

Storm Water Management

The practice of Storm Water Management is not a new concept, although there is an increasing awareness about storm water as a fairly large issue. For some years it has been a requirement that projects keep all of the runoff of predevelopment quantity on site. Traditional pipe and drain systems collect the runoff and dump it and all of its pollutants into detention and retention ponds that you see at most developments. The mall, the grocery store, subdivisions, dense multifamily housing communities, any development with a lot of impervious cover requires major engineering studies and designs to deal with water quantity. But what about water quality? What about water not as a nuisance, but rather a precious or misplaced commodity. The “green” movement has put in the forefront of the minds of one of the greatest offenders, the green industry, the challenge of how to manage the problem. We are responding and with your help, we can make incremental change that mitigates a crisis in the future. How?



The Irrigation Industry has taken a lead role in developing solutions. The EPA estimates that nationwide 33% of water consumption is for landscape irrigation. To say they are interested in water conservation before it becomes a crisis is an understatement. Using new devices that monitor the weather more closely, using drip irrigation where possible and maintaining quality soil conditions all contribute to less water usage. When choosing an irrigation contractor be sure to qualify who you are working with. The technology and the industry are there but it is only as environmentally sound as the people who install it. Please feel free to contact us about reputable, knowledgeable contractors. Designing landscapes that require less water are also a wise management decision. The use of indigenous plants, ground covers, drought tolerant species and minimal lawns designed only for intended purposes, are all design choices that can aid in the reduction of water demand.



Rain gardens are gaining a wider acceptance and with a growing awareness they should become common place. Directing the runoff from your property toward one of these small carefully designed and built depressions allows the water to be stored temporarily in a special soil mix. The garden is designed to store water and allow it to drain slowly into the ground while offering the visual benefit of plants and trees that also benefit from this “micro” environment. Rain gardens, bio swales, and other manmade structures offer an alternative that reduces pollutants in our wetlands, streams, rivers, ponds and lakes. Conventional run off that is collected across pavements, concentrated into catch basins and storm drains and then piped to another location are known as non point source (NPS). Natural and manmade pollutants have been determined to be detrimental to our water supply, fisheries, recreation and wildlife. Consider these alternatives when considering your next project.



Storm Water Management (cont'd)

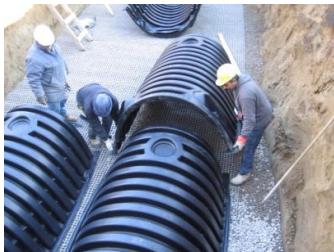
Porous or permeable pavements are another possibility for satisfying storm water challenges. We have been involved and continue to be involved in the correct specifying, detailing and construction of these pavements.



For large areas asphalt is often specified but for more modest driveways, walkways, patios and fire lanes concrete pavers are a preferred solution. These products have also evolved from the “grid” pavers shown here on the left to include plastic cellular confinement type pavements and concrete pavers with as little as a 12% reduction in the surface. Regardless of the product that is selected is critical that they be designed and installed correctly. Their intended use, serviceability and overall aesthetic are all compromised when not done correctly. With all the benefits of concrete pavers plus the added benefit of decreasing the impervious cover of the site, this solution is often implemented when the combined size of the buildings and pavement exceeds the allowable amount of lot coverage.



And finally, underground chambers or simple septic fields for capturing and storing storm water temporarily are another management alternative. Collecting your roof run off in rain barrels, cisterns or chambers allows



you to have at your disposal, free water. Depending on your needs these systems can allow you to have water available that does not need to come from your well or domestic water source. They can be designed for vegetable gardening or lawn irrigation systems, they could be used to wash a car or provide water for a visual water feature. Regardless of your situation when moving forward with a project these design principles should be considered. They typically do not increase the

cost of the project that much and when you consider the environmental benefit and the life cycle cost savings they may actually prove to be a good use of your financial resources. Approaching landscape improvements with this type of approach is the best thing for people today and tomorrow. Please feel free to contact us about your unique needs as they pertain to storm water on your property or project.

