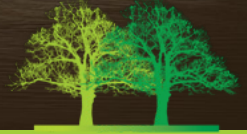




DRAINAGE SOLUTIONS TO FIX YOUR WATER DAMAGE WOES





TWIN OAKS
LANDSCAPE

About the Artist



Chris Speen is the owner and General Manager of Twin Oaks Landscape, a full-service lawn and landscaping company serving Ann Arbor, Michigan and its' surrounding regions. With more than 20 years of experience in the landscape industry, Chris shares a passion for creating and maintaining beautiful outdoor living environments. He is committed to providing reliable landscape services to residential and commercial clients through his experience, adaptability and loyalty, and he provides them with the education necessary to understand and help maintain their landscaping beauty in the future.

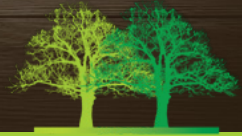


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Breaking Down the Drainage Problem

You've probably seen first hand the damage that can be done by one of nature's most powerful forces, water. The same water that is needed to help plant life and grass flourish within any landscape also has the capability of killing those plants; destroying building foundations; flooding basements; cracking cement; and producing harmful mold, mildew, and other bacteria. All of these have the potential to threaten your health and your safety.



Two main factors commonly contribute to the water damage caused by improper drainage:

1 Improper Drainage Planning or Implementation

Especially common in newer housing developments (those built around 10 years ago), poor planning or implementation has played a significant role in many drainage problems. Due to the economic events surrounding 2008, many lots were left empty and builds left unfinished. This consequently led to numerous drainage problems once construction resumed later on. Poor quality products used in these builds fail easily, and water that was left pooling caused significant damage to the ground and landscape.



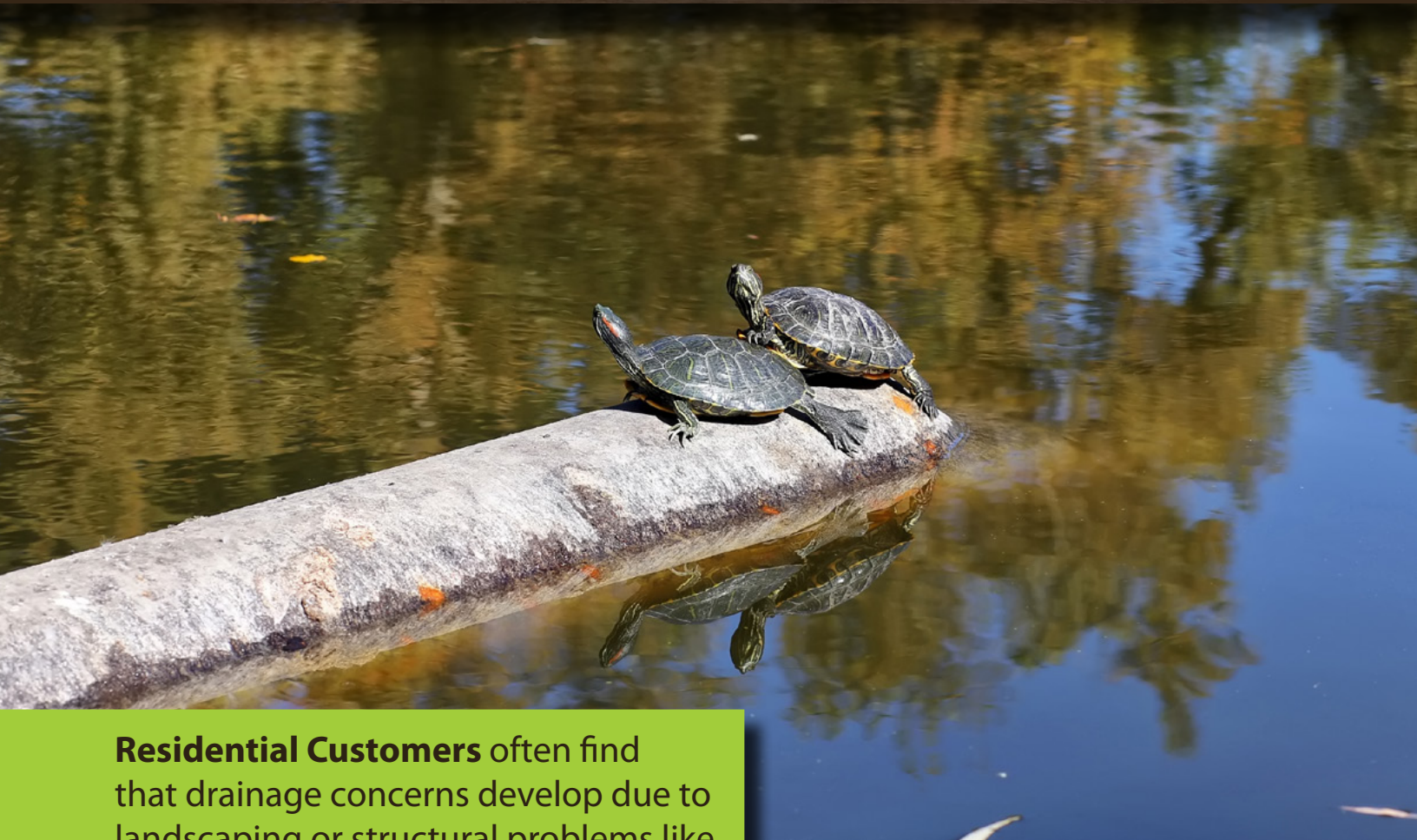
2 Overland flow system (known as surface runoff)

The original design of the overland flow system can be easily interrupted by the addition of buildings like garages, sheds, or other structures or landscaping elements. When these elements are added into the equation, the proper flow of water is disrupted, and the consequent damage results. Water may begin to pool in yards, flow toward buildings instead of away from them, and affect the underlying soil that supports the landscaping and buildings. Existing storm water management systems can become temporarily useless when this happens.

Who's suffering the most from drainage issues?

Overall, those who are affected by improper drainage problems most commonly fit into one of three categories: **Residential**, **Commercial**, and **Home Owners Associations**

The drainage needs, and therefore water damage concerns, can vary depending on which category a client falls into. These unique needs and specified solutions need to be addressed carefully and thoroughly in order to prevent or limit future water damage issues from developing.



Residential Customers often find that drainage concerns develop due to landscaping or structural problems like yard grades, ineffective downspouts, improper sump pump discharge and poorly functioning drains.

Commercial Clients often experience water damage and drainage failure due to the more public nature of their drainage systems. Parking lots, sidewalks, landscaping, and building foundations are often damaged due to failed catch basins, cheap pipe and negative grade.



Home Owners Associations (HOAs) often experience water damage from improper drainage due to the individual drainage systems that are constructed for the association itself. Capacity limitations and other outside factors contribute to the failure of these retention/detention ponds. Retention/detention ponds are part of the infrastructure and often require semi-annual maintenance.

There are many ways that drainage problems can be addressed for clients that fall into each of these categories. A knowledgeable team of Drainage Solution Specialists will assess the specific problems unique to each situation, and determine what the more effective methods will be to eliminate the problem and prevent future damage from occurring.

Drainage Problems for Residential Customers

Those living in residential homes often find themselves the unfortunate recipients of water damage due to poor water drainage. Whether there is too much or too little water left in your yards, the damage can be devastating to your property and pocketbook.



Older homes, built more than 40 years ago, frequently suffer water damage today because of failing drainage solutions put in place decades prior. These homes most likely were not built with sump pumps underneath them, and rely on foundation drains to divert water away from the house and toward the street. When these become clogged, damaged, or fail in any way, excess water can cause flooding and damage to everything around it. In addition frost heave from standing water is a major threat and cause.

Other sources of drainage problems commonly found on residential properties can include:

- Clogged downspouts and gutters
- Lawn grades that are sloped toward the home
- Improper sump pump discharge
- Soil erosion
- Leaky irrigation systems
- Cheap drainage pipe within clay soils
- Leaking egress windows or window wells in basements



Your personal residence acts as your living space, a place to store your valuable possessions, and a canvas to display the beauty of your home to the world around you. Maintaining its structural integrity and aesthetic beauty begins with a properly maintained landscape. If the surrounding landscape fails to properly drain water (whether in excess or short supply) the integrity of your home and your safety could be put in jeopardy of experiencing tremendous harm.

The Susceptibility of Home Owners Associations' (HOAs) Drainage Systems

Living in a community of common-interest homes can be a great benefit for many individuals, and most enjoy the added perks that come with being a part of a Home Owners Association. However, living in a community with a large number of homes or condos closely laid out together can come with some drawbacks as well. In residential areas located in urban settings, the city or municipality typically maintains the primary drainage means, such as the sewer and sanitation system. But, in a Home Owners Association community, the association usually has its own dedicated drainage system.

This drainage system usually features a retention/detention pond to store stormwater overflow from the homes and yards. Large drains or ditches that pass through the neighborhood can also serve as a drainage point for surface water as well. But, these systems do come with their limitations.



Limitations of HOA Drainage Systems

1

The size and content capacity of these retention/detention ponds can limit how much water can remain inside at a given time. Weather patterns can produce too much precipitation, causing ponds, ditches, and drains to overflow.



These shared community drains require ongoing maintenance to ensure pathways remain functional and unobstructed from debris.

2

As a Home Owners Association, a simple way to curb the expenses associated with this maintenance is to add the cost of preventative drainage solution measures into your annual budget and membership fees.

Commercial Business Accounts

Business owners and commercial properties also are not exempt from water damage woes caused from improper drainage. If you fall under this category, you may have noticed significant damage caused in part to the *drainage catch basins* serving your property. These catch basins, also known as storm drains, serve to collect and direct water away from the sidewalks, parking lots, buildings, and paved streets that surround them, and into underground waterways and sewers.



What causes catch basin failure?

Catch basins can fail to direct water away from buildings for many reasons. The main reason is due to the fact that the leaves, debris, and foreign objects that end up inside them can clog them up. Blocked sewer lines can also cause a backup in these catch basins. This may cause catch basins to break down over time. Or mother nature dumps more on us than what the drain was designed for.

What happens when catch basins/storm drains fail?



As you may have already experienced, when these drains become clogged, their capacity to hold and redirect stormwater away from buildings and paved areas decreases. Simply speaking, flooding starts to happen.

Flooding around your commercial property can:

- Damage sidewalks, parking lots, and other paved areas
- Destroy landscaping and plant life
- Compromise the structural integrity of your building
- Create hazardous conditions for individuals entering and leaving the premises
- Cause property damage to those items stored inside in the event water enters the building
- Water that sits around the foundation of the building will cause frost heave during winter months

Properly addressing your drainage concerns is one simple way to protect your investments, and increase the aesthetic appeal and beauty of your property's landscaping.

The Best Approach to Tackle Your Water Problem

Whenever professionals are called in to assess water damage and drainage concerns, it's important that all possible areas of cause are examined. One area of concern could easily turn into several problem areas that need to be amended. The goal is to find those drainage solutions that will completely eliminate your unique problems, and implement them in a way that makes sense to you. One must understand the original intent of the system to understand and provide a solution.



What's the best approach for your drainage problem?

Yard re-grading

Every yard has some sort of slope to it. A yard with no grade or a minimal grade will result in standing surface water that collects or pools in the grass. A negative grade refers to a yard that slopes toward your home or building. This is very problematic, and will cause significant damage to your landscaping and physical structures. A positive grade refers to a slope away from the home. This is the ideal solution, as storm or surface water will be directed away from the home and toward a central underground system. If needed, a yard can be re-graded to have that ideal positive grade your property needs.

Sump pumps

Sump pumps should be assessed to determine where they lead. Are they working properly or are they failing to perform as expected? Does a sump pump need to be installed under your home or building to help direct water away from the foundation?



Downspouts and Gutters

These two systems are some of the most common culprits of your water drainage problems. Leaves, sticks, ice, or debris can easily clog gutters, and downspouts often become homes for rodents and other small animals. These clogs can lead to water leaking inside the home, wood and structure damage, flooding in and around the building, and an infestation of grubs, earwigs, and other creatures in the organic-rich soil. Simple, regular maintenance and cleaning of your gutters and downspouts can quickly eliminate all of these problems.



What's the best approach for your drainage problem? (Cont.)

Trench Drainage

Underground drains can be added to your landscaping assist in redirecting surface water or ground water away from the area. These trench drains provide the additional drainage needed to help alleviate excessive water that collects in problem areas. Must understand the existing soil conditions.



Aeration is one of the best ways to maintain a healthy lawn, it helps alleviate compacted soils and thatch build up. The process allows the lawn to breathe, and helps nutrients and water to reach the root zone.



Specialized storm water management systems like use of these Gabian Baskets, help to maintain existing drainage systems to ensure sustainability.





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About Twin Oaks Landscape



Twin Oaks Landscape, a full-service landscaping company, was founded in 1993, and became one of the landscaping industry leaders in and around Ann Arbor, MI. Then, in 2003, they were looking to find a niche that would separate them from the other landscaping companies around. That's when they learned about the important role that drainage solutions played within the landscaping industry. They began educating themselves on the issue of drainage solutions through the help of a civil engineer, and have continued that partnership to this day. That very same civil engineer evaluates and assesses every work site to determine what specific drainage problems and unique solutions will work best. The staff at Twin Oaks Landscape continues to focus on drainage solution education and creating sustainable solutions for the future.

Twin Oaks Landscape has been recognized, both throughout the state of Michigan and the nation, as an industry leader in the world of drainage solutions. They are committed to providing their clients with the education and service they need to maintain beautiful, healthy lawns and landscapes.

How We Can Help

At Twin Oaks Landscape, we provide a wide variety of Maintenance Programs and Drainage Solutions to tackle any landscaping problem you may have. We create unique drainage solutions for all of our clients because we understand that no two problems are exactly the same. Our experienced staff of civil engineers and landscape technicians will complete a full assessment of your property and existing storm water management systems to determine what the most effective measures will be to restore the integrity and beauty of your landscape.

Whether your property requires the installation of downspout drainage pipe, trench or ditch drains, spillway installations, installation of plants to assist in negating the effects of wind and rain on the soil, a redesign of your irrigation system or retaining wall systems, we will work to find an unique solution that matches your specific needs.



Drainage project in progress for condo residents where water was pooling in their yards. Our efforts required the need to bore beneath the sidewalks, and installation of sound pipe products.

How We Can Help

Other services we provide for our clients' drainage needs include:

- Lawn re-grading
- Landscape design
- Storm Water Management
- Trench Drain Installation
- Aeration Services
- Spillway Systems
- Construction and maintenance of Retaining or Boulder Walls



No matter your landscaping needs, Twin Oaks can help. Call us today, and we can create a specialized drainage solution plan that will eliminate your water drainage problems, once and for all. Don't let another day pass as improper water drainage gradually destroys your landscape and home. "Rely on Us" is the fundamental principle that enables us to turn our clients' visions into reality. Can we do the same for you? Call us today to learn more about the perfect drainage solution for your water management needs.