



Cascade Irrigation Efficiency Program Rebate Application



Introduction

Cascade Water Alliance wants to help you save water. To reduce summer water demand, Cascade's Irrigation Efficiency Program offers rebates to commercial customers who upgrade their irrigation systems to save water and money. Applicants should not commit to any project before receiving written authorization from Cascade. Funding for this program is limited and may terminate at any time without notice.

Eligibility and Limitations

1. Participants in this program must be commercial customers of one of the following cities or water districts: Bellevue, Issaquah, Kirkland, Redmond, Sammamish Plateau Water and Sewer District, Skyway Water and Sewer District, and Tukwila.
2. The irrigation system must be in-ground, at least two years old, and operated by an automatic controller.
3. The maximum, combined rebate per individual property is \$10,000 per year. Refer to the Irrigation Efficiency Hardware Specifications for rebate amounts (see Appendix 1).
4. All work must be performed by a licensed irrigation or landscape contractor in accordance with the Irrigation Efficiency Hardware Specifications, subject to final inspection and approval by Cascade.
5. All work must conform to state and local codes, including the Uniform Plumbing Code.
6. Only commercial property owners are eligible for rebates; no rebates are issued to contractors.
7. Rebates are limited to equipment meeting the hardware specifications. Cascade reserves the right to deny rebate requests for any item or work it deems inappropriate for a specific situation.
8. All proposed hardware replacements must be new. Replaced hardware must be presented at final inspection. Invoices showing the hardware must be provided prior to final inspection.
9. Owners are responsible for obtaining all required permits.
10. Applications must be received by October 15, 2016. All work must be completed within 90 days after Cascade issues written authorization for the project or before November 15, 2016, whichever is sooner.

Instructions

1. Have your irrigation system inspected by a licensed irrigation or landscape contractor. Work with your contractor to determine the best ways to improve the efficiency of your irrigation system. If hardware upgrades may improve your irrigation system's efficiency, complete this application and submit to irrigationefficiency@cascadewater.org. If you have questions, please call 425.543.1810.
2. Provide information on the Irrigation Efficiency Proposal section for all zones where new equipment is proposed.
3. If your application is complete, you will be contacted within two weeks to schedule an initial site inspection before any work begins. Inspection may not be required for rebates under \$1,000.
4. Written authorization for projects will usually be sent within two weeks after the initial site inspection is completed, including the approved rebate amount and conditions.
5. When the project is finished, contact Cascade to schedule a final inspection of the fully operational system. At the time of final inspection, controllers must be correctly scheduled for each zone, sensors must be properly installed and calibrated, and all zones must be operational and free of leaks. If the system is not fully operational and another inspection is required, rebate amounts will be reduced by a dollar amount equivalent to Cascade's cost of returning to complete the inspection.

Updated 4/4/16

Applicant Information

Applicant

Property Name & Location (Street Address, City, ZIP):
Property Type: <input type="checkbox"/> Apartment <input type="checkbox"/> Condominium <input type="checkbox"/> Commercial <input type="checkbox"/> School <input type="checkbox"/> Park or Public Facility <input type="checkbox"/> Other _____
Property Owner or Manager:
Contact Name, Telephone Number and Email Address:
Mailing Address, City, ZIP (if different from above):
Name to be Printed on Rebate Check:
Water Provider:

Irrigation / Landscape Contractor

Company Name:
Contractor's Telephone Number and Email Address:
Contractor Signature and Date:

Applicant Confirmation

By signing below, the applicant acknowledges and agrees to the following:
<ol style="list-style-type: none">1. The applicant is the owner or authorized agent of the property listed above.2. The installation of the irrigation equipment or changes to the irrigation system is the applicant's sole responsibility, and all work shall be done in accordance with all applicable laws, codes and regulations.3. Cascade Water Alliance does not endorse any contractor or brand of irrigation equipment.4. Cascade Water Alliance shall have the right, but not the obligation, to inspect the irrigation system before, during and after the work has been completed. Such inspections are not a certification, endorsement or approval of the applicant's compliance with applicable laws, codes or regulations.5. Cascade Water Alliance makes no representations or promises of water savings, reductions in utility bills, performance of irrigation systems or health of the landscape for the results of any work performed under this program.6. Cascade Water Alliance reserves the right to deny rebate requests for any item or work it deems inappropriate for a specific situation. All completed hardware installation and work must comply with Cascade Water Alliance's instructions, Irrigation Efficiency Hardware Specifications, and conditions contained within the written authorization. Issuance of rebate is subject to final inspection and approval by Cascade Water Alliance. Issuance of rebates shall be in the sole discretion of Cascade Water Alliance.
Applicant Name and Title _____
Applicant Signature _____ Date _____

Project Description

1. Review the Cascade Irrigation Efficiency Hardware Specifications for qualified equipment and rebate amounts found in Appendix I before initiating your project.
2. Briefly describe your project scope and total budget:

3. For proposals to upgrade controllers, include a site map showing the location of all controllers and zones.
4. Estimated annual water savings from irrigation system improvements: _____ % reduction in total irrigation water use at this site.
5. Below list all new irrigation hardware proposed in your rebate request, including the make and model of controllers, sensors, valves and sprinkler heads (Attach a separate page if necessary).

Proposed Upgrade Quantity Rebate Amount Subtotal

<u>Proposed Upgrade</u>	<u>Quantity</u>	<u>Rebate Amount</u>	<u>Subtotal</u>
Total Rebate Requested			\$

Irrigation Efficiency Program Proposal Instructions

Listed below are the instructions for completing the proposal section for upgrades to your irrigation system. All proposals must comply with Cascade’s Irrigation Efficiency Hardware Specifications (see Appendix 1). Complete only the areas of the proposal for which you are proposing upgrades. Input the information electronically and email to irrigationefficiency@cascadewater.org.

Enter the number of each item to be installed in the appropriate columns for each zone, and the totals in the bottom row.

Controllers

- All proposed controllers must be climate-based controllers found on the Irrigation Association’s list of “Smart” Controllers: www.irrigation.org/SWAT/swat.aspx?id=298.
- At the final inspection, you must demonstrate that the controllers have been appropriately scheduled taking into account the specific conditions of the site including, plant type, spray head precipitation rates, slope, soil and other factors.
- Provide information on the existing controller at the top of the green section on the left.
- Provide information on the model of new controller at the top of the form in the orange section on the right.
- Provide the number of zones for each controller.
- Retain old controllers on site for final inspection.

Sensors

- Provide the number and type of existing and proposed sensors.

Nozzles

- Provide the number of proposed high efficiency nozzles.
- Retain old nozzles for final inspection.

Pressure Regulating Equipment

- Complete the section entitled “Pressure Regulation Valves (PRV)”.
- Note the type of equipment proposed for each zone.
- Retain old valves on site for final inspection.

Drip Irrigation

- Provide the square footage of the area to be converted to drip irrigation.

Installing New or Removing Old Sprinkler Heads

- Refer to the Irrigation Efficiency Hardware Specifications to ensure proposed new spray heads are eligible.
- Provide the number of spray heads proposed for upgrades or removal.
- Spray heads to be removed must be marked with flags or paint for initial site inspection and final inspection.

Irrigation Efficiency Proposal (add additional sheets as needed)

Existing System				Rebate Proposal (List all items you plan to upgrade)				
Controller Brand & Model		Number of Zones		Controller Brand and Model:			Number of Zones	
Existing Number of Sensors				PROPOSED NUMBER OF SENSORS				
Solar	Flow	Rain	Soil	Solar	Flow	Rain	Soil	
Landscape and Irrigation				PROPOSED UPGRADES (Number of items for each zone)				
Zone Description: <ul style="list-style-type: none"> ✓ General location of zone ✓ Turf, shrubs / groundcover, or annuals ✓ Rotors, spray heads, or drip ✓ Current water pressure in zone 				Water Application			Pressure Regulation	
				Number of Efficient Sprinkler Nozzles	Number of Sprinkler Heads to be Removed	Square Footage of Drip Irrigation	Sprinkler PRV / Check Valves	Master Valve, Zone PRV (Indicate Type and New or Retrofit)
1.								
2.								
3.								
4.								
5.								
6.								
7.								
8.								
9.								
10.								
11.								
12.								
Total Number of Each Item Proposed								

Appendix 1 - Cascade Irrigation Efficiency Program Hardware Specifications and Rebate Amounts

I. High Distribution Uniformity Nozzles			
Replacing standard nozzles with High Distribution Uniformity nozzles can produce healthier landscapes that use 15% - 20% less water and reduce dry spots, runoff and erosion.			
Hardware	Specifications	Applications and Requirements	Rebate Amount
Rotating spray nozzles	<ul style="list-style-type: none"> ● Multi-stream, multi-trajectory, rotating spray nozzles. ● Constructed of UV-resistant plastic with stainless steel radius-adjustment screw capable of 25% reduction based on manufacturer's rating. ● Nozzles must have adjustable spray arc and radius and matched precipitation rates across patterns and radii. 	<ul style="list-style-type: none"> ● All spray heads in a zone must be upgraded to matching High Distribution Uniformity nozzles (including all sprays in zones with mix of spray heads and rotors). ● Pressure in zone must be within manufacture's specified range for new nozzles. 	\$5 per nozzle
High-frequency oscillating stream nozzles	<ul style="list-style-type: none"> ● Nozzles that distribute water through internal oscillating chambers, mounted around turret. ● Constructed of UV-resistant plastic, with stainless steel radius-adjustment screw capable of 25% reduction from rating. ● Must have integrated HDPE screen sized to prevent nozzle plugging. ● Model number with arc and radius must be stamped on top of nozzle. 		

II. Sprinkler Bodies with Check / Pressure Regulating Valves

Check and pressure regulating valves integrated into sprinklers or installed in pipes prevent water in distribution pipes from leaking out of sprinklers at low spots after the zone has shut off. In large zones, hundreds of gallons may be wasted each time the system runs. In some situations, pressure regulators built into sprinkler bodies may also reduce wasteful misting more effectively than pressure regulation at control valves.

Hardware	Specifications	Applications and Requirements	Rebate Amount
Spray bodies with check valves and other sealing components	<ul style="list-style-type: none"> ● Check valve, or model number indentifying as such, must be stamped on top of each sprinkler body. ● Check valves shall be rated to seal while under a minimum of 4 pounds of static pressure (10 feet of elevation change). 	<ul style="list-style-type: none"> ● Check valve heads may be limited to low portions of zone only where they will stop low head drainage. ● Check valve must be rated by manufacturer to match elevation / pressure change at head. 	\$3 for 4" spray heads \$6 for 6" or larger spray heads
Rotor bodies with check valves and other sealing components			\$20 per rotor
Check valve retrofit for rotor head	<ul style="list-style-type: none"> ● Retrofit check valves should be used when sprinkler manufacturer offers compatible model for existing rotors. 	<ul style="list-style-type: none"> ● Check valve must be specified by sprinkler manufacturer as compatible with intended application. ● Check valve must be rated by manufacturer to match elevation / pressure change at head. 	\$5 per check valve
In-line check valves	<ul style="list-style-type: none"> ● Spring-loaded check valves may be used where elevation / pressure changes are too large to be corrected by in-head or below head PRVs. ● Check valve bodies must be constructed of PCV or impact-resistant ABS. 	<ul style="list-style-type: none"> ● Check valve must be rated by manufacturer to match elevation related pressure change in zone. ● Installation of check valve will only be approved when needed to reduce pressure to sprinkler manufacturer's suggested operating range. 	\$10 per check valve

III. Master Valves

A master valve installed where the sprinkler system is connected to the water main will shut off water to the entire irrigation system when no zones are running. Using a master valve prevents leaks in main lines or at zone valves from running continuously and can save thousands of gallons of water if a main line breaks.

Hardware	Specifications	Applications and Requirements	Rebate Amount
Master Valves	<ul style="list-style-type: none"> Rebates may be authorized for installation of Master Valves or Pressure Reducing Valves, not for both. 	<ul style="list-style-type: none"> Controller must be equipped to shut off master valve when system is not running. 	3" - \$250 2" - \$150 1.5" - \$100 1" - \$75 ¾" - \$50

IV. Pressure Regulating Valves

High pressure in zones creates mist that can waste up to 20% of the water being applied and puts unnecessary wear and tear on the system. Depending on the system, pressure regulation may be required for the whole system, some zones or some heads.

Hardware	Specifications	Applications and Requirements	Rebate Amount
Valves		<ul style="list-style-type: none"> All pressure reducing valves rebates must be approved based on application description of existing static pressure and operating range of sprinklers. Pressure reducing master valves must be adjustable. Installation of pressure regulating valve will only be approved when needed to reduce pressure to sprinkler manufacturer's suggested operating range. <u>Rebates will not be approved for pressure reducing valves at zone valves where the pressure can be or is already adequately regulated by a master valve.</u> 	3" - \$250 2" - \$150 1.5" - \$100 1" - \$75 ¾" - \$50
Retrofit Valves	<ul style="list-style-type: none"> Retrofit zone valves instead of installing new zone valve, unless otherwise justified. 		\$50 per valve
In Line Pressure Reducing Valves			\$25 per valve

V. Smart Controllers

Irrigation controllers that automatically adjust watering based on weather conditions and plant needs determined by on-site sensors or data from local weather stations can reduce watering by 15% - 20% compared to a system that is not regularly adjusted. The Irrigation Association (IA) has developed protocols for testing the efficiency of these "Smart Controllers" called Smart Water Application Technology (SWAT). The IA publishes this list at www.irrigation.org/SWAT/swat.aspx?id=298.

Hardware	Specifications	Applications and Requirements	Rebate Amount (per number of zones)
Smart Controllers	<ul style="list-style-type: none"> ● IA-SWAT tested and approved Smart Controllers. 	<ul style="list-style-type: none"> ● At final inspection, Smart Controllers must be correctly programmed to match each zone's soil and plant conditions, watering needs, and sprinkler precipitation rates. ● <u>All controller proposals must be accompanied by a site plan map that shows the location of the zones run by that controller.</u> A written schedule listing the location, plant type, and irrigation head type for each zone must be posted at the controller. 	\$ 150 / <4 \$ 200 / 5-12 \$ 250 / 13-18 \$ 300 / 18-24 \$ 350 / >24 Larger systems will be considered on case-by- case basis.

VI. Sensors

Sensors that detect rainfall or moist soil and stop irrigation can be added to most controllers and help reduce unnecessary watering. Some controllers are capable of adjusting irrigation based on more sophisticated weather sensors, or shutting down the system if excessive flows indicate large leaks.

Hardware	Specifications	Applications and Requirements	Rebate Amount
Rain Sensors		<ul style="list-style-type: none"> ● Hardwired or wireless ● Must be installed to manufacturer's specifications. ● Must be set to interrupt irrigation program at ¼" setting. ● Automatically break the circuit to the solenoid valves of the sprinkler system after a rain. ● Have replaceable absorptive disks or an anti-splash catchment system. ● Be adjustable to shut off at different amounts of rainfall. 	\$50 per controller
Retrofit to change controller to ET-based model	<ul style="list-style-type: none"> ● IA-SWAT tested and approved Smart Controller retrofits. 	<ul style="list-style-type: none"> ● Must have compatible controller. 	\$125 per controller

Flow Sensors for existing controller equipped to read flow meter	<ul style="list-style-type: none"> ● 	<ul style="list-style-type: none"> ● Flow-sensors must be equipped with automatic shutoff of zones and remote alarm via cell-phone or pager. ● The flow sensor must be installed on the mainline with compatible firmware/software and controller to record flows by zone. In addition, a high flow condition must result in the controller closing the master valve or zone valves. ● A master valve and controller with flow monitoring capabilities must be installed with the flow sensor. 	\$200 per sensor
Soil Sensor	<ul style="list-style-type: none"> ● 	<ul style="list-style-type: none"> ● Soil sensor rebates must be approved based on application details. ● Automatically break the circuit to the solenoid valves of the sprinkler system. ● Have an interface module between the sensor and the controller. ● Have the ability to finish an irrigation cycle after activation. ● Be adjustable to shut off at different soil moisture levels. ● Be installed by a professional trained in soil moisture technology. 	\$75 per controller

VII. Removed Sprinkler Heads

Sprinkler heads installed with new landscapes often become unnecessary as plants become established. Trees and shrubs often do not need to be watered once established; landscape changes may replace plants with paths or utility areas. Removing sprinkler heads that are no longer needed saves water and reduces the potential for damage to heads that are shut off at the nozzle but still pop-up each time the zone runs.

Hardware	Specifications	Applications and Requirements	Rebate Amount
Removed Sprinkler Heads	<ul style="list-style-type: none"> ● Removed sprinkler heads and associated parts (swing joints, flex-pipe, etc.) must be removed at the point of connection to zone laterals, and replaced with a pipe threaded PVC cap or plug. 	<ul style="list-style-type: none"> ● Sprinkler heads must be in actively scheduled zones. ● Mark each sprinkler head to be removed with paint for initial site inspection. ● Present removed sprinkler heads and associated parts at post-inspection. 	\$5 per sprinkler head

VIII. Drip Irrigation

Drip irrigation delivers water directly to the root zone and can improve plant health and reduce water use by up to 50%. Layout of drip emitters must be based on the soil, plant type, and plant spacing to economically provide adequate coverage. Typically in sandy soils each emitter creates a 12" diameter wet zone, and in clay soils a 24" diameter wet zone. Drip lines and emitters should be spaced about 1.5 to 2 times these distances in perennial and densely planted shrub beds or one line per row of annuals or drought tolerant plants. Emitters may be spaced farther apart where irrigation is needed solely for establishment of native and drought tolerant plantings.

Hardware	Specifications	Applications and Requirements	Rebate Amount
Drip Lines, Emitters and associated hardware.	<ul style="list-style-type: none"> ● Drip designs are subject to review and must be pre-approved. ● Drip irrigation may only be used in dedicated zones, not mixed with sprinklers, sprays, bubblers or other devices. ● All drip lines should be laid on the soil surface, staked down, and covered with at least 2 inches of mulch. ● Use only pressure regulating, self-flushing emitters, and wherever practical, use in-line or low-profile emitters to minimize potential damage. ● Use compression fittings or barbed fittings with screw-tightened stainless steel hose clamps. ● Install pressure regulators at each zone valve or valve cluster as needed to provide optimum pressure as defined by the equipment manufacturer. 	<ul style="list-style-type: none"> ● Pressure regulating style emitters ● Each converted zone or valve group must have a Wye-type filter with 150 or finer filter media. ● Compression or clamped barb fittings on all lines ½" diameter or larger. ● ½" in-line emitter tubing, or low-profile inserted emitters recommended for most applications. 	Wholesale cost, up to \$400 per 1,000 square feet.