Water Harvesting for Dryland Farming

Earthworks for Resiliency in an Era of Drought

April 5-8, 2017
Jalisco Jojoba in Hyder, Arizona

In partnership with Lush Cosmetics, join international educator, Warren Brush, with a dynamic teaching team that includes Brad Lancaster (http://www.harvestingrainwater.com) and Kate Tirion (https://www.facebook.com/DeepDirtFarmInstitute/), at Jalisco Jojoba Farm in Hyder, Arizona. Learn about earthworks and hydration strategies for dryland ecological farming, land restoration, and agroecosystem stability and resilience.

www.permaculturedesign.us

Program Overview

Worldwide, topsoil erosion averages 30 to 40 tons per hectare (2.5 acres) a year or 30- to 40- times faster than the replacement rate of topsoil. The need for people is growing daily with hands-on skills in hydrological restoration and the integration of farming utilizing the principles that lead to ecological stability. Whether you are working on your own landscape, farm, or as a consultant, this course will grow your skills in the appropriate design and construction of structures that will reduce erosion, increase productivity, harvest & store water, and create resiliency in the ecologies that sustain us.

The Program offers an Overview of:

- Ethics and principles of permaculture and water harvesting as applied to land restoration and regenerative design
- Land component identification
- Development of Farm Pollinators
- Natural patterning in farm application
- Water harvesting, drought-proofing and erosion mitigation systems applications
- Large earthworks & soil renovation techniques and machinery applications.
- Planting structures and guild development
- An emphasis on arid-land strategies

The following systems will be explained and participants will be able to assist in surveying, mapping and construction of various elements of:

- Water Harvesting Structures
- Soil Armoring
- Anti-evaporation strategies
- Water flow harvest structures
- Dryland drains and roads
- Erosion mitigation structures

A major component of this course will be hands-on skill development where we will develop on-site earthworks with large earthmoving equipment:

- Landform discovery and mapping
- Water flow calculation

- Use of survey equipment
- Soil testing for earthworks
- Construction flagging
- Appropriate earthworks system application for dryland context
- Working appropriately with equipment operators
- Equipment overview and application
- Large swale development and systems linking
- System planting and commissioning
- Additional hydration strategies

Schedule Overview:
(subject to change)

DAY	Session 1 • 8:30-10.30	Session 2 • 11-12.30	Session 3 • 2-3.30	Session 4 • 4-5.30	Evening Sessions
April 5 Wednesday	Welcome and Introduction - Water for Every Farm	Farm Planning Considerations, Earthworks, and Equipment for Varied Landscapes and Purpose	Site Assessment, Soil Testing and Surveying Techniques	Survey and Flagging - Field Work	
April 6 Thursday	Water Potential - Calculations and Analysis, Assessment of Rainfall to Run-On Opportunities, Constraints and Hazards with Brad Lancaster	Whole Farm Design Process - Erosion Triangle - Run-off to Run-on, Sun/Shade - Anti-Evaporation Strategies with Brad Lancaster	Water Harvesting Structure Construction Practicum with Brad Lancaster	Continued Field Work	
April 7 Friday	Native pollinators, increased biodiversity and using interstitial spaces for production and system resilience with David Seibert	Pollinator and interstitial spaces planting practicum with Kate Tirion	Armoring, Spillway Development, Erosion Control and Run-on Development - Field Work	Field Work Continued	Road Construction & Maintenance Video With Bill Zydeck
April 8 Saturday	Decompaction of Soils, Soil Biology Boosting, Swale Seeding & Planting Techniques, Crop Patterning for Water and Nutrient Retention	Irrigation, Planting Trees in a Dryland Environment	Field Work Continued	Wrapping the Bundle - Next Best Steps	

Registration Information

Tuition:

- $895 Early Bird Special until February 1, 2017
- $1050 after February 1, 2017

*Tuition includes Instruction, 3 meals a day, and camping accommodation.
**Financial assistance available for students and next generation farmers

Register Online at:

http://permaculturedesign.us/waterharvesting-2017/

For more information:

Please contact Ana Smith at ana@regenerativeearth.com.

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