



**LANDSCAPE INDUSTRY COUNCIL OF HAWAII  
POSITION STATEMENT**

**Irrigation Water Conservation**

<b>Position:</b>	Landscape Industry Council of Hawaii supports water conservation, research & development, and the utilization of best management practices to conserve outdoor water usage within the landscape.
<b>Background :</b>	<p>Landscape irrigation uses upwards of fifty percent or more of our household water. A poorly maintained or installed irrigation system can waste up to fifty percent of water<sup>1</sup> due to inefficient irrigation practices, poor components, evaporation and runoff.</p> <p>Maintaining and installing water efficient irrigation systems is one of the most effective ways to reduce wasted drinking water, reduce run-off, sediments and optimize plant health by applying the correct amount of water.</p>
<b>Statement:</b>	<p><b>Support and encourage the following best management practices for new installations or major renovations<sup>2</sup>:</b></p> <ul style="list-style-type: none"> <li>• Design irrigation system with sprinklers spaced with head to head coverage or better.</li> <li>• Irrigation system plans and specifications shall include post-construction documentation, including drawings of record (as-built drawings), maintenance recommendations, seasonal operational schedules, design precipitation rates, manufacturer’s operational guide which shall remain on site. Specifications shall require a coverage test prior to acceptance and LICH water conservation best management practices.</li> <li>• Irrigate with a precipitation rate not exceeding soil infiltration rate.</li> <li>• Design systems to irrigate similar hydrozones (similar site, slope, sun exposure, soil conditions, and plant materials with similar water use) on same circuit. Avoid irrigation overlap between high and low water demand hydrozones.</li> <li>• Use a Climate Based Irrigation Controller (Smart Controller). Automatic irrigation controllers utilizing either evapotranspiration, weather sensor or soil moisture sensor.</li> <li>• Encourage the use of drip irrigation for individual specimen plants.</li> <li>• Use of flow sensors with malfunction valve shutoff system capability at irrigation controller.</li> <li>• Use irrigation submeter that measures water use on large sites.</li> <li>• Use water conservation irrigation components including but not limited to rotary nozzles, pressure regulated spray heads &amp; valves, rain switches and matched precipitation rate nozzles.</li> <li>• Sprinklers in low-lying areas shall be equipped with check valves.</li> <li>• Incorporate Low Impact Development storm water design methods including rain gardens, infiltration beds, swales, and basins that allow water to collect and soak into the ground on site.</li> <li>• Preserve existing native trees and non-invasive vegetation where feasible during development and do not install irrigation in these areas.</li> <li>• Encourage the use of non-potable water sources when available.</li> <li>• Encourage the use of xeriscaping practices to include drought tolerant plants or plants that are naturally occurring at the site and surroundings.</li> </ul>

	<ul style="list-style-type: none"> <li>• Use a qualified irrigation designer and installation contractor such those certified by the Irrigation Association and a maintenance contractor with water conservation expertise.</li> </ul> <p><b>Supports the following best management practices for maintenance:</b></p> <ul style="list-style-type: none"> <li>• At a minimum, adjust irrigation controller run times seasonally.</li> <li>• Conduct a practical water audit annually. Review the system components to verify that the components meet the original design criteria for efficient operation and uniform distribution of water.</li> <li>• At a minimum, conduct a monthly inspection to verify system operation and correct deficiencies.</li> <li>• Water in 2-3 short run time cycles in areas where run off and ponding occurs.</li> <li>• Program irrigation controllers to encourage deep watering to improve deep rooting and increase drought resistance. Avoid daily watering except for sandy soils.</li> <li>• Mulch plantings and refresh as necessary to maintain a minimum of 2 inches.</li> <li>• Encourage the incorporation of organic matter like compost into soils.</li> <li>• Schedule night or early morning runtimes for established plantings (5:00 p.m. to 9:00 a.m.)</li> <li>• Allow grass to grow taller to conserve water.</li> <li>• Aerate lawns when compaction occurs.</li> <li>• Encourage landscape professionals to attend water conservation seminars with continuing education units including American Water Works Association, Landscape Industry Council of Hawaii, American Society of Landscape Architects, U.S. Green Building Council, and the Irrigation Association</li> <li>• Use a maintenance contractor with water conservation expertise.</li> </ul> <p><b>Strongly Opposes:</b></p> <ul style="list-style-type: none"> <li>• Requiring utilization of drip irrigation for entire sites due to short lifespan, high maintenance and exaggerated water savings..</li> <li>• Requiring extensive and expensive water audits according to the Irrigation Association’s Certified Landscape Irrigation Auditor Training Manual (2004).</li> <li>• Prohibiting permanent irrigation systems.</li> <li>• Requiring use of synthetic grass.</li> </ul>
<b>References:</b>	<ol style="list-style-type: none"> <li>1. Outdoor Water Use in the United States, August 2008, U.S. Environmental Protection Agency (<a href="http://www.epa.gov/WaterSense/docs/ws_outdoor508.pdf">http://www.epa.gov/WaterSense/docs/ws_outdoor508.pdf</a>)</li> <li>2. LICH Water Conservation Survey, October 2010</li> </ol>

As a professional association, the Landscape Industry Council of Hawaii has a proud history of providing information to policy makers on matters concerning the science and profession of the landscape industry.

Hawaii’s landscape industry is one of the fastest growing and largest segments of the green industry with an economic impact of over \$520 million annually and full time employment of over 11,000 landscape professionals.

Formed in June 1986, the Landscape Industry Council of Hawaii is a state wide alliance representing Hawaii's landscape trade associations: Aloha Arborist Association, American Society of Landscape Architects Hawaii Chapter, Hawaii Association of Nurserymen, Hawaii Island Landscape Association, Hawaii Landscape and Irrigation Contractors, Hawaii Society of Urban Forestry Professionals, Kauai Landscape Industry Council, Maui Association of Landscape Professionals, Professional Grounds Management Society, Big Island Association of Nurserymen, and the Hawaii Professional Gardeners Association.

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