

**South Tahoe Public Utility District
Residential Irrigation Efficiency Rebate Program
Frequently Asked Questions**

What is Irrigation Efficiency?

Irrigation efficiency is a critical measure of irrigation performance in terms of the water required to irrigate a landscape. It can be defined in terms of a) system performance, b) the uniformity of the water application, c) the response of the landscape to the irrigation. Having an efficient system is better for the landscape and saves water. Irrigation systems/equipment that are badly designed, inefficient or poorly maintained reduces the degree of control over the water application.

What is the purpose Residential Irrigation Efficiency (RIE) Rebate Program?

The RIE program was developed to help customers upgrade their irrigation systems to make them more efficient. Examples of efficiency improvements can include replacing older, non-efficient pop up spray heads with a low volume drip irrigation system; removing pop up spray heads and replacing them with low volume, high distribution uniformity or multi-stream nozzles with a flow rate of 1.20 inches per hour (In/h); installing a pressure regulator for optimal system performance; installing check valves or low lying sprinklers at the bottom of a slope to stop excess drainage.

What does the rebate cover?

The program offers a rebate of up to \$400 which covers 50% of the irrigation equipment and 25% of the labor to install it. Itemized receipts are required. Eligible irrigation equipment includes equipment that improves irrigation efficiencies as determined by a South Tahoe PUD representative.

Efficiencies may include:

- Drip irrigation systems
- Replacing mis-matched sprinkler heads with like-kind heads
- Water pressure regulating devices
- Check valves
- Low precipitation, high distribution uniformity or multi stream rotating nozzles
- Rain shut off devices, moisture sensor or smart controllers

How do I know if the parts are eligible for the RIE Program?

Eligible parts are those that reduce water use in the landscape by operating at a lower volume, have a more uniform spray pattern or have high distribution uniformity.

The most common types are:

Precision nozzles: Spray nozzles that distribute less than 1.20 inches per hour, high efficiency- variable arc (HE-VAN) nozzles

Drip irrigation systems: each emitter distributes less than 2.5 gallons per hour

Micro-sprays: each micro-spray distributes less than 2.5 gallons per hour

In- Line irrigation systems: drip line to distribute water at less than 1.0 gallons per hour per built in emitter.

Multi-stream rotating nozzles: nozzles that distribute less than .92 inches per hour

Are all micro-spray systems allowed?

No, only low volume micro-spray systems are eligible (2.5 gallons per hour or less)

Does turning in an application mean I can start work?

No, A representative from South Tahoe PUD will review your application, irrigation plan and detailed parts list prior to scheduling a pre-conversion site visit. At this site visit, the staff member will give approval to start the work if all the proper documentation is received. You will then have 60 days to complete the project.

What do I need to complete before my pre-conversion site visit?

To avoid delays, all applicants must complete the application, including irrigation improvement plan sketch (attachment A), a detailed parts list of current and subsequent replacement parts (attachment B).

What is the purpose of the Irrigation Improvement Worksheets?

The worksheets give the District representative a better understanding of the improvements to be made to irrigation system and landscape. Drawing a sketch of your current irrigation system and proposed system offers a visual demonstration to assist staff in conducting a thorough pre and post site visit. The sketch shall include the overall irrigation system design featuring any zones and/or stations that will be replaced with an upgrade. Roughly identify existing plant material which will help staff determine sprinkler placement. The detailed parts list will be used for the determination of reimbursement for purchased parts. If using a licensed contractor this information should also be part of the landscapers estimate. The list should include quantity of the old equipment being replaced and the type, model, and quantity of the upgraded equipment that is being installed.

What is an irrigation zone and/ or station?

An irrigation zone or station is a portion of the sprinkler system that is activated by an irrigation control valve that operates a group of sprinkler heads or drip emitters. A typical irrigation system has several zones operated by irrigation control valves. Typically one zone valve is turned on at a time and controls the water application to a portion of the landscape.

How do I find out specifics of the parts I am replacing?

The best way to determine the details of any product is to go check the company website and look for the manufacturer's technical specification catalogs. These catalogs have specific information on pressure requirements and spacing. You can also visit any irrigation supply store or nursery or consult a professional landscaper.

What timeframe do I have to complete the conversion?

Once the pre-conversion site visit takes place and the plan is approved the 60 day timeframe begins.

What do I do when the project is complete?

Compile all required supporting documentation (plans, receipts, invoices) then call 530-543-6268 to schedule a post conversion site- visit. Once inspected and approved your rebate will be processed and mailed within 30-60 days.

Do I need to hire a state licensed contractor?

The District recommends that you hire a state licensed contractor, although it is not required to obtain the rebate.

How do I calculate water savings?

You can calculate water savings in gallons per minute with the formula referenced below. Make sure you add in every station to get the total figure. You will need to know the model, type and spacing of sprinkler heads to determine precipitation rates then compare the old and new irrigation systems.

Water savings formula

a= total water usage rate of old equipment

b=total water usage of new equipment

c=average time equipment runs per day

d=number of days per year equipment runs

e= 748 (number of gallons per ccf)

ccf = one hundred cubic feet

1ccf = 748 gallons

$$\text{Annual ccf decrease} = \frac{(a-b) \times (c) \times (d)}{(e)}$$

Example:

Gallons per minute= gpm

a=14.8 gpm (8 standard pop up heads at 1.85gpm (or 1.87 inches/hour))

b=5.84 gpm (8 multi-stream nozzles at .73 gpm (or .77 inches/hour))

c=10 minutes

d=250 days per year

e=748

$$\text{Annual ccf decrease} = \frac{(14.8-5.84) \times 10 \times 250}{748} = 29.94 \text{ ccf or } 22,400 \text{ gallons}$$

For any further questions contact:

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