

## Draft User Interface Features Definitions

### Non-Volatile Memory

The controller shall include a storage device or mechanism to preserve the contents of the irrigation program and settings when the power source is lost and no back-up battery is available.

### High Performing Stand Alone Irrigation Controller

If the controller loses the real-time weather input or signal, the controller shall default to a high performing conservation controller with the features outlined below.

1. **Multiple programming capabilities** – The controller should be capable of storing a minimum of three different programs to allow for separate schedules for zones with differing landscape needs.
2. **Multiple start times (cycling, cycle/soak, stackable start times)** – The controller should be capable of a minimum of three different start times to allow for multiple irrigation cycles on the same zone for areas prone to run off.
3. **Variable run times** – The controller should be capable of varying run times, for example one minute to a minimum of one hour.
4. **Variable scheduling** – The controller should be capable of interval scheduling (up to a minimum of 14 days) to allow for watering on even day scheduling, odd day scheduling, calendar day scheduling, and interval scheduling.
5. **Diagnostic circuitry** – The controller should have some mechanism for informing the user when the signal is lost and the controller is operating in stand alone mode.
6. **Percent adjust (water budget) feature** – The controller shall include a ‘Percent Up/Down Adjust’ feature (or ‘Water Budget’ feature) such as a button or dial that permits the user to increase or decrease the run-times or application rates for each zone by a prescribed percentage, by means of one adjustment without modifying the settings for that individual zone.

### Zone by Zone Control

The controller shall have the capability to implement run times specific for each zone (station) at a minimum using the following attributes:

- Plant type, crop coefficient values, and/or depth of root zone
- Soil type
- Slope
- Sprinkler type and/or precipitation rate

- Cycle/Soak (either manually programmed into the controller or through automatic calculations)

#### Ability to Comply with Potential Utility Drought Restrictions

When operating in ET mode, the controller shall have the following capabilities in order to comply with potential utility drought restrictions:

1. **Assigned day of week scheduling** – Ability to operate on any prescribed day of the week schedule (for example, Monday-Wednesday-Friday, or Tuesday-Thursday-Saturday, or Tuesday-Friday, etc.).
2. **Skip day interval scheduling** – Ability to operate on an every-other day or every-third day schedule. Alternatively, the controller could operate on a skip interval between 0 and 30 days.
3. **Even/odd scheduling accommodating a day exclusion** – This feature allows the exclusion of a mow day or if a jurisdiction prohibits a specific day for all users.
4. **Minimum of three start times per program within a 24 hour period.**
5. **Ability to set irrigation runtimes to avoid a prohibited time of day** – for example, irrigation will not occur between 9 a.m. and 9 p.m.
6. **Complete shut off capability** for total elimination of outdoor irrigation.
7. **Percent adjust (water budget) feature** – The controller shall include a ‘Percent Up/Down Adjust’ feature (or ‘Water Budget’ feature) such as a button or dial that permits the user to increase or decrease the run-times or application rates for each zone by a prescribed percentage, by means of one adjustment without modifying the settings for that individual zone.

#### Rain Management

The controllers shall be equipped to interface with a “rain device.” For the purpose of this specification, the “rain device” is assumed to be a simple dry/wet, on/off (mini-click) type device.

- The controller shall provide an appropriate “simple” terminal connection to allow a rain device to be connected during or after initial installation of the controller; i.e., retrofittable.
- The controller shall recognize a rain device once it is connected.
- The controller shall have the capability to stop and or prevent an irrigation cycle from occurring when a “wet” signal is received from the rain device.
- The controller shall prevent an irrigation cycle from occurring until the rain device provides a “dry” signal.

- The controller shall provide some form of visual display to indicate when the rain device has suspended irrigation.

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