/ thearizonagreenplumber/2012/10/17/the-arizona-green-plumber-talks-to-u-of-a-wrrc.
7	Sharon B. Megdal provided a series of interviews relating to the 2012 Annual Conference: January 19, 2012, Horizon, KAET PBS TV8, Phoenix, AZ; January 20, 2012, Arizona Week, KUAT PBS TV6, Tucson, AZ; and January 23, 2012, Bill Buckmaster Show, KVOI Radio, Tucson, AZ.
8	Sheila Wilensky interviewed Sharon B. Megdal for the Arizona Jewish Post article, "'Immersed in water': Sharon Megdal dives into policy and environmental issues," published December 28, 2012.
9	APW activities featured in "Kids Conserve Water", Channel 12 News, December 14, 2012, Online video: http://www.azcentral.com/ video/2041617084001
10	APW-School Water Audit Program featured in "PERA Club Water Audit", Know99 Television, December 14, 2012, Online video, http://youtu.be/ YI6e1KFhY3I