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Course Announcement
Water Harvesting Certification
August 19 - 28, 2011 – Santa Barbara, CA

Watershed Management Group (WMG) is accepting applications for its *Water Harvesting Certification* course to be held August 19 - 28, 2011, in Santa Barbara, California. Applications are accepted until July 15th, with priority registration given to residents of Santa Barbara and Southern California.

The WMG Water Harvesting Certification program provides the highest quality and greatest depth of training in integrative water harvesting offered in the nation. The Santa Barbara course is taught by a variety of experts including Santa Barbara's Art Ludwig and Tucson's Brad Lancaster.

In the last two years, WMG has trained over 80 people through our Water Harvesting Certification from throughout the U.S., Mexico, and Canada.

Program Description

The WMG Water Harvesting Certification provides a unique, hands-on 65-hour curriculum in water harvesting systems design and construction, with an emphasis on retrofitting urban areas while working in concert with the local environment. The course teaches design, implementation, and installation of greywater systems, water harvesting earthworks, and plastic and steel cisterns.

This rigorous course includes readings, written homework assignments, site assessments, outdoor workshops, and lectures. A typical day includes a 4-5 hour hands-on outdoor workshop and 2-4 hours of lectures or site assessments. To ensure a quality educational experience, we limit the number of students in the course to 12 to 16 students.

Registration Deadlines:

To be considered for the Santa Barbara course, applicants must submit a one-page resume and application form by the following dates:

Priority Registration: \$1,050 course fee

Applications must be postmarked by June 13th. Once accepted for the course, applicants must pay the full course fee 2 weeks after their acceptance. Three monthly installments may be negotiated if necessary.

Regular Registration: \$1,200 course fee

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Applications must be postmarked by July 15, 2011. Once accepted for the course, applicants must pay the full course fee two weeks after their acceptance. Three monthly installments may be negotiated if necessary.

Applicants will be notified of the status of their application on a rolling basis. **The program fee is non-refundable after August 1st.**

Scholarships:

WMG offers subsidies of \$100 to \$300 to help defray the cost of the course. To be considered for a subsidy, please include an explanation of your financial need in your application.

Course Requirements and Qualifications

Application to the Water Harvesting Certification is competitive; it is possible we will not be able to accommodate all the applicants we receive.

Though there are no prerequisites or educational or professional requirements to participate in the course, preference is given to those applicants who demonstrate that they have the capacity to utilize the skills and knowledge learned in their profession and/or community in a direct way.

In addition, all applicants are required to commit to participating in the entire program, including attending all course sessions and completing all readings and written assignments.

Meaning of Certification

Certification signifies that the participant has received a thorough training and has demonstrated a mastery of essential core concepts in the water harvesting topics outlined in the curriculum.

The Water Harvesting Certification course is designed and administered by WMG staff with assistance from an advisory board comprised of professionals who teach and implement water harvesting practices in their careers. The lectures and trainings are taught by WMG staff and well-respected guest instructors.

Participants who complete the Water Harvesting Certification will be able to:

- Integrate water harvesting systems with other design considerations (energy conservation, aesthetic design, food production, wildlife habitat, etc.)
- Calculate rainwater runoff potential of catchment areas and determine soil percolation rate
- Create a water budget and use water harvesting systems to match landscaping to available water supply
- Choose, size, and build appropriate earthworks features for different applications (basins, berms, swales, French drains)
- Design greywater systems from laundry machines, bathroom sinks, and bathroom shower water
- Build laundry to landscape greywater systems that comply with code requirements in CA
- Size and build steel-culvert cisterns
- Size and install plastic cisterns
- Design water harvesting systems to support small-scale food production (including earthworks design, cistern design and application, and soil improvements)

- Design all of the above systems while incorporating safety and health considerations

Earning Certification

To earn certification, participants must:

- Attend all course sessions (consisting of lectures, hands-on site assessments, and training workshops to practice construction of water harvesting systems at public, residential, or commercial sites.)
- Complete all reading assignments and written homework to solidify knowledge gained in the lectures and workshops.
- Score 90% on a written examination of concepts and applications of water harvesting taught in the course. The exam is challenging, and focuses on critical thinking and practical application. Support is given throughout the course to prepare for the exam. If students do not pass the exam, they will receive personalized feedback from WMG staff and can re-test at the next scheduled test date without a fee.

Participants who earn certification are listed (if they desire) on WMG's web site as a *WMG Certified Water Harvesting Practitioner*, along with contact information for the participant or their business.

Contact

If you have any questions about the training program or application process, please contact Lindsay Ignatowski by email at lindsay@watershedmg.org or by phone at 520-396-3266. You may learn more about Watershed Management Group by visiting our website at www.watershedmg.org or about the Certification program at www.watershedmg.org/certification. For more information on WMG's work in Santa Barbara, contact Barbara Wishingrad by email at bwishingrad@watershedmg.org or by phone at 805-403-4566.

Curriculum Details

- 1) Integrated systems design
- 2) Passive rainwater harvesting design and installation
 - a) Basins
 - b) Berms
 - c) Swales
 - d) French drains and infiltration features (design only)
- 3) Greywater harvesting design and installation
 - a) Bathroom sinks and showers (design only)
 - b) Laundry machine (design and installation)
- 4) Cistern systems design and installation
 - a) Steel culvert cistern
 - b) Plastic cistern
- 5) Sustainable Landscaping
 - a) Fundamentals of landscape design
 - b) Native plants
 - c) Calculating water budgets
- 6) Water harvesting for food production

7) Water Harvesting Policy

Instructors

Brad Lancaster, WMG Sr. Watershed Specialist

Brad Lancaster has been an educator of sustainable systems since 1993. He is affiliated with, and/or taught for, Sonoran Permaculture Teachers Guild, ECOSA Institute, Watershed Management Group, University of Arizona, Prescott College, Audubon Expeditions, and the Permaculture Research Institute. Brad specializes in water harvesting and conservation meshed with integrated regenerative design and permaculture. A major focus of this work is transforming "wastes" into safe and productive resources. He is the author of *Rainwater Harvesting for Drylands and Beyond*, Volumes 1 and 2. Brad has been researching, testing, using, and teaching about compost and compost toilet systems since 1996.

Catlow Shipek, WMG Sr. Program Manager

Catlow Shipek has led over 75 water harvesting workshops for WMG over the past five years. He teaches the hands-on implementation of a variety of water harvesting systems including: cisterns, greywater systems, passive earthworks, and erosion control techniques. Catlow has a Master's in Watershed Management from the University of Arizona and experience with erosion and sedimentation research in southeastern Arizona's rangelands. He manages various WMG programs including the Green Living Co-op, Schoolyard Water Education, and Water Harvesting Demonstration Sites program, along with consulting and international work.

Art Ludwig, Ecological Systems Designer

Art has 30 years of experience in water, wastewater systems, energy, shelter and human powered transport. His specialty is complex, integrated "systems of systems." Art has studied and worked in 22 different countries, consulted for the states of New York, California, and New Mexico on water reuse policy, and given dozens of lectures and workshops. He designed his own education in Ecological Systems Design, graduating from UC Berkeley. At Berkeley, he developed the first cleaners specifically designed to be biocompatible with plants and soil, and founded a successful business to manufacture and distribute them. Art has authored numerous articles (including one on water testing procedures) as well as the books "Water Storage" "Principles of Ecological Design," and "Create an Oasis with Greywater."

Lisa Shipek, WMG Executive Director

Since 2006, Lisa Shipek has served as the Executive Director of Watershed Management Group (WMG), a non-profit organization based in Tucson, Arizona. Lisa has expertise in developing training programs for professionals; developing environmental education programs for adults and children; and collaborating with a diverse range of partners to implement community-based environmental projects. Lisa directs fundraising, strategic development, and outreach activities for WMG. She manages several of WMG's programs including the unique Tucson Conserve to Enhance program that links individual water conservation savings with local river restoration and WMG's Water Harvesting Certification program that trains professionals from throughout the U.S and abroad. She holds a B.S. in Environmental Science and Masters in Latin American Studies.

Barbara Wishingrad, WMG Program Manager

Barbara is a Permaculture designer and longtime environmental steward with a special interest in water. She completed the Water Harvesting Practitioner Certificate with WMG in July 2009 and

was videographer for a Water Harvesting Course the following year. She is an ARCSA Accredited Professional and received additional training in Greywater Design and Installation through Greywater Action. Barbara is currently developing a WMG Co-op in Santa Barbara, CA, where she makes her home. Barbara has years of experience as an educator and advocate of holistic, sustainable systems for individuals as well as the broader environment. She is a UC Berkeley graduate in History.