

This presentation premiered at WaterSmart Innovations

watersmartinnovations.com



College-Level Water Conservation Technician Degree Now Available



WaterSmart Innovations Conference
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A Clear Need

Lake Mead 118' below
max level
(www.hprcc.unl.edu)



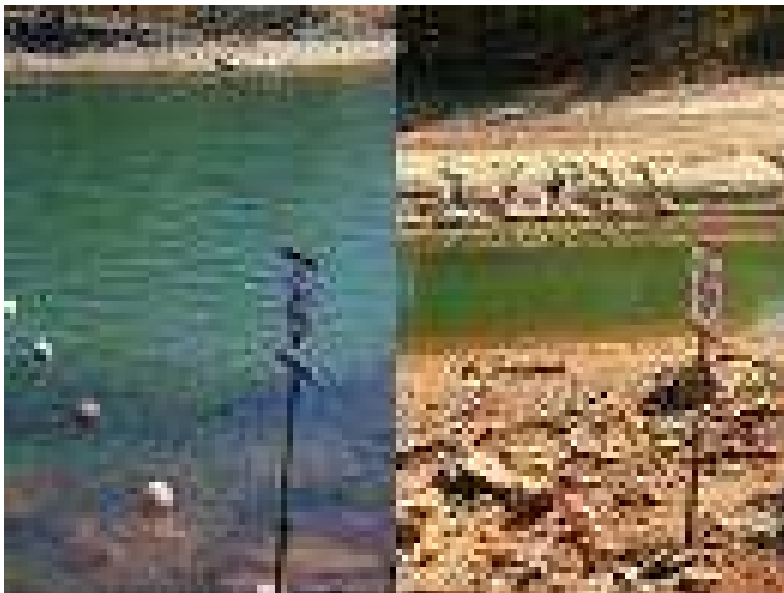
- The Government Accountability Office states by 2013 at least 36 states will experience water shortage[1]
- There is a 50% chance that Lake Mead will be dry by 2021[2]
- ... media is filled with examples of water issues – a new trend in reporting



Water stressors compound



- Aging infrastructure
- Need to maintain water quality & habitat
- Prepare for wave of retirees
- Population doubling by 2050
- Increasing industry demand
- Climate change & reduced snow pack
- **Mandatory programs more common, standardized training not available**





Benefits of Efficient Use



- New York City:
 - less expensive than expanding capacity
 - saved 28 gallons per-capita / day
 - decreased customers' water and wastewater bills 20-40%
 - increased customer satisfaction[1].
- Ashland, OR:
 - saved 500,000 gallons per day
 - fraction of the cost of added supplies
 - delayed capital expenditure until 2021 [2].



Benefits of Efficient Use



- Ample case studies clearly prove the multiple benefits of efficient use
- Water efficiency is the most cost-effective first step in preparing any water plan
- Wise water use yields saves \$, water, energy.... habitat
- It also creates jobs
- ... and boosts sustainability or green industries



But... who is training staff?

- On-the-job training is most common, and is:
 - Expensive
 - Time consuming
 - Not consistent across the industry

Do Survey

- **Workforce demand may soon exceed on-the-job training capacity – has it already??**





Degree Overview

- **Two-year Associate of Applied Science degree**
- **Teaches students how to design, implement & evaluate water conservation programs**
- Program is completely outside funded – does not receive any general fund support
- Success of the program will depend on you – the future employers – to hire interns & graduates



Degree Overview

- Water conservation practitioners:
 - Helped develop program
 - Review curriculum & provide ongoing advice to ensure program meets workforce needs
 - Teach in program as adjunct faculty
- Degree Advisory Committee includes:
 - Paul Lander
 - Jeanne F. LeJeune
 - Stephen West
 - Jill Hoyenga
 - Hari J. Krishna, Ph.D.
 - Michael Laurie
 - Christine Hollenbeck
 - Chris Jackson
 - Janet Nazy
 - Deborah Green
 - Debbie Colbert
 - Bill Fuji



Degree Overview

- 93 credit program includes:
 - Academic curriculum
 - Practical, hands-on curriculum
 - Required internships (need an intern?)
- LCC offers sustainability, energy efficiency & solar classes such as:
 - Environmental & Natural Resource Economics
 - Energy Efficiency Methods
 - Alternative Energy Technologies
 - Global Climate Change





Year One Classes

Intro to Sustainability	Intro to Water Resources	Water Conservation: Outdoor
GIS 245 Maps & Spatial Information	Water Conservation: Residential	Water Resource Economics
MS Excel for Business	Intermediate Algebra	<u>Regional Botany class</u>
English Composition	Technical Report Writing	Human Relations/Social Science
Physical Education / Health	Physical Education / Health	



Year Two Classes

Water Conservation: Industrial, Commercial	Integrated Water Resources Management	Water Conservation Program Development
Water Conservation: Agricultural	Fostering Sustainable Behavior	Water Mechanical Systems
<u>Regional Water Policy</u>	Arts/Letters requirement	Restricted Elective
Restricted Elective	WATR 280 Co-op Ed: Water Conservation	WATR 280 Co-op Ed: Water Conservation
Co-op Ed: Water Conservation		



Water Program Learning Outcomes



- Evaluate water use patterns in rural, urban, residential & commercial sites
- Recommend water efficiency measures
- Design, implement, evaluate & market programs
- Perform public outreach & marketing functions
- Understand & comply with regulations & laws



Program Learning Outcomes



- Develop knowledge of water resource economics
- Understand the multiple stressors to water supply
- Understand water distribution, flow & elimination
- Create technical reports & explain data using water industry measurement units & formulas
- Perform systems analysis using water bills, meters & other evidence to problem solve



Earning Potential for Graduates

Job Title:

- Water Conservation Coordinator
- Water Resources Technician
- Water Management Specialist
- General Conservation Scientist

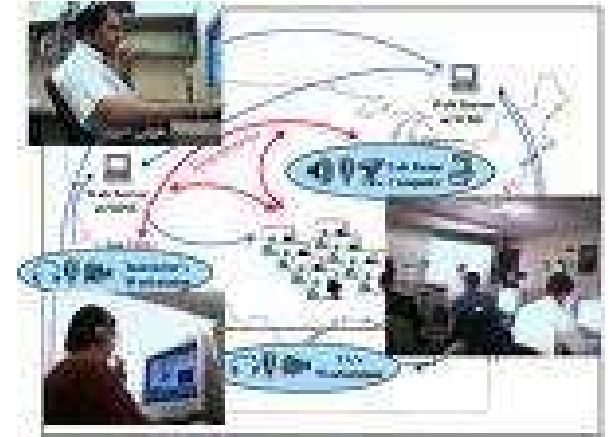
Annual Wage:

- **\$36,546 - \$53,856**
- **\$43,152 - \$46,124**
- **49,940 – 59,925**
- **\$30,730-\$54,640**

**What job titles do you use?
What salary range do you offer?**



Training beyond Oregon



- Distance Learning allows training to be delivered regionally through two-way real time video conferencing
- Education available at multiple sites
- Students do field work & internships at home site to solidify theory
- Practitioner instructors at distance sites

GO TO www.teachertube.com Show RWH Overflow clip



Training beyond Oregon

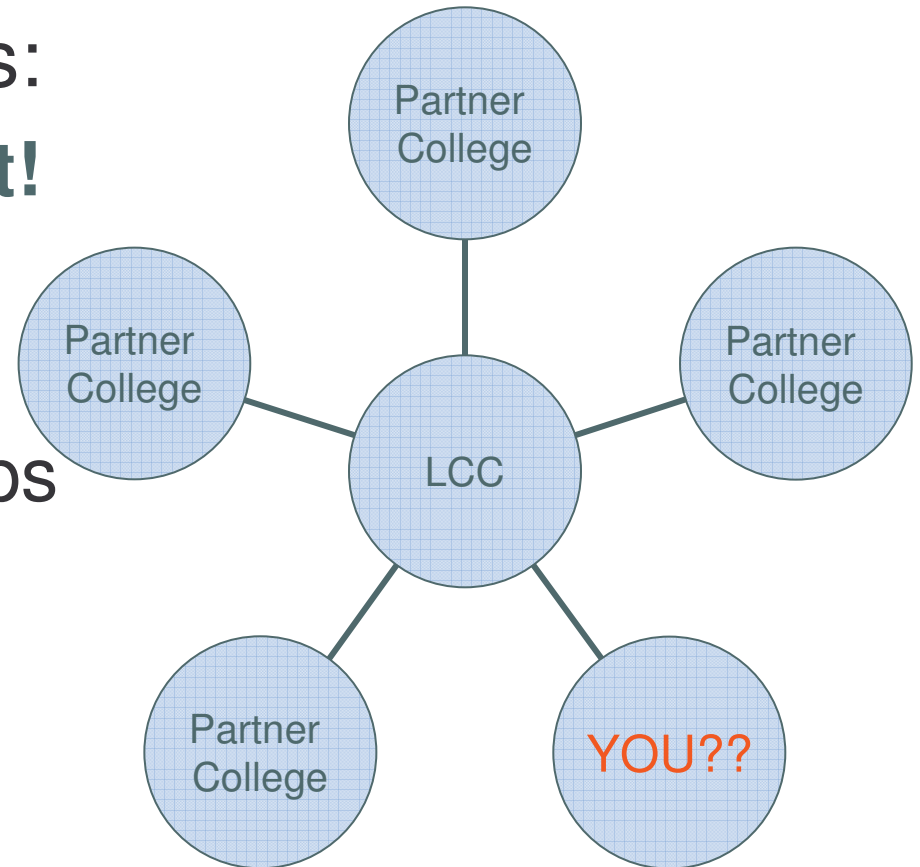


- Classroom training plus ease of **learning from the home or office**
- Combination of **live audio** and cutting-edge networking technology, providing a **real-time environment** for dynamic, **interactive collaboration**



Distance Learning Benefits

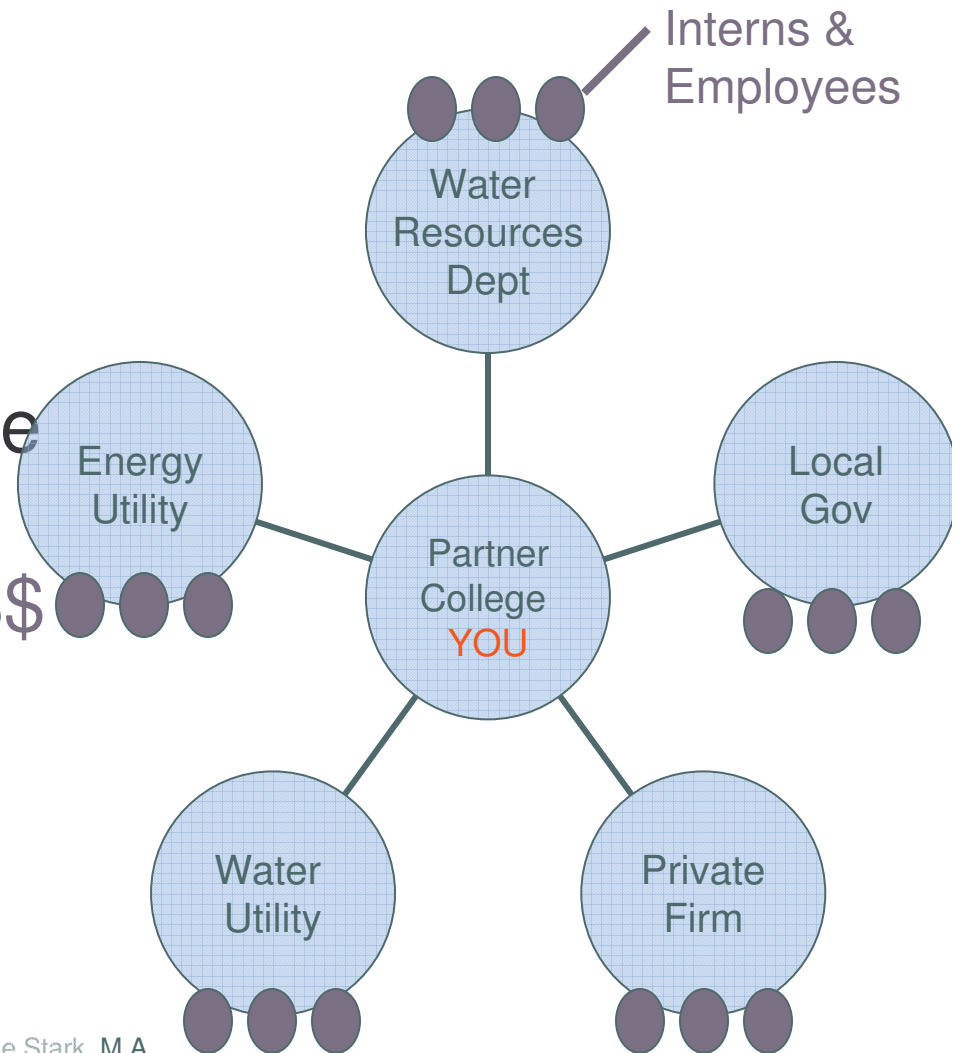
- Partner college benefits:
 - **Increased enrollment!**
 - **Training w/out development costs!**
 - Field work & internships
- Network of sites:
 - Leverages resources
 - Provides regional training





Distance Learning Benefits

- Employer benefits:
 - Local students for internships
 - Local graduates for hire
 - Standardized training saves you time and \$\$\$
 - Your training can be broadcast to LCC
 - You can teach in program





Professional Certification


- Program learning outcomes encompass all the need-to-know criteria of the Pacific Northwest Section of the American Water Works Association (PNWS-AWWA) Water Conservation Technician Certification
- Lane is the contracted provider of choice for training for the PNWS-AWWA Certification
- PNWS, CA/NV & other AWWA Sections working together for certification
- NEW! American Rainwater Catchment Systems Assoc, Accredited Course will be available at Lane



Be a hero – take action now!

- Degree will help meet workforce need
- Action / opportunities:
 - **Provide internships!**
 - Hire graduates!
 - **Partner college site!**
 - Share resources!
 - **Teach in program!**
 - Underwrite!
 - **SEND JOB OPENINGS!**
- Get involved! Provide support! Connect!





**Thank you! Questions?
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