

This presentation premiered at WaterSmart Innovations

watersmartinnovations.com



Challenges in Achieving Water Management Certification

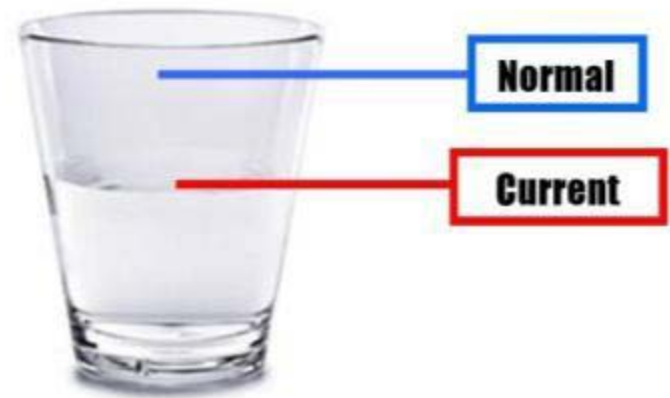
October 6, 2010

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City of Santa Monica



Water Supply Challenges

- State-wide Issues
 - Drought
 - Regulations
 - Water Quality
 - Climate Change
 - Population Increasing
- Impacts on Southern California
 - Drought
 - Reservoirs low
- Santa Monica Challenges
 - Rely on imported water
 - Water waste



A Picture Says...

Lake Oroville – Source of State Water Project



June 2005



February 2009

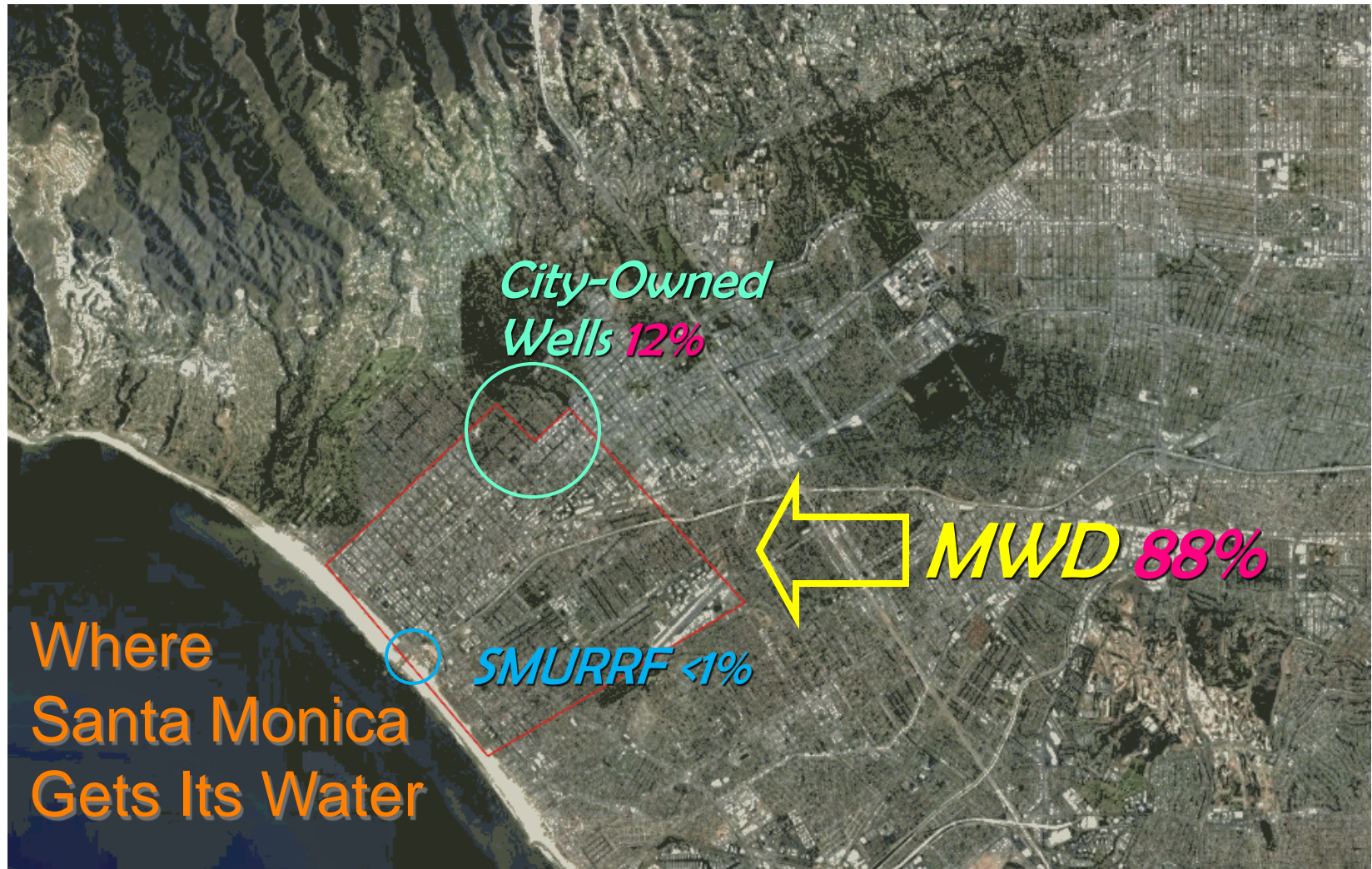
Photos provided by California Department of Water Resources

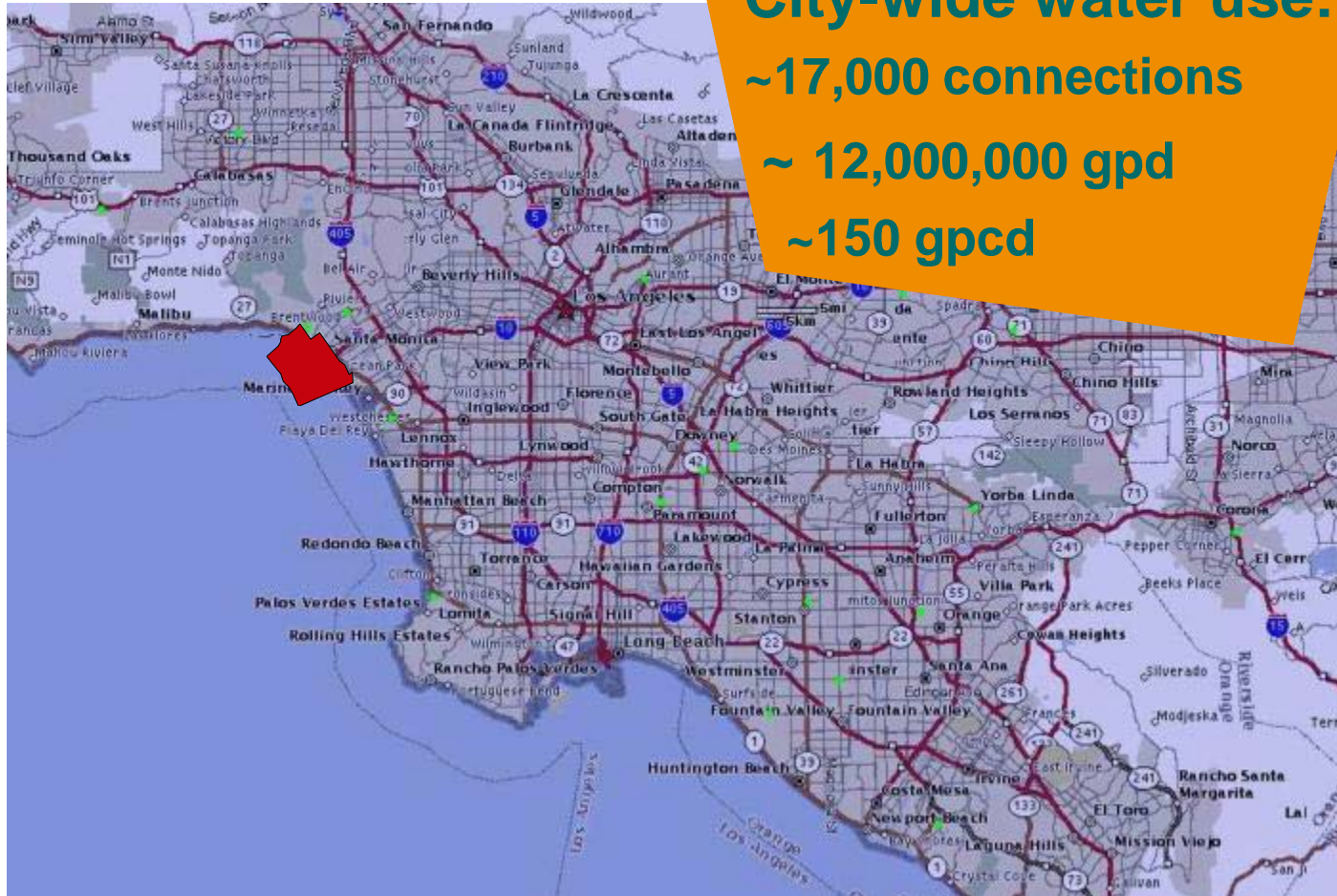
City of Santa Monica Office of Sustainability and the Environment

Photo Credit: Department of Water Resources









City-wide water use:
~17,000 connections
~ 12,000,000 gpd
~150 gpcd





The avg Single Family home uses 420 gpd – ~200 gpd for landscape





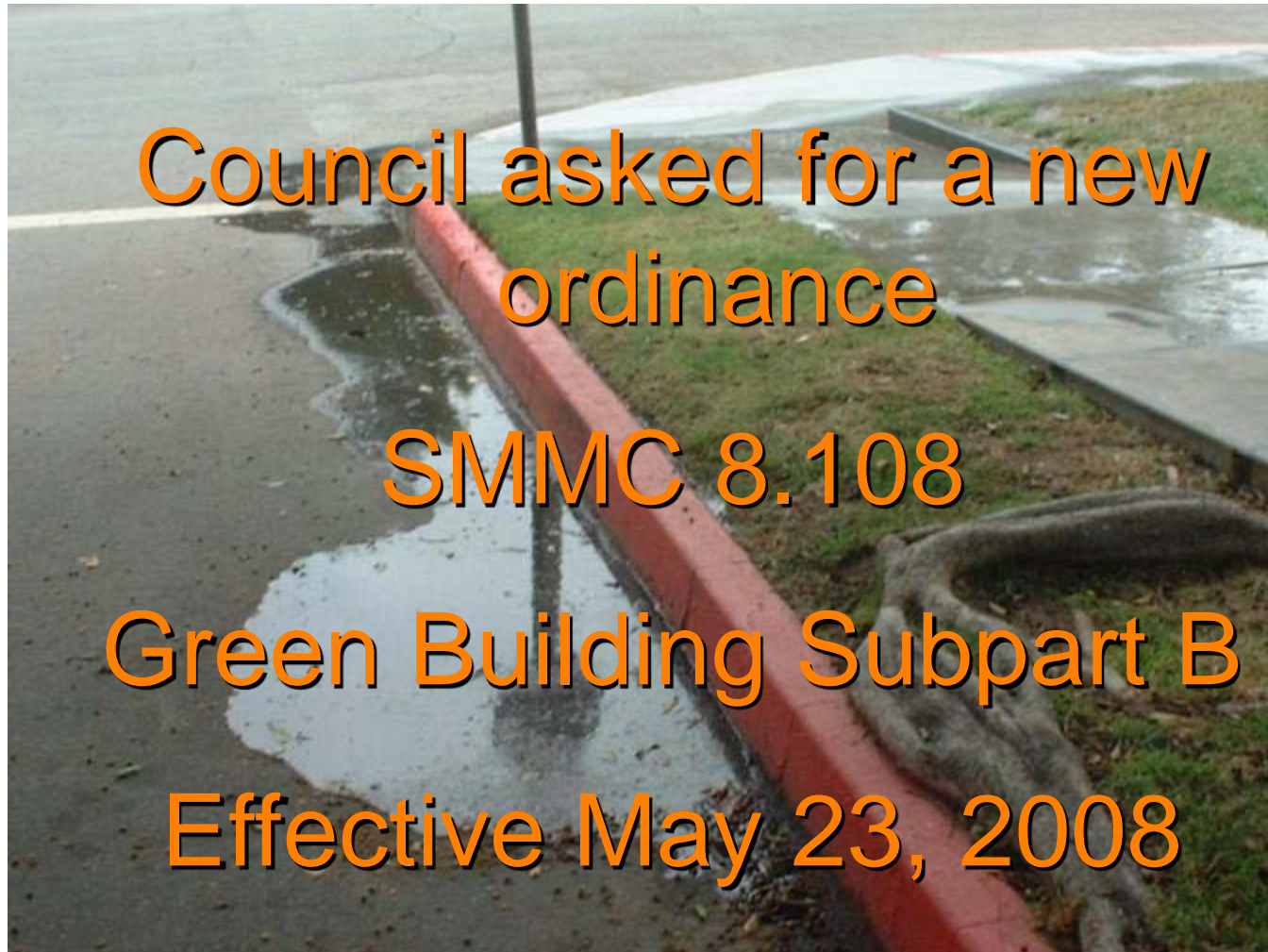
**Over 6,000
Warnings & Citations
85%
Irrigation Related**







325,000 Gallons
wasted every day
in dry weather



Council asked for a new ordinance

SMMC 8.108

Green Building Subpart B

Effective May 23, 2008

4 Basic Goals

- More climate appropriate landscapes
 - Higher irrigation efficiency
 - Weather Based Controllers
 - No runoff
-
- 2 inspections required: open trench and final



Professional Outreach

Sustainable Landscape Professional “SLP”



The City of Santa Monica's *Office of Sustainability and the Environment (OSE)* offers the Sustainable Landscape Professionals Program (SLP) to help educate members of our local professional community to use water more efficiently in their landscape projects.

This information includes the latest technologies in water-efficient irrigation systems, smart irrigation controllers, climate appropriate plants, rainwater harvesting, permeable paving and more.

As a result of this Program, a list of professionals has been created and is distributed via the web and upon request to clients interested in installing sustainable landscapes.



How Do You Get In the SLP Program?



Basic Requirements

1. Complete the SLP application – all members
2. Attend two required workshops on Sustainable Landscaping and Policies
3. Get a City of Santa Monica Business License
4. And....



In 2009....

*you had to enroll in third
party water management
certification programs to join
the Program*



- 46 SLP Program participants enrolled
- Nearly a year later only 2 successfully became certified due to various program obstacles.



Obstacles?

- Changing program requirements
- Exams evaluated by different people at different stages
- Changing multi-media interfaces
- Time consuming process; resubmittals
- Turf-centric
- Doesn't address Southern California issues
- Lack of training
- Expense





*What is
“water management”?*

- Is increasing the efficiency of the water delivery system the goal or just “managing” the water at an “acceptable” level?
- Is turf the only plant material that needs water management?



*Is water management and
turf management the
same thing?*



- Does knowing how inefficient the overhead spray irrigation is at watering my client's lawn help me save water or just increase the run-times to compensate for it?



- Should “water management” include training on the installation and maintenance of water efficient irrigation systems?



How do you properly install drip valve assemblies?



What's a minimum flow requirement?



What's a minimum flow requirement?



How do you properly install backflow prevention devices?



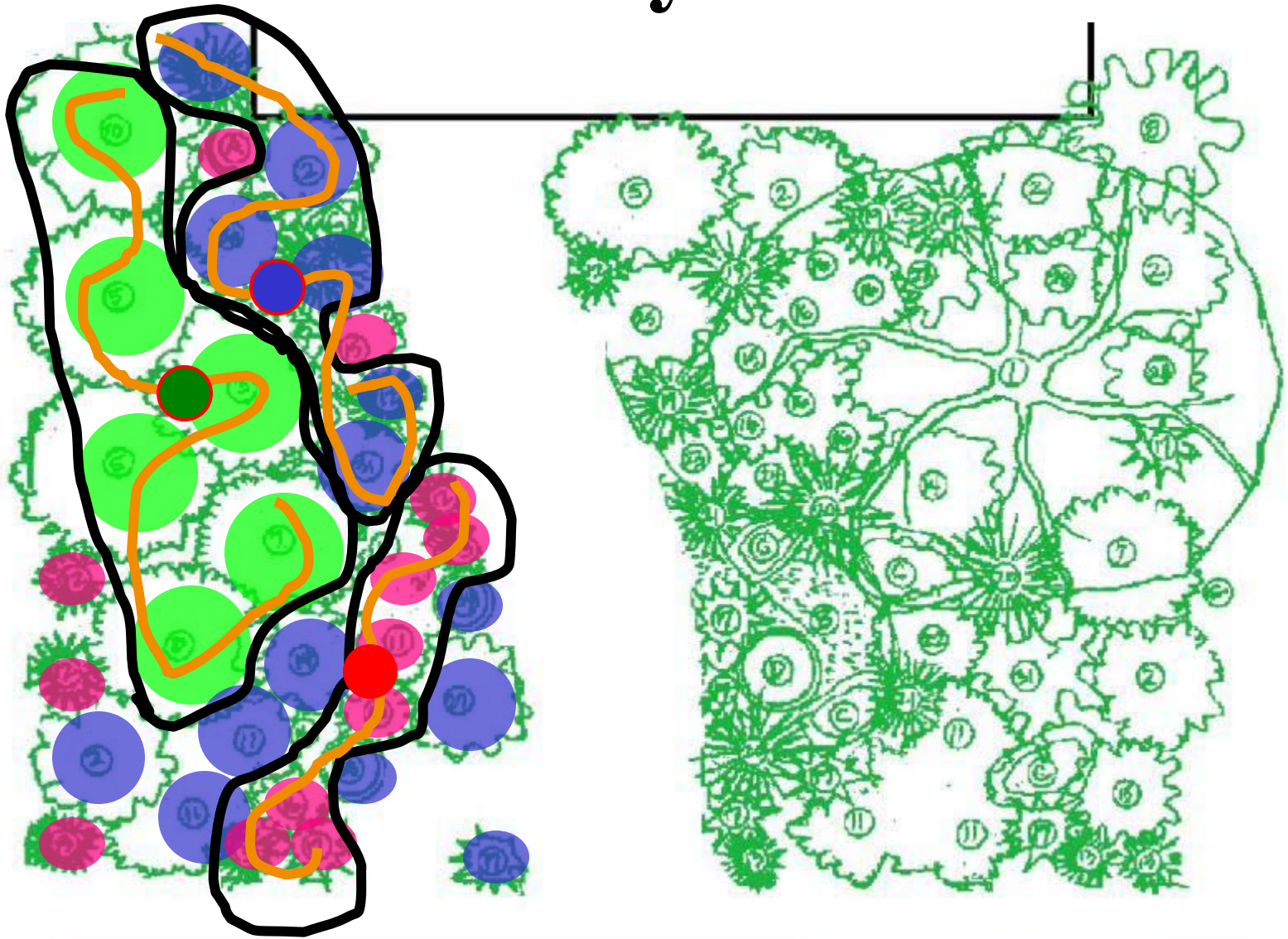
How does pressure effect my irrigation system?



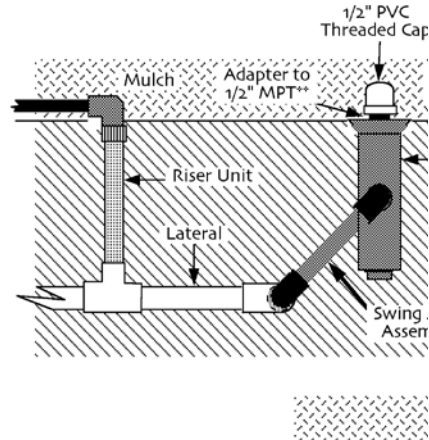
How do Weather Based Irrigation Controllers work?



What's a Hydrozone?



How do you audit a drip irrigation system?



Our experience with irrigation inspections showed that even with professional enrollment in “water management” programs,
100% of their field inspections failed:

- Low flow valves not installed for drip systems
- Anti-siphon valves not installed at proper height
- Underground laterals are haphazardly installed and on top of each other
- Drip tubing improperly installed
- Pressure compensating stems not installed with rotary nozzles
- Pressure regulation not installed at all or low flow pressure regulation not installed
- WBIC programmed incorrectly
- Improper hydrozoning – trees on same valve as turf
- Wrong type of pipes used
- Multiple inspections required



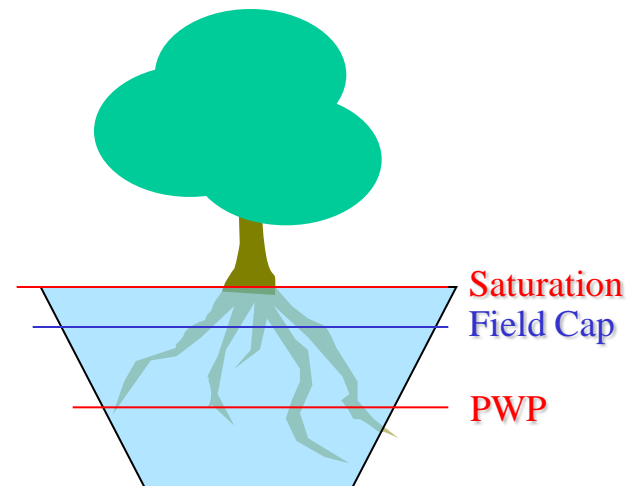
We REVISED the Ordinance...

- In effect Feb 1, 2010
 - To include specific Irrigation and Landscape Standards that have all the technical code stuff including text from State Model Ordinance
 - No audit
 - B&S inspectors testing system and making sure installed per approved plans
 - Audit requirement is only to provide a *report* not a fix
 - **There is no training available for *auditing* drip irrigation systems**

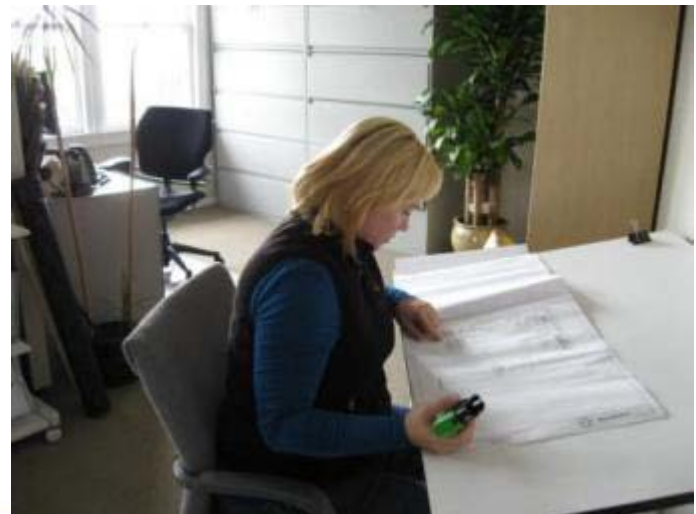


So we also REVISED the SLP Program requirements...

No longer have to enroll in a third party water management program. But you must attend our “Plants, Soil, Water Relationships” class and pass the in class test. If you have already passed the CLIA exam you may use that to fulfill the requirement.



- Should a municipality be *having* to provide professional training?
- Should having a basic water management understanding be an industry standard and part of state licensing requirements?



Solutions

- **Create a new landscape irrigation audit program that focuses on auditing drip irrigation systems and scheduling for climate appropriate plant materials**
- **Create a new water management program that focuses on designing , installing and maintaining water efficient irrigation systems with particular attention to drip components and system layout as well as choosing climate appropriate plant material.**
- **Make current certification process more transparent**
- **Remain consistent within the process**
- **Speed notification of certifications**



Questions?



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