



**CALIFORNIA STATE SCIENCE FAIR  
2005 PROJECT SUMMARY**

<b>Name(s)</b> Vanessa Peralez	<b>Project Number</b> <b>S0812</b>
<b>Project Title</b> <b>Water Conservation: What Can People Do to Conserve Water and Avoid Wet/Dry Spots</b>	
<p style="text-align: center;"><b>Abstract</b></p> <p><b>Objectives/Goals</b> The goal is to help people understand just how much water their sprinkler system is affectively applying to their lawn, based on precipitation rate (net) and distribution uniformity. With this knowledge maybe they will be encouraged to perform an irrigation audit on their sprinkler system. This would help minimize runoff and conserve water while eliminating wet/dry areas.</p> <p><b>Methods/Materials</b> A method of checking an irrigation system for net precipitation rate, distribution uniformity and efficiency is by performing an irrigation audit. An audit is a series of field tests procedures for collecting data (capturing water). This data was then put on an area test map for quick reference showing location of 30 catch devices and the amount of water capture in each catch device, location of sprinkler heads and duration of test (runtime).</p> <p>Materials: Pressure regulator, Catch devices, flags, time clock, Clipboard, Pen &amp; paper</p> <p><b>Results</b> After performing two audits, one at 30 p.s.i. and one at 60 p.s.i. the visual observations was that the water spraying out from the sprinkler nozzles were in the form of droplets and the water from the 60 p.s.i. was in the form of mist. Calculations showed that the lower pressure setting (30 p.s.i.), had better net precipitation rate (4.26 in / hrs) and distribution uniformity (76%) than that of the higher pressure setting. This means the water is being distributed more uniformity throughout the area to help eliminate wet /dry spots. Also knowing the precipitation rate can help when estimating run time, minimize runoff and conserve water.</p> <p><b>Conclusions/Discussion</b> My conclusion agreed with my hypothesis, if people were to perform an irrigation system audit on their sprinkler system, they most likely will find they could do alterations to their system to lower the amount of water used and still keep a healthy landscape while keeping runoff to a minimum.</p>	
<b>Summary Statement</b> Water conservation and how it relates to the distribution uniformity of an irrigation lawn system.	
<b>Help Received</b> Grandfather helped set the sprinkler system pressure regulator for audits first at 60 psi then at 30 psi.	