

# **Guidance Document for Temporary Irrigation Systems in Alachua County**

August 2023

## 1.0 Background

Revisions to the Irrigation Design Standards were approved on May 23, 2023, and went into effect June 12, 2023. The new requirements limit the area that can be permanently irrigated to 50% of the permeable area. The goal is to encourage the use of groundcovers and plants that can survive with minimal supplemental watering. While temporary irrigation systems are exempt from complying with the irrigation design standards, the recent code changes revised the temporary irrigation definition and added a requirement to register temporary irrigation systems with the County (no fee).

The temporary irrigation definition is as follows:

Temporary establishment irrigation means the temporary use of irrigation for the establishment of new vegetation that shall be removed once the plants are established or within one year, whichever occurs first. The department may grant an extension if it is deemed necessary for tree establishment or in periods of severe drought. Temporary establishment irrigation must clearly be separate from a permanent irrigation system.

This guidance document aims to clarify which temporary systems must register with the County (and the steps to complete the registration) as well as provide examples of temporary irrigation options. Please see the summary table on page 12 for quick reference. This document is also intended to be updated frequently to reflect new technologies and incorporate innovative approaches to temporary establishment irrigation, so please reach out with suggestions.

## 2.0 What types of Temporary Irrigation systems need to be registered?

If any portion of the temporary irrigation system is underground (irrigation lines, pipes, valve boxes and timers, or other components), or if the system or temporary zones are operated by a wired automatic controller, then the temporary system must be registered through the Alachua County <u>Citizenserve</u> Portal. A <u>Temporary Irrigation Affidavit</u> signed by the property owner, acknowledging that the temporary system will be removed or permanently disabled after establishment or within a year of installation, must be included with the registration. This affidavit also authorizes the Alachua County Environmental Protection Department (EPD) to inspect the system to verify removal and/or disabling.

If a project includes both a temporary system that requires registration (in-ground components or operated by wired automatic controller) and a separate permanent

irrigation system, the installer must complete the Temporary System Registration section within the permanent system application <u>or</u> submit a separate application for each distinct system in the Citizenserve Portal. Please note: the sketch and description included with any permanent system application must clearly label and describe all temporarily irrigated areas, including details on how long the temporary irrigation system is proposed to remain in place and whether it requires registration.

## 3.0 Temporary Establishment Irrigation Options

## 3.1 Hand Watering

No registration or temporary irrigation affidavit required.

On smaller properties already owner or resident occupied, hand watering with a handheld auto shut-off nozzle or wand is a simple, low-cost option for establishing new plantings on private lots. This method minimizes water use and can help property owners develop a better awareness of their landscape. Since the responsibility of establishment falls with the property owner or resident, clear instructions on watering needs



(days, schedule, amount) should be provided to the property owner/resident.

## 3.2 Above Ground Sprinkler and Hose Method — manual or scheduled watering No registration or temporary irrigation affidavit required.

A sprinkler attached to a garden hose is a simple and effective way to temporarily irrigate a landscape. Options can include a simple oscillating sprinkler or more elaborate designs that incorporate conventional irrigation system emitters attached to the hose system.





Oscillating sprinklers come in a variety of styles with different options for coverage based on specific site needs.

Custom temporary systems can be designed using conventional irrigation system emitters and hoses. For example, there are free-standing emitters designed to attach directly to a hose system that have check valve and pressure regulation options available. These types of systems are ideal in landscapes that only need temporary establishment irrigation for a short duration (example, bahia turfgrass), as they are easy to detach and can be re-used on other projects when temporary irrigation is discontinued. Pressure loss is an important factor to consider, as using rubber or garden hoses will cause 3 or 4 times pressure loss compared to PVC pipe (Source: Kurt Thompson referencing <a href="Hunter's Handbook of Technical Irrigation Information">Hunter's Handbook of Technical Irrigation Information</a>). For this reason, the size and length of the garden hose must be considered when designing the temporary system.



MP rotator attachment built with standard irrigation components.

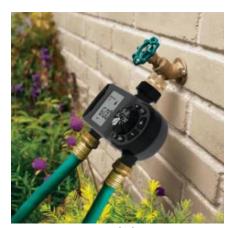


MP STAKE, preassembled for use with high efficiency mp rotators, easy hose connection. Check valve and 40 psi pressure regulation available in preassembly.

## 3.2.1 Manual vs Scheduled Watering with a hose system

The complaint most often associated with using a hose system attached to an outdoor spigot is that it requires manual operation and is not ideal in maintaining a consistent watering schedule. Timers attached between the spigot and hose help to address this challenge. There are many timer options available from basic to more sophisticated versions that allow multiple zones to be scheduled and operated.

There are also options for Wi-Fi connected timers that include weather detection, allow scheduling and operation using a cell phone, and skip scheduled watering when a rain event has occurred.

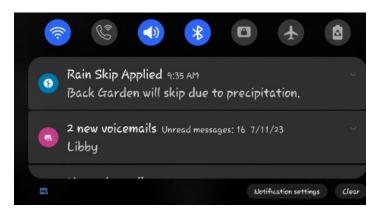


Hose spigot with battery timer

Basic timers are very reasonably priced, ranging from \$10-\$40. The cost of more sophisticated timers is higher but still far less expensive than permanent irrigation. Both basic and more complex timers are easy to set up and operate and can be re-used for multiple lots.

While there is no registration or temporary irrigation affidavit requirement when spigot timers are connected to above ground temporary systems, these systems will need to be removed once the plants are established or within one year, and only utilized occasionally, if needed, to supplement rainfall during periods of drought (see Section 6.3). Please note: Timers that do not have Wi-Fi connection and do not collect weather data to skip scheduled waterings must be removed after the 60-day establishment period (See Summary Table on page 12).





Rachio and Hunter both offer Wi-Fi connected hose timers that use weather data to skip scheduled waterings when a rain event is expected or has occurred (standard retail price around \$100).

The automatic spigot timer options such as the Rachio or Hunter smart hose timers may also be used to fulfill the "temporary automatic irrigation system" requirement listed in Section 407.46(a)1, Landscaping Code for unincorporated Alachua County, to establish code required landscaping.

### 3.3 Temporary Drip Irrigation for Landscape Beds

No registration or temporary irrigation affidavit required unless buried under soil.

Similar to the sprinkler and hose method described in the previous section, temporary drip tubing can be attached to a timer and hose system connected to a spigot. The drip irrigation line can be hidden under mulch but not buried in-ground. This will allow for watering at the root while also minimizing disturbance to plants when the drip lines are removed after establishment. The temporary drip irrigation must be removed once the plantings are established or within one year of installation.

## 3.4 Above Ground PVC Pipes with Emitters

No registration or temporary irrigation affidavit required unless connected to a wired automatic controller.

Some communities have opted to solely use temporary irrigation to establish turf for new homes. PVC pipes and emitters are placed in a similar fashion to a permanent system without the need for trenching. These above-ground systems can be disassembled and moved to other projects, which reduces overall costs. Placing PVC pipes at the edge of

mulched beds, with heads directing water towards turf areas, reduces challenges with routine maintenance such as mowing. All above ground PVC pipe and components must be removed once the plantings are established or within one year of installation.





Above ground PVC pipe and emitters system used to establish turf (On Top of the World, Ocala, Florida).

## 3.5 Traveling Sprinklers

No registration or temporary irrigation affidavit required unless connected to a wired automatic controller.

Above ground temporary irrigation may not be feasible in certain situations or acceptable to the property owner (example, certain commercial projects). Traveling sprinklers may be a viable alternative. These are connected to a hose, self-propelled and portable. There are small versions of these units offered by companies such as Toro and Underhill International, as well as larger options such as the Kifco Water-Reels.

Toro rollcarT™ traveling sprinkler

## 3.6 Above Ground Temporary Irrigation Operated by a wired automatic Controller System

Registration and temporary irrigation affidavit required.

The definition for Temporary Establishment Irrigation states that "*Temporary establishment irrigation must clearly be separate from a permanent irrigation system.*" If the desire is to have the temporary zone(s) operated by a wired automatic controller, the best approach to meet the separation requirement would be to provide a secondary, independent controller (or valve timer) for the temporary zones. However, in situations where it is not feasible to use a separate controller, above ground temporary

establishment irrigation may be connected to the same controller as the permanent irrigation so that the separation of temporary irrigation will be met by leaving lines and other components visible rather than buried. The temporary system will require registration in Citizenserve and a temporary irrigation affidavit in addition to the application for the permanent system (with appropriate details noted in the permanent system application).

After establishment or within one year of installation all above ground temporary irrigation pipes and components must be removed, along with the temporary zone valve and timer, if applicable, and valve box (if separate).

## 3.7 Temporary Irrigation with Underground Pipes or Components

Registration and temporary irrigation affidavit required.

In ground temporary irrigation is highly discouraged as burying pipes and irrigation components makes them difficult to be removed after establishment without damaging the landscape and creates additional work and cost. That said, there may be situations where above ground piping is not feasible or desired. Staff are available to discuss these unique situations with applicants and brainstorm solutions. For example, during a recent conversation with a local landscaper staff learned that their approach to "hiding" temporary above ground irrigation is to install the above ground (or at ground) pipes along the perimeter of the temporary irrigation zone so the pipes can be easily covered by mulch.

In situations where underground piping is warranted, staff's preferred option is that the temporary zone(s) be connected to a spigot timer, manual valve, or valve timer located a sufficient distance from the permanent system controller to ensure the two systems are clearly intended to remain separate. Under no circumstance is underground irrigation allowed on the same controller as permanent irrigation. For example, proposing a below ground "temporary" zone on the same automatic controller as the permanent irrigation system is strictly prohibited. Applicants wishing to operate underground temporary zones with a wired automatic controller will need to provide a separate controller for the temporary zones independent of the permanent irrigation controller.





Valve timers located in valve box.

## 4. Disabling Temporary Irrigation Systems

All temporary irrigation systems must be removed once the plants are established or within one year of installation.

Temporary systems that require registration and a temporary irrigation affidavit (buried components or connected to a wired automatic controller) must be inspected by County staff to confirm removal or permanent disabling.

To summarize, the following actions will need to take place to comply with requirements for removal/disabling (and pass the Temporary Removal inspection required for registered systems):

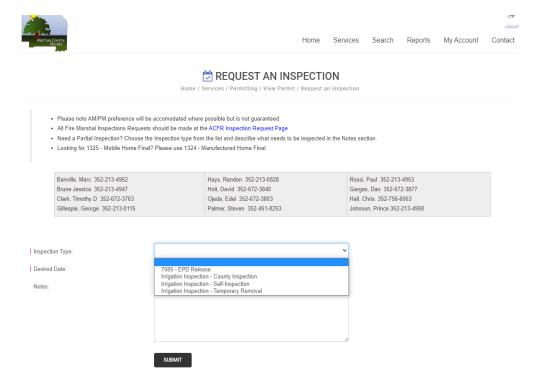
- 1. Above ground components must be removed (including hose and sprinklers, PVC pipes, battery operated timers, independent controller, etc.).
- 2. Below ground components must be removed or permanently disabled as follows:
  - a. Pipes must be disconnected and permanently capped.
  - b. Emitters must be removed from below ground pipes.
  - c. Valves and valve timers for the temporary zones must be removed and/or permanently disabled.
  - d. Valve boxes (if used exclusively for the temp zone) must be removed and the hole backfilled.

## **5. Inspection of Temporary Irrigation Removal**

Upon removal of a registered temporary system, applicants must request a County inspection in Citizenserve by selecting the project, clicking on "Request An Inspection", and selecting the "Irrigation Inspection - Temporary Removal" option from the drop-down menu.

Please note: Registered temporary irrigation systems will be subject to inspection by County staff after the one-year expiration date even if an inspection request has not been submitted. Failure to properly remove the temporary irrigation system within one year of installation will result in inspection failures and associated fines. If site or weather conditions warrant an extension to the one-year time limit for temporary irrigation, please contact EPD Water Resources staff at (352)246-6800 for review prior to the one-year expiration of the temporary irrigation system registration.

All other temporary systems not requiring registration shall also be removed after establishment or within one year of installation and will be subject to random inspection.



#### 6. Additional Considerations

### 6.1 Water Access for Occasional Watering

One concern raised by various stakeholders regarding temporary irrigation is that, once removed, they will not have access to water to be able to irrigate replacement vegetation or to prevent landscape failure during periods of drought. We offer the following suggestions:

- 1. Engage in discussions with architects and builders to ensure all external sides of a building are equipped with water spigots to allow easy access to water. As outlined in previous sections, systems such as a hose bib timer and oscillating sprinkler can be quickly set up if additional watering is warranted. These should be used only as needed to supplement rainfall and should be promptly removed once the new landscaping is established or rainfall provides sufficient watering, and the plants are no longer stressed. These intermittent uses of water for landscape watering in times of need are far less wasteful than the routine application of permanent irrigation.
- 2. In commercial projects where the landscaping may not be adjacent to a building and water spigot, ensuring a water source is provided adjacent to the landscaping is crucial and cost effective. For example, a water pipe could be trenched underground, and an outdoor spigot provided near the landscaped area mounted on a post with a locking mechanism and a shut-off valve as an added safety.

#### 6.2 Soil Health

Soil health is a key factor to the success of new landscapes. Healthy soil is loose, holds moisture, and has an adequate supply of plant nutrients. In new development, where construction may have caused widespread soil compaction, it is important to loosen soil before planting and it may be necessary to incorporate organic matter. There are many sources of organic soil amendments. Existing topsoil can be saved and stockpiled onsite for later application within landscaped areas to increase organic matter content. Alternatively, organic soil amendments, such as compost, are available commercially. Soil amendments have been demonstrated to improve landscape health and appearance and reduce the need for supplemental irrigation.

### 6.3 Establishment Irrigation

Whether a temporary or permanent system is used, all irrigation to establish new landscapes must comply with the establishment schedule as follows:

- 1. In the absence of sufficient rainfall, supplemental watering is allowed every day for the first 30 days, and every other day for another 30 days, for a maximum establishment period of 60 days.
- 2. Irrigation systems operated by a wired automatic irrigation controller or valve timer must be connected to a functioning rainfall shut-off device set to active at the controller. That is, you must **not** bypass the rainfall shut-off device even during the first 60 days establishment period. Temporary systems with scheduled watering using a smart timer attached to a spigot will satisfy the rain sensor requirement as long as the timer is set up to use weather data to skip scheduled waterings (i.e., Rachio and Hunter smart timers). Timers that do not have Wi-Fi connection and do not collect weather data to skip scheduled waterings are allowed provided they are removed after a 60-day establishment period.
- 3. After the first 60 days, all supplemental irrigation must comply with the irrigation restrictions schedule shown in the table below. Please note: Hand watering with a garden hose nozzle or wand is allowed anytime.

Watering i	s allowed before 10 a	
Location	Summer 2 <sup>nd</sup> Sun in Mar - 1 <sup>st</sup> Sat in Nov	<b>Winter</b> 1 <sup>st</sup> Sun in Nov - 2 <sup>nd</sup> Sat in Mar
Odd House #	Wed and/or Sat	Sat
Even House #	Thur and/or Sun	Sun
Non-residential/ commercial	Tue and/or Fri	Tue
AyYardOurWater.	org	Harpellespellesternett

4. While State and County codes allow up to 60 days for establishment, many jurisdictions have moved to limit establishment to 30 days. The University of Florida has created the following 30-day lawn establishment schedule to assist landscapers and irrigation professionals further conserve water:

## 30-Day Lawn Establishment Schedule

Day	# of Cycles	Run Time (fixed spray)	Run Time (rotors)	Time of Day
Day 1	3 times/day	6 minutes 18 minutes		Upon Installation
My start date:	Water 3 times on the first day at 6 hour intervals. 1st application occurs immediately following sod installation.			
Days 2 - 10	2 times/day	8 minutes	8 minutes 24 minutes	
My day 10:	Increase run time as indicated Water 2 times per day in the morning and the evening at 12 hour intervals.			
Days 11 - 15	1 time/day	16 minutes	48 minutes	Before 8 a.m. or after 6 p.m.
My day 15:	Increase run time as indicated. Water 1 time per day, in morning or evening.			
Days 16 - 30	1 time/day	20 minutes	60 minutes	Before 8 a.m. or after 6 p.m.
My day 30:	Increase run time as indicated. Water 1 time per day, in morning or evening.			
Day 31	Water up to twice weekly, by address, before 8 a.m. or after 6 p.m. Water your established lawn using the seasonal run times below.			

#### Recommended Seasonal Run Times

Head Type	Setting	Summer	Fall	Winter	Spring
Fixed		25 min.	15 min.		20 min.
Spray	Range	20-30 min.	10-20 min.	0-10 min.	15-20 min.
Rotor	Ideal	45 min.	30 min.	<10 min.	40 min.
rtotor	Range	40-60 min.	20-40 min.	0-20 min.	35-55 min.

- 1. Information included in this table is based on research by Dr. Michael Dukes, University of Florida/IFAS.
- 2. The recommended establishment schedule assumes an application rate of 1.5 inches of water per hour for fixed spray heads and 0.5 inches of water rotor heads.
- 3. When these UF/IFAS recommendations were used to establish 5,000 sq. ft. of sod, the estimated amount of water used over the 30-day establishment period was 31,306 gallons or 41.8 ccf (hundred cubic feet).
- 4. The seasonal run times for use following establishment are excerpted from document ABE 355, one of a series of the Agricultural and Biological Engineering Department, UF/IFAS Extension. Original publication date March 2005. Reviewed April 2014. Visit the EDIS website at <a href="http://edis.ifas.ufl.edu">http://edis.ifas.ufl.edu</a>.

### Adapted from Tampa Bay Water

The current Florida Friendly Landscaping Program recommendations for establishment of trees and shrubs, adapted from the <u>Florida Grades and Standards for Nursery Plants</u> (2022) are summarized below:

## Establishment - Irrigation\*

**Trees** 

Size of Nursery Stock	Irrigation Schedule for Establishment	Irrigation Schedule for Vigor
< 2 inch caliper	2x/week for 2-3 months	1x/day for 2 weeks; every other day for 2 months; weekly until established
2-4 inch caliper	2x/week for 3-4 months	1x/day for 1 month; every other day for 3 months; weekly until established
> 4 inch caliper	2x/week for 4-5 months	1x/day for 6 weeks; every other day for 5 months; weekly until established

<sup>\*2-3</sup> gallons per application

## Establishment - Irrigation\*

(3-gallon Shrubs)

Location	Irrigation Schedule for Establishment	Irrigation Schedule for Vigor	
North FL	Every 8 days	Every 4 days	
Central/South FL	Every 4 days	Every 2 days	

<sup>\*1</sup> gallon per application

Note: Plants from smaller containers require irrigation for a shorterperiod of time, whereas plants in larger containers typically take longer to establish.

### Slides provided by UF/IFAS Extension

Establishing trees can often take longer than other plantings. Thus, it is important to ensure that tree bubblers are scheduled on a separate zone from other landscape plants. This ensures adequate watering of trees while conserving water by not irrigating other plants unnecessarily. This recommendation applies to both temporary and permanent irrigation systems.

## **Summary Table for Temporary Irrigation Systems Requirements**

Temporary System Type	Affidavit Required ?	Registratio n Required?	Rain Sensor Required?	Irrigation Restrictions Apply?
Hand watering	No	No	No	No
Above ground - manual watering  • sprinkler and hose**  • drip irrigation  • PVC pipes with emitters	No	No	No	Yes*
Above ground - scheduled watering with battery operated spigot timer • sprinkler and hose** • drip irrigation • PVC pipes with emitters	No	No	Smart hose timers with rain skip activated satisfy this requirement. Timers without rain skip must be removed within 60 days.	Yes*
Above ground - wired automatic controller or valve timer • sprinkler and hose • drip irrigation • PVC pipes with emitters	Yes	Yes	Yes	Yes*
Below ground - <i>manual</i> watering (including manual valve)	Yes	Yes	No	Yes*
Below ground - scheduled watering with battery operated spigot timer or valve timer	Yes	Yes	Smart hose timers with rain skip activated satisfy this requirement. Timers without rain skip must be removed within 60 days. Valve timer must be connected to functioning rain sensor.	Yes*
Below ground – wired automatic controller independent of permanent system)	Yes	Yes	Yes	Yes*

<sup>\*</sup> The establishment period allows daily watering for the first 30 days after installation, and every other day watering for the next 30 days.

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<sup>\*\*</sup> Above ground hoses and sprinklers are allowed to be used as needed in the future but must comply with restrictions.