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Water: What Is on the Horizon and Knowing What to Grow^{© 1}

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INTRODUCTION

Plants do not waste water, rather people waste water on plants. Water-use efficiency during droughts and water shortages has less to do with plant selections than it does with planting design, installation, and maintenance. The key to a thriving "Green Industry" during resource scarcity lies in the successful education of the government leaders who have to respond to crises. Those who have been through water shortages and restrictions know this all too well. Those who have not — will!

BACKGROUND

Drought is inevitable. Water shortages are not. From the beginning of recorded meteorology, we have seen cycles of droughts and floods. This history is not confined to the Southeast, in fact since there is a finite quantity of atmospheric water present at all times. One region's abundance is almost always related to another region's scarcity. The unfortunate reality of the past several years finds the humid U.S. Southeast in an extremely dry period. Millions opted to stay or settle in a humid, temperate region to avoid the perpetual dry aspect of the desert west. But this aberration in weather, which has resulted in a 20% to 30% deficit in precipitation, totaling an annual rainfall of 90 to 140 cm (35 to 45 in.), is still 8 to 10 times the normal annual rainfall for the desert regions of the Western U.S.A.

While droughts will come and go, water shortages and their restrictions do not have to occur. Water shortage is a community or region's inability to cope with drought. Restrictions are a community's answer for poor planning, and the result of a crisis management mentality. And if restrictions need to be imposed, they should place the least amount of impact on the community. Restrictions should be designed concurrent with water supply planning and guarantee equity amongst all users and uses of the resource. The simple triple-bottom line is that water shortage restrictions should protect the resource, the economy, and the community. Unfortunately, they usually do not do a decent job protecting any of these three goals.

WATER LAW

The United States of America is actually two distinctly different water worlds, the East and the West. Most modern technology developed to use water for beneficial purposes, such as landscape irrigation, was developed in the West. Most restrictions were initially developed to cope with western water habits. Many eastern restrictions were not developed with regard to appropriate irrigation methods for humid climates and eastern soils. In the Southeast, a number of states and local governments simply adopted regulations from adjoining states, without regard for

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regional/local parameters and prevailing conditions. This standardized approach to restrictions, further complicated by local choice compliance and enforcement, has brought the “green” industry to its knees. Many states and local governments have opted to simplify their task in achieving water shortage reduction goals, by opting to “pick the low-hanging fruit” and severely curtail or eliminate landscape irrigation. While these governments might justifiably incur the wrath of the green industry, the real problem lies in the basis of law under which they are forced to operate, both during normal times and especially during droughts.

POLICY

In order to achieve a responsible set of equitable restrictions, a state needs to first complete two other tasks. The first task is the establishment of a comprehensive water use law, preferably based upon several basic tests — reason and beneficial use, public interest, and first in time. Both western prior appropriation doctrine and eastern riparian doctrine address some of these principles. Only “administrative” water law addresses all three. Some eastern “riparian” law states have adopted “regulated riparianism” doctrine into water law. During the regional drought of the past few years, states using regulated riparianism have nearly destroyed the green industry. Unfortunately, the administration of these hybrid laws is often left to local governments, and hence confusion abounds when it stops raining.

The second task involves the establishment of equitable restrictions to be applied when water allocation methods are trumped by a lack of supply. These restrictions must be developed considering the impact on the water resources of the region, the economic impact of withholding water from users, and especially the equity of the restrictions among the region’s water users. All in the region should share in the adversity, with priorities of use based upon the society’s needs, established well before the crisis occurs.

The third task, and the most critical, is managing water shortages through effective and consistent enforcement. Too many scenarios exist in states which have not pre-empted local variations in codes and enforcement of restrictions. States or regional water management agencies need to establish consistent rules and enforcement procedures for consistent restrictions. Our economies are no longer local or regional, but rather impacted by national and global forces.

RESTRICTIONS

When restrictions are established, they must first protect the water resource and the region’s environment. They must prioritize the value of the water use to society, to the economy and the environment, by ranking the effect of the withholding of water through restrictions. They need to be based upon hard science and reflect the “Best Management Practices” of the affected industry/use. Restrictions must consider the economic impact of withholding water from a use based upon the time impact of the restriction. For example, if water is denied to a vegetable crop, the impact relates to only that season’s crop. If water is denied to a mature grove of trees, the impact could run to multiple years. If these priorities are established in advance, businesses can make financial decisions as to crops grown, business ventures, and the risk associated with the published restrictions.

Restrictions must be equitable across the board. No industry should be the only target of restrictions. Government must understand the full implications of restric-

tions. For example, withholding water from a property's landscape has far reaching consequences all the way up the supply chain for the green industry. If equitable restrictions are established, published and enforced, industry will know up front which directions to take, including which plants to grow, and how to care for installed material. One state's restrictions may often create diseconomies in adjoining states — which often share a common water resource. For example, cutting off all outside water use in Georgia last year, created a \$2.5 billion impact on the industry, caused fear of gardening in the general public, and impacted on growers/suppliers in surrounding states, which had no such ban on use. In a global economy, actions of a single state or local government can have irreparable effects on interstate or even international economies.

PITFALLS

As mentioned above, many states copy rules from other states without regard for differences in local water-use parameters. Then when they apply restrictions, they fail to meet goals — or worse yet, jeopardize the water resource. Recent experience has validated that most areas do not have competent, effective restrictions. Furthermore these restrictions are not compatible with the state or local water policies and laws. Each state must design and implement consistent, science-based rules which meet the parameters and needs of the region. Studies of economic impact regarding passage and enforcement of laws and rules often disregard the long range of effect on the entire industry's supply chain. A recent example where a water management district calculated the time cost of a homeowner hand-watering his/her landscape (under local restrictions) failed to even mention, let alone evaluate, the restriction's impact on the professional landscape/nursery industry. Additionally, the same study ignored the revenue loss to the local government's water utility through implementation of permanent watering restrictions — again solely on landscaping irrigation.

SOLUTION

Given the current state of rules and laws throughout the Southeast, the green industry must become the source of science and reason in the promulgation of effective laws and rules which allocate water both during normal and "dry" times. The industry can no longer be content with just doing a "professional job of running a business."

While it has been proven foolish and ineffective to copy another state's methods, there is nothing foolish in examining the process by which their rules and laws were established. This is especially meaningful if their process resulted in a successful effort in protecting the resource while also protecting the economy, the green industry, and the community it serves. Any collective, yet ardent effort by the green industry, through its professional associations, to become engaged in helping governments in each of the states to review, revise and adopt equitable, science-based water-use and water-shortage rules is a needed and crucial start.