

# Landscape Guidelines for [Insert Development]

## *Purpose*

The goal of these Landscape Guidelines is to promote low-impact landscaping practices that reduce water usage while maintaining aesthetically pleasing and consistent environments. Homeowners are encouraged to use native or drought-tolerant plants, efficient irrigation systems, and water-conserving techniques such as mulching and proper soil management. Additionally, homeowners are encouraged to make landscape lighting choices that do not permit light escape into the night sky.

By implementing these guidelines, homeowners can conserve water resources, reduce water bills, and create landscapes that are resilient to drought conditions. Additionally, these guidelines may contribute to environmental conservation efforts by minimizing water runoff and promoting biodiversity. Overall, the goal is to strike a balance between beautiful landscapes and responsible water usage within our communities.

## *Definitions*

To reduce the potential for misunderstanding, commonly used terms in the landscape guidelines are defined below:

- **Adaptive Plants.** Species or cultivars of a plant that, while not native, grow well in a given habitat with similar maintenance and water needs as plants that are native to the same area, and that do not pose an invasive risk.
- **Hydrozones.** Specific landscaped areas that are serviced by the same irrigation zone. The most efficient landscape designs will include plants with similar water needs planted within the same irrigation zones, or irrigation zones designed according to the plant needs in the landscape and allowing the least amount of water to be applied in each zone.
- **Invasive Species.** Aggressive and undesirable plants—whether native, naturalized, or exotic—which are detrimental to the health of native plant populations as they outcompete desired native plants and create monoculture systems that reduce biodiversity and local habitat.
- **Irrigation System.** A system of pipes and emitters that delivers water from a potable or non-potable source to the landscape either from above or below the surface.
- **Native Plants and Trees.** Plants, grasses, and trees that live or grow naturally in Central Texas without direct or indirect human intervention; they are adapted for Texas' drought and heat and are an essential food source and habitat for native animals.

- **Non-Potable Water.** Water not fit for human consumption, including untreated well water, recycled water, aerobic septic water, untreated captured rainwater, and raw water from reservoirs or community water systems.
- **Potable Water.** Treated water or water considered naturally safe for human consumption, such as filtered well water, treated municipal or community water from a permitted and managed community water system using groundwater sourced from wells.
- **Rainwater Harvesting System.** A system which connects gutters from buildings to a storage tank, either above or in the ground, and which collects rainwater from rooftop surfaces, for use in the home or landscape.
- **Turfgrass.** Species of grasses, either native, adaptive, or foreign, that are installed close together in large swaths so as to create a lawn or carpet-like appearance (e.g. Buffalograss, Zoysia).
- **Xeriscaping.** A style of landscape design for greenspaces that requires low amounts of irrigation and maintenance, and which promotes biodiversity.
- **Water-wise landscape.** An attractive, functional, easily maintained landscape that uses native or drought-tolerant plants and requires minimal water to thrive.

## ***Landscape Guidelines***

### **1. Landscape Plan.**

Before any landscaping commences, owners must present a completed landscape plan and schematic drawings to the LDC for approval. Irrigation plans must be submitted to the LDC along with landscape designs. If the Owner wants to change landscaping or irrigation from the original proposal, the plan must be resubmitted. Any updates to landscaping must be in compliance with the landscape guidelines.

Within the landscape plan, consider creating low maintenance areas that support a variety of the Texas Hill Country's iconic plant populations and conserve resources. These areas can increase stormwater infiltration and groundwater recharge, eliminate the need for irrigation, reduce mowing operations, and increase the site's biodiversity.

### **2. Landscape Planting.**

**Choosing native and drought-tolerant plants for your landscaping is one of the easiest ways to conserve water and support local wildlife.** As such, the use of native or drought-tolerant plants, grasses, and trees is required when planting the landscape. All plant species must be on a preferred plant list—several of which are provided in Appendix B herein—or from another credible source on native and adapted plants. Adapted plants that are invasive shall not be allowed. Care should be taken to hydrozone

landscape areas to deliver the proper amount of water depending on species, cultivar, and density of planting.

It is recommended to preserve native plants on the predeveloped site to the extent possible, incorporating them into the final landscape design. [Note: Native plants that have been preserved should not require irrigation and, as is the case of the Ashe juniper tree (*Juniperus ashei*), could be harmed by installed irrigation systems or changes in grade.]

New landscape planting is best undertaken in the Spring or Fall to reduce water use during the establishment period.

### **3. Shade Trees.**

Trees play a big role in keeping our neighborhood cool, and native and established trees can be quite resilient to drought. Every effort should be taken to preserve pre-existing trees on a property, including protecting trees from damage to roots during construction. Trees that must be removed during construction should be marked on landscape plans, and caliper measurements noted, so that original caliper capacity can be maintained through the replacement of similar size trees once construction is complete. (See Appendix B Resources for proper tree protection during construction.)

### **4. Turf Areas.**

To promote water conservation and biodiversity, native turfgrasses should be prioritized over non-native turfgrass in landscaped areas. Native grasses are naturally adapted to local conditions, requiring less water, fertilizer, and maintenance. Natives can thrive in difficult terrain and thin underlying soils while providing essential habitat for pollinators and wildlife.

Non-native turfgrasses, which demand more frequent irrigation and maintenance, shall be limited to at most 50% of total landscaped areas, or 5,000 square feet (whichever is smaller). Native turfgrasses are exempt from this restriction.

Artificial turf, which studies show contributes to the heat island effect, harbors bacteria, and produces microplastics, is not permitted.

Turf areas should be allowed to have low-growing native forbs and groundcovers, as long as they are maintained neatly. Examples include Texas frogfruit, horseherb, and silver ponyfoot.

Mowing heights for turfgrasses shall not be less than three inches, and preferred heights are four inches or more. Mowing height should be informed by the recommendations for the specific species of grass. Many native species thrive with little to no mowing and should be allowed to reach their natural height to promote drought tolerance and ecological health. Taller turf encourages deeper root systems, resulting in more resilient, self-sustaining landscapes.

If planting non-native turfgrasses in areas with less than two inches of native soil, it is recommended to add at least four inches of clean topsoil. Non-native turfgrasses often struggle in shallow soils, which can lead to overwatering. Topsoil should be free of weed seeds and construction debris and should contain 25% mature compost. Healthy soils absorb and retain more water, reducing the risk of runoff and erosion. (Good resources for native and drought-tolerant grasses can be found in Appendix B.)

## **5. Irrigation.** \*

Irrigation should be thought of as a supplement and complement to natural rain patterns. A water-wise landscape should be designed so that once an area is grown in, typically a period of between one month to one year (depending on the project), watering is only needed on the hottest driest days or in drought conditions. This can be done through hand watering or through an irrigation system.

Most water-wise landscapes that use native and drought-tolerant plants **do not need automatic irrigation**. Automatic irrigation systems can be overutilized or misused, potentially wasting water or drowning native or drought-tolerant plants whose water needs are minimal once established. Therefore, it is encouraged that landscapes minimize or eliminate automatic irrigation, and instead use hand-watering as needed for extreme conditions.

However, if automatic irrigation is desired, the following guidelines should be followed to reduce waste:

- a. Irrigation systems must be **hydrozoned**, matching irrigation schedules to plant needs in each zone to avoid overwatering. Irrigation controllers should be capable of multiple programs.
- b. Rain and freeze sensors are required to avoid watering plants when it's not needed.
- c. Use drip irrigation instead of overhead sprinklers in plant beds. Drip is often more efficient than overhead sprinklers, and well-suited for low-traffic areas. Be sure to work with a licensed irrigator experienced in drip installation to ensure the drip is installed according to industry best practices, including proper pressure regulation.

d. Irrigation systems must be **scheduled properly** to avoid overwatering. Consult with an irrigation specialist to set up a schedule that minimizes water use. Once native and drought-resilient plants are established, the watering schedule can be as infrequent as once per month. **At most, automatic irrigation should be set up to water plants no more than once per week after the grow-in period.**

e. Plants need different amounts of water in different times of the year. Homeowners should adjust their irrigation schedules seasonally to accommodate the growth and dormancy cycles of landscape plants. Consult with an irrigation specialist to create a good seasonal schedule.

f. If you are using overhead emitters, nozzles must be appropriately sized to ensure consistent performance throughout the zone and to minimize water waste and overspray on hardscapes.

g. Consider installing a second meter to track irrigation water use.

h. Avoid planting in the summer, when new or young plants will need the most water to get established.

i. Homeowners planning to irrigate, whether via automatic irrigation or hand watering, are encouraged to consider installing a rainwater harvesting system (see Rainwater Harvesting guideline).

j. Irrigation plans must be submitted to the LDC along with landscape designs. If alternative watering schedules are needed for landscape grow-in periods, residents must include a water schedule variance request, which shall include how many zones are included in the variant schedule and how many days or weeks the variant schedule is needed.

*\*Notes for this guideline: Irrigation needs are complex and specific to your individual landscape, making it difficult to offer a one-size-fits-all guideline on irrigation. The most conservative irrigation approach is no irrigation, with limited hand-watering only under extreme conditions. However, this is not always practicable. When designed and installed properly, and paired with native or drought-tolerant plants, automatic irrigation systems can be water-efficient. The guidelines provided in the irrigation section are intended to promote efficiency and conservation and should be discussed with your irrigation consultant.*

*Additionally, for established developments looking to maximize water savings in homes, the LDC can encourage homeowners to retrofit existing irrigation systems when updating their landscaping.*

*Alternatively, the LDC could encourage homeowners to cap or eliminate automatic irrigation during the landscape conversion.*

## **6. Rainwater Harvesting.**

A professionally designed rainwater harvesting or catchment system is encouraged in place of a traditional irrigation system to help supplement the use of well water or public water supply to which the lot is connected. The system should be designed in accordance with the [Texas Manual on Rainwater Harvesting, Third Edition \(Texas Water Development Board\)](#), or in accordance with industry best management practices as provided by the American Rainwater Catchment Systems Association.

The installation should be neat and tidy, and the system maintained to ensure complete functionality. All downspouts from all buildings on the property should be tied into the rainwater storage tank(s) or other water swales or rain gardens designed into the landscape.

Harvested rainwater, rather than potable water, is preferred for irrigating landscaped areas. Owners wishing to irrigate landscapes primarily with rainwater are encouraged to install a rainwater collection system of at least 5,000 gallons which can supplement the use of well water or a public water supply to which the lot is connected. However, the inclusion of a rainwater catchment system does not preclude the inclusion of another water source for irrigation, and it is permissible for a homeowner to utilize both systems to ensure landscapes stay healthy and thriving, especially in drought conditions.

For property owners with minimal watering needs, smaller rainwater harvesting systems (less than 5,000 gallons) are highly encouraged to reduce demand on existing water supply and may be connected to individual downspouts.

## **7. Nonliving Ground Cover.**

Nonliving ground cover should be permeable to encourage recharge. Areas can contain decomposed granite, ground hardwood mulch, crushed limestone, flagstone, loose stone material, or other appropriate ornamental material for a ground cover that is maintained to prevent weed growth without using toxic or environmentally harmful chemicals. Large areas may not be composed of a single nonliving material, i.e. bare mulch/rock is not allowed unless interspersed with plants. Additionally, loose rock in the front lawn must not wash out onto the public sidewalk or street. This may be prevented by ensuring that the rock level is lower than the curb or sidewalk. Concrete surfaces shall be limited to driveways and sidewalks.

## **9. Mulch.**

All beds and tree wells must be mulched. Mulch helps keep moisture in the ground, so that plants need less water during dry times. Mulch should be 2 to 3 inches in depth and turned and replenished regularly. Care should be taken to remove mulch from around the crown of plants, maintaining a three-inch buffer zone free of mulch to allow full transpiration by the plant. Organic mulch, which includes pine bark, newspaper, compost, sawdust, and straw, is preferred.

## **9. Pre-existing or Native Property Rock Features.**

Landscapes composed of majority rock or boulders will not be allowed; however, boulders or rocky areas that are native to the building envelope can remain in place if they are incorporated into the greater landscape. Rock should be used as a complement or border or accent areas to landscape, not as a primary landscape material itself. Rocked areas should be designated on landscape plans, and native undeveloped rock areas should be distinguished from prepared, landscaped rock areas.

## **10. Outdoor Lighting.**

Outdoor light fixtures should serve a specific purpose while preserving the view of the night sky and minimizing impacts on neighbors, drivers, and pedestrians. To achieve this goal, any light fixture used for exterior illumination must be fully shielded and directed downward so that the light source is not directly visible from any other properties or public roadways. To reduce glare and light trespass into neighboring lands, as well as minimize adverse impacts on wildlife, the light source should be no brighter than necessary. It should be controlled by a timer or motion detector and turned off when not in use. The color temperature of the light source must comply with local government regulations. In the absence of an outdoor lighting ordinance or policy, the recommended color temperature of the light source should be 2200K and must not exceed 3000K. Properties with outdoor lighting that does not comply with these requirements must become compliant within five years from the date the policy is adopted.

## **11. Outdoor Water Features.**

Outdoor water features are permissible subject to any setback provisions and in compliance with the water supplier's drought contingency plan. Water features must be maintained regularly, kept clean and free of mosquito larvae, algae, and bacteria. Maximum size for water features is 500 gallons. All features shall have a recycling pump to reduce the amount of water needed to maintain the feature. Large pond-like features are not allowed, and all water features will be reviewed in planning and assessed by the LDC. If at any point a water feature becomes unkempt, or becomes a nuisance in smell, sight, or wildlife attraction which causes a problem for neighboring properties, the LDC reserves the right to require

adjustment, decrease in size, cleaning, or permanent removal of the water feature.

## **12. Oak Wilt and Tree Maintenance.**

All tree pruning will be completed in accordance with the US Forest Service recommendations (Appendix B US Forest Service 2012 “How to Prune Trees”) and all oak tree cuts will be painted within 20 minutes year-round to prevent oak wilt disease. Tree-wound paint acts as a barrier which stops fungal spores carried by insects from entering the wound. According to the Texas A&M Forest Service, residents should avoid pruning between February and June when risk of infection is highest. If oak wilt is identified, then it becomes a community issue. The Texas Forest Service oak wilt specialist will be contacted for recommendations, which could include additional cost for the property owner to treat trees and/or ensure the infection is contained.

## **13. Chemical Pesticides and Fertilizers.**

Residents are encouraged to use Integrated Pest Management (IPM) to minimize the exposure of stormwater runoff to chemicals, which can harm waterways and water supplies. IPM restricts the broadcast application of chemical pesticides in the absence of active pests, and instead promotes mechanical or biological controls. Residents should consider chemical controls only if non-chemical treatment fails; always follow instructions on chemical labels exactly.

Due to the sensitive nature of Hill Country waters, fertilizers will be limited to those that are certified natural or organic and contain no more than 4% phosphorus. Additionally, care must be taken to ensure no more than one pound of Nitrogen, and ideally no more than ½ pound of Nitrogen, is applied per 1,000 square feet *per year*. Care should be taken to avoid applying pesticides or fertilizers before a rain event.

## **14. Other Maintenance.**

*Non-native* grasses or sodded areas must be mowed regularly. Homeowners with native grasses should not expect to mow as frequently and should refrain from mowing during critical flowering or seeding seasons. The taller the grass, the deeper the root, and the more resilient the plant to drought.

Beds must be free of weeds and all yards need to look neat and tidy. No plants may encroach on public sidewalks. Sickly and dying plants must be removed or replaced. Shrubs, trees and perennials need to be pruned according to what is appropriate for the plant and in accordance with plant maintenance recommendations.



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### **Other Considerations: Protecting Your Community from Wildfire**

The expanding threat of wildfires to Texas communities is a result of the state's ever changing land use, climate, and population. Water-wise and fire-wise landscaping can go hand in hand. Fire hardening your property can include using at least minimum clearances between landscape beds and the residential structure—and using landscape plants that don't combust easily. The [Texas A&M Forest Service](#) has a lot of good information on how to fire harden a property.