



Seattle  
Parks & Recreation

# Smart Irrigation

## Healthy Environment Stories



Seattle is well-known for its rain. In parks, though, when rain falls is just as important as how much or how often it rains.

Seattle's water supply comes primarily from the Cedar River and Tolt River Watersheds, and as anyone who has spent a year in Seattle knows, our normally plentiful rainfall occurs primarily in the fall, winter, and spring. That means during the dry summer months Seattle Parks and Recreation (SPR) must irrigate our parks to provide welcoming places to recreate.

Occasionally, an especially dry summer or a low snowpack from a dry winter results in a drought, and so the City must respond by making moderate or even drastic reductions to the amount of water we use. In a drought, SPR's challenge is to cut back water use and still keep valuable landscape assets alive.

In 1980, when the technology of tracking water use was not very far along, the then Water Department, now a division of Seattle Public Utilities (SPU), notified SPR that it was the city's largest water user. Given the hundreds of acres of ballfields, open space, golf courses, shrub beds and gardens SPR cares for, this was not a surprise, but it was new information.

The City then began in earnest to develop a water shortage contingency plan for responding to such conditions, based on the premise that the public would support and participate in a water reduction plan if it were equitable and consistent.

The plan, most recently updated in 2018, includes an array of actions that range from voluntary water reductions in a slight drought to mandatory reductions in a severe one.

SPR participated by beginning to identify water conservation strategies and evaluating the central irrigation control systems then available on the market. SPU helped finance the first ones, in south Seattle and the I-90 lid parks. The City of Seattle was an "early adopter" of smart irrigation systems in the early 1990s.

SPR primarily uses the RainBird Maxicom system, one of the original "intelligent" irrigation systems. SPR's system:

- Measures evapotranspiration - the sum of water lost from the soil surface and plant leaves (evaporation) and water used by plants (transpiration) - to adjust irrigation schedules of individual landscape zones based on daily weather variation and site-specific landscape water need.
- Pauses irrigation when it rains.
- Reduces runoff on sloped areas by breaking up run times into smaller chunks which allows better infiltration in soils.
- Detects breaks in sprinkler heads and water lines and quarantines problem areas.

Since the Maxicom system was installed at the first sites, SPR has added substantially to the places where it automatically controls irrigation. SPR's water manager, Karen Galt, estimates that 75 percent of SPR's irrigation water use is regulated by our smart irrigation systems. Most sites that are not controlled by this system have rain sensors that prevent irrigation when it rains. Staff are an integral part of SPR's smart irrigation by monitoring landscapes, making repairs, and fine-tuning scheduling over the irrigation season.

Today's efforts are focused on renovating and fine tuning the smart irrigation system by upgrading equipment, comparing notes with other city park agencies, inspecting and repairing system elements, keeping up with technological changes, and keeping training current for the staff of SPR gardeners who make the daily decisions about how the system runs. Gardeners are constantly on the lookout for issues that need resolving, such as leaks in water lines and faulty sprinkler heads. One of the major benefits of the system is that it creates flow alarms right away, so troubleshooting and repair can happen as soon as possible, minimizing water loss or damage to the landscape. It also allows staff to make quick schedule adjustments from a central location, reducing vehicle trips.

Because of central control of so many irrigation sites, water use has dropped substantially over time. In the 10 years prior to implementing the central control program, SPR used about 25% more water on average than currently. Recent record-breaking dry summers, however, are nudging that use up again as SPR supports its living assets.

With skilled staff and smart irrigation, SPR is well placed to use water wisely and as efficiently as possible, which preserves our living assets and increases our urban resiliency in the face of climate change.



### Learn more

[seattle.gov/parks/about-us/policies-and-plans/irrigation-and-water-usage](http://seattle.gov/parks/about-us/policies-and-plans/irrigation-and-water-usage)

## Why Keep Public Parks Green?



Seattle's public parks are the gathering place of our neighborhoods. They provide respite, recreation, gathering places, and more. Parks are the front yard for Seattle's apartment dweller and the community space for us all.

By maintaining healthy and functional public parks, we reduce the need to water personal lawns, thus saving water for our entire community.

## Natural Yard Care at Home



Learn five easy steps to a healthy, water-efficient landscape:

1. Build healthy soil with compost and mulch
2. Choose the right plants for your site
3. Practice smart watering and irrigation
4. Use natural pest, weed and disease control methods
5. Practice natural lawn care

Learn more at [www.savingwater.org](http://www.savingwater.org).

