



# Water Conservation Assessments and Rebates for Commercial Accounts

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# Who We Serve



- Population ~800,000
- 264,000 customer accounts
  - Including single family, multifamily, commercial & industrial, institutional and wholesale
- Provide water service to 95 percent of El Paso County

# Where does our water come from?

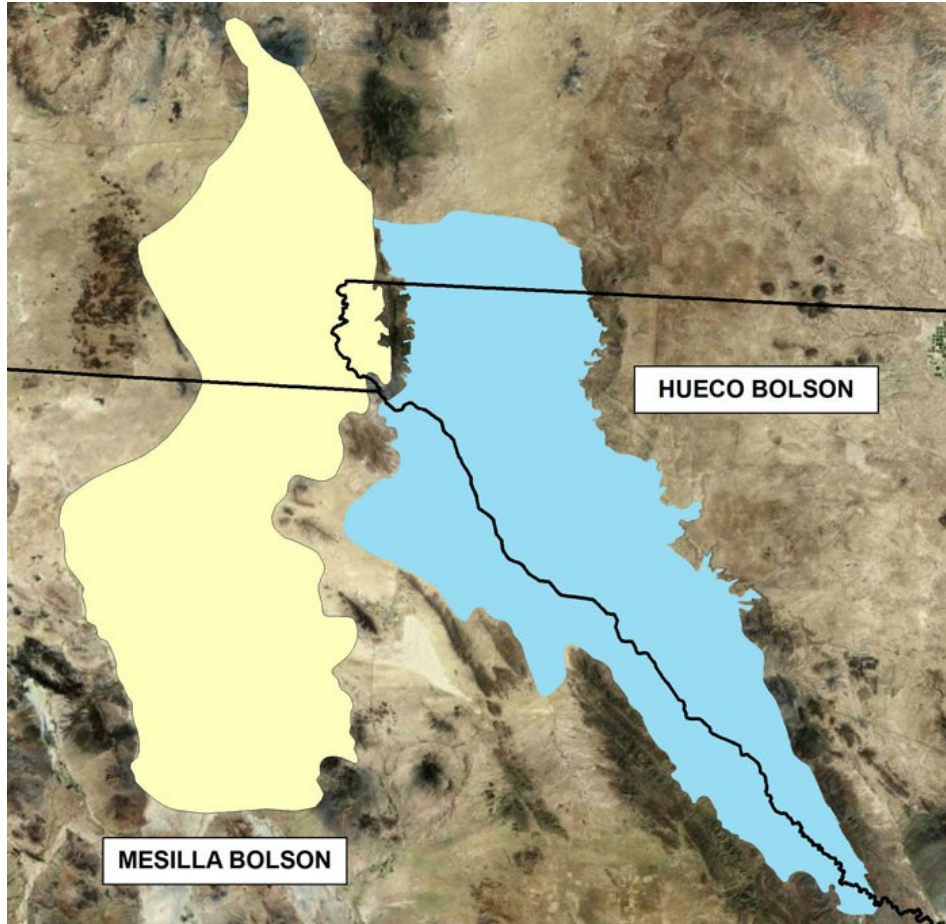
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- The Rio Grande River starts in Colorado as snow
- During the spring, runoff travels the river and stops at Elephant Butte Reservoir
- Water is released at the start of Irrigation Season
- El Paso's allotment is based on how much water has collected in the spring

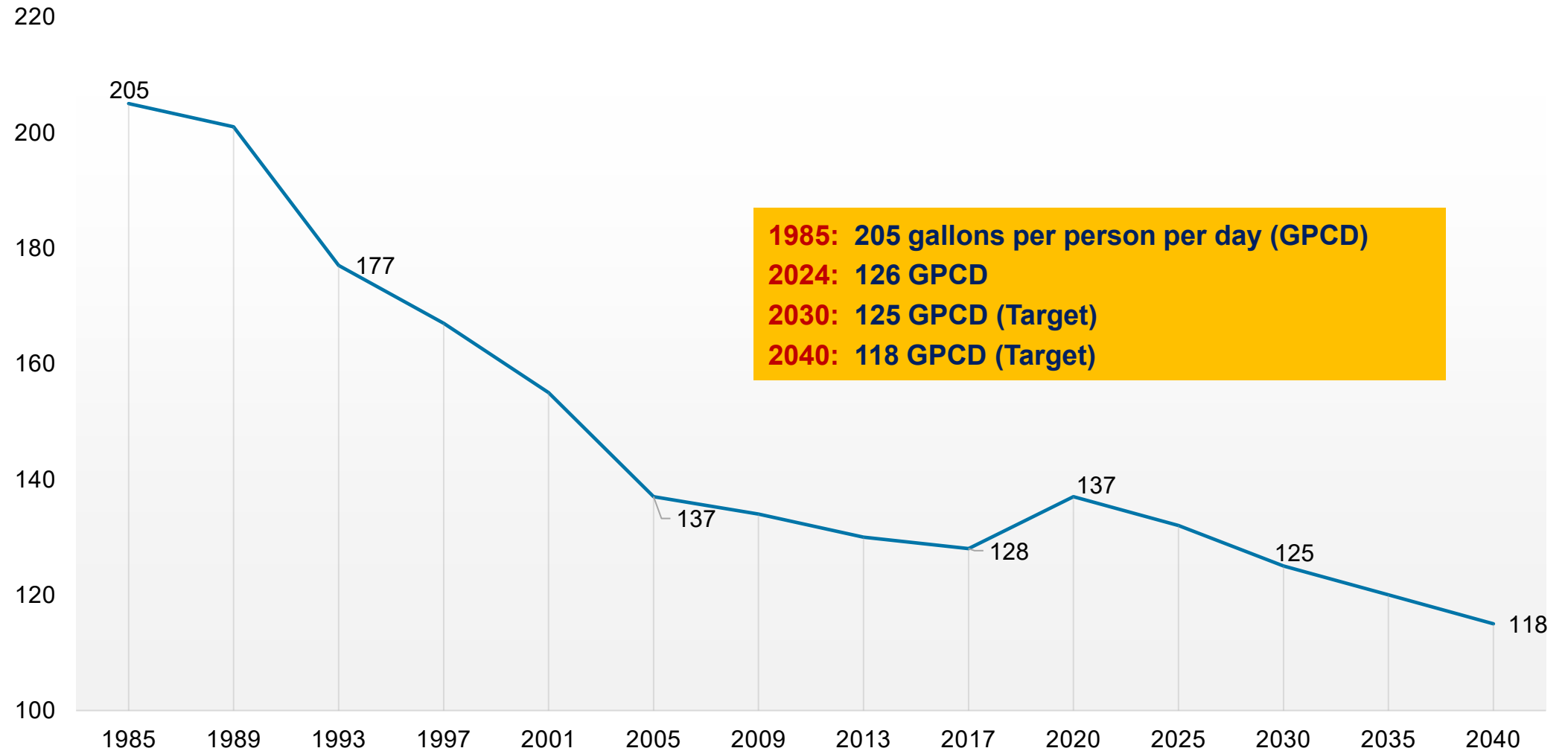
# The water under our feet

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- El Paso sits on two large aquifers
- These resources are shared between 3 states and 2 countries
- Both aquifers have areas of fresh and brackish water
- Most of our drinking water comes from these aquifers

# History of Conservation



# The Assessment Process

| Building Water Survey Worksheet             |                                                                 |  |                              |                 |  |
|---------------------------------------------|-----------------------------------------------------------------|--|------------------------------|-----------------|--|
| Surveyed by:                                |                                                                 |  | Customer/Management company: |                 |  |
| Date:                                       |                                                                 |  | Person requesting survey:    |                 |  |
| General Information                         |                                                                 |  |                              |                 |  |
| Name of Building:                           |                                                                 |  | Address   City, ST, Zip:     |                 |  |
| Building Contact                            |                                                                 |  | Phone:                       |                 |  |
| Building Information:                       | Is recycled water currently used in any of the following areas? |  |                              |                 |  |
| Units:                                      |                                                                 |  | Landscaping?                 |                 |  |
| Number of Floors:                           |                                                                 |  | Toilet flushing?             |                 |  |
| Building Occupancy Data                     |                                                                 |  |                              |                 |  |
| Number of Occ/Day:                          |                                                                 |  | Number of Employees/Day:     |                 |  |
|                                             |                                                                 |  | Number of Visitors/Day:      |                 |  |
| Occupancy Schedule                          |                                                                 |  |                              |                 |  |
| Total Number of Days in Operation per Year: |                                                                 |  | Time open                    | Time close      |  |
| Weekdays                                    | From                                                            |  | To                           |                 |  |
| Saturdays                                   | From                                                            |  | To                           |                 |  |
| Sundays                                     | From                                                            |  | To                           |                 |  |
| Holidays                                    | From                                                            |  | To                           |                 |  |
| Site Checklist                              |                                                                 |  |                              |                 |  |
| Fixtures                                    | Estimated Total                                                 |  | Fixtures                     | Estimated Total |  |
| Tank Toilets:                               |                                                                 |  | Salon Nozzles:               |                 |  |
| Flushometer Toilets:                        |                                                                 |  | Other Faucets:               |                 |  |
| Urinal Fixtures:                            |                                                                 |  | Other Showerheads:           |                 |  |
| Clothes Washers Residential In-Unit:        |                                                                 |  | Hose Bibs/Garden Nozzles:    |                 |  |
| Clothes Washers Common Area (or Coin-Op):   |                                                                 |  | Ice Machines:                |                 |  |

- Businesses reach out to the Conservation Department to schedule a water efficiency assessment
- Surveys usually take about 1 hour, and require access to all water using equipment
- All common areas are also tested
- Report completed in 2 weeks

# During the Assessment

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- We measure every water using fixture including but not limited to toilets, sinks, showers, irrigation systems
- We check efficiency ratings of dishwashers, ice machines, and pool equipment
- We will recommend upgrades and provide an ROI

# Irrigation Assessments



- 1. Equipment Review
  - Check for broken nozzles, heads, leaky seals, misalignment, etc.

## STATION INSPECTION DATA AND ACTION ITEMS:

|                          |                 |                       |
|--------------------------|-----------------|-----------------------|
| Valve:                   | 8               |                       |
| Head type:               | I-25's & Toros  |                       |
|                          | Action Required | Repair Date (fill in) |
| Broken pipes             | N               |                       |
| Broken heads/caps        | N               |                       |
| Missing Nozzle           | N               |                       |
| Damaged/Clogged Nozzle   | Y-2             |                       |
| Pressure adjustment      | N               |                       |
| Stuck heads              | N               |                       |
| Arc adjustment needed    | Y-1             |                       |
| Radius adjustment needed | Y-most          |                       |
| Leaky seals              | N               |                       |
| Sunken heads             | Y-2             |                       |
| High heads               | N               |                       |
| Tilted heads             | Y-1             |                       |
| Mismatched HEADS         | Y-3             | (Toros and Hunters)   |
| Valve sticks open        | N               |                       |
| Heads need to move       | Y               | heads at max 80'      |
| Additional Heads Needed  | Y               | to fill in            |

# Irrigation Assessments:



- 2. Water Budgeting
  - Develop a water budget considering existing plants

| OUTDOOR WATER BUDGET                                  | Jan.          | Feb.          | March         | April         | May           | June          | July          | Aug.          | Sept.         | Oct.          | Nov.          | Dec.           |
|-------------------------------------------------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|----------------|
| Average ETo (inches) (Texas A&M AgriLife)             | 2.74          | 3.53          | 6.07          | 8.19          | 9.83          | 11.12         | 9.19          | 8.94          | 7.69          | 5.89          | 3.58          | 2.49           |
| Landscape (Turf) Coefficient (fescue-.8; bermuda .6)  | 0.7           | 0.7           | 0.7           | 0.7           | 0.7           | 0.7           | 0.7           | 0.7           | 0.7           | 0.7           | 0.7           | 0.7            |
| Microclimate Factor (.8 shade, 1 full exposure)       | 0.9           | 0.9           | 0.9           | 0.9           | 0.9           | 0.9           | 0.9           | 0.9           | 0.9           | 0.9           | 0.9           | 0.9            |
| Landscape ET                                          | 1.73          | 2.22          | 3.82          | 5.16          | 6.19          | 7.01          | 5.79          | 5.63          | 4.84          | 3.71          | 2.26          | 1.57           |
| Average Irrigation Efficiency                         | 0.6           | 0.6           | 0.6           | 0.6           | 0.6           | 0.6           | 0.6           | 0.6           | 0.6           | 0.6           | 0.6           | 0.6            |
| Water Use in Inches per square foot                   | 2.88          | 3.71          | 6.37          | 8.60          | 10.32         | 11.68         | 9.65          | 9.39          | 8.07          | 6.18          | 3.76          | 2.61           |
| Water Use in Gallons per square foot                  | 1.79          | 2.31          | 3.97          | 5.36          | 6.43          | 7.27          | 6.01          | 5.85          | 5.03          | 3.85          | 2.34          | 1.63           |
| Square feet of Turf                                   | 63,785        | 63,785        | 63,785        | 63,785        | 63,785        | 63,785        | 63,785        | 63,785        | 63,785        | 63,785        | 63,785        | 63,785         |
| Plant Water Requirement for Turf (gals per month)     | 114326        | 147289        | 253270        | 341727        | 410156        | 463982        | 383452        | 373021        | 320865        | 245760        | 149375        | 103895         |
| Tree Water Requirement                                | 31.5          | 40.6          | 69.9          | 94.3          | 113.2         | 128.0         | 105.8         | 102.9         | 88.5          | 67.8          | 41.2          | 28.7           |
| Approx. # of trees                                    | 132           | 132           | 132           | 132           | 132           | 132           | 132           | 132           | 132           | 132           | 132           | 132            |
| Plant Water Requirement for Trees (gals per month)    | 4163          | 5364          | 9223          | 12444         | 14936         | 16896         | 13964         | 13584         | 11684         | 8949          | 5440          | 3783           |
| Shrub Water Requirement                               | 3.2           | 4.2           | 13.1          | 17.7          | 21.2          | 24            | 19.8          | 19.3          | 16.6          | 10.2          | 3.3           | 2.3            |
| Approx. # of shrubs                                   | 173           | 173           | 173           | 173           | 173           | 173           | 173           | 173           | 173           | 173           | 173           | 173            |
| Plant Water Requirement for Shrubs (gals per month)   | 558           | 719           | 2266          | 3058          | 3670          | 4152          | 3431          | 3338          | 2871          | 1768          | 569           | 396            |
| <b>Total Landscape Water Requirement (in gallons)</b> | <b>119048</b> | <b>153372</b> | <b>264760</b> | <b>357229</b> | <b>428763</b> | <b>485030</b> | <b>400847</b> | <b>389943</b> | <b>335421</b> | <b>256477</b> | <b>155384</b> | <b>108074</b>  |
| <b>SUGGESTED ANNUAL WATER BUDGET</b>                  |               |               |               |               |               |               |               |               |               |               |               | <b>3454348</b> |

# Irrigation Assessments

## Watering System Recommendations:

Follow Best Management Practices attached.

Change timers to WaterSense-labeled timers. Consider purchasing a BT model, so that they can be programmed using a phone App.

If future irrigation modifications are made, consider adding a master valve to each mainline as well as a flow sensor.

## Watering Schedule Recommendations:

Completely reschedule all timers using the schedule below. For each spray station, look to see the most common nozzle type in the zone and follow that schedule.

Water one, two, or three times per week, and at the approximate number of minutes shown. In winter months, you may only want to water once or 2x/month. If so, water to 8" depth at these times.

If runoff occurs during watering times, set timer to "cycle/soak" schedule. This is the only reason the watering should occur more than once/day.

This schedule has been developed using the manufacturer-provided precipitation rates for the heads on site. The schedule assumes soils are sandy, and that the grass should be watered to an 8" depth or beyond for ideal root growth and increased drought resistance.

For drip irrigation zones, run each station such that trees/shrubs receive water to a depth of 18" (or 24" for zones with mostly trees), and follow the same times/week for turf.

Watering is only allowed on Tuesdays, Thursdays, and/or Saturdays for this (even-numbered) address.

| Once/Week Water Schedule (or less) |            |      |                     |                       | Jan.                       | Feb.                       | March                      | April                      | May                        | June                       | July                       | Aug.                       | Sept.                      | Oct.                       | Nov.                       | Dec.                       |
|------------------------------------|------------|------|---------------------|-----------------------|----------------------------|----------------------------|----------------------------|----------------------------|----------------------------|----------------------------|----------------------------|----------------------------|----------------------------|----------------------------|----------------------------|----------------------------|
| Majority NozzleType                | Times/week | PR   | Sandy soil capacity | (Minutes to reach 8") | Watering schedule (in min) | Watering schedule (in min) | Watering schedule (in min) | Watering schedule (in min) | Watering schedule (in min) | Watering schedule (in min) | Watering schedule (in min) | Watering schedule (in min) | Watering schedule (in min) | Watering schedule (in min) | Watering schedule (in min) | Watering schedule (in min) |
| Hunter Pro 10A                     | 1          | 2.00 | 0.80                | 16                    | 11                         | 15                         | 25                         | 34                         | 40                         | 47                         | 37                         | 36                         | 32                         | 24                         | 15                         | 10                         |
| Hunter Pro 12A                     | 1          | 2.06 | 0.80                | 16                    | 11                         | 15                         | 24                         | 33                         | 39                         | 45                         | 36                         | 35                         | 31                         | 23                         | 15                         | 10                         |
| Hunter Pro 15A                     | 1          | 1.65 | 0.80                | 19                    | 13                         | 19                         | 30                         | 42                         | 48                         | 57                         | 45                         | 44                         | 39                         | 29                         | 18                         | 12                         |
| Twice/Week Water Schedule          |            |      |                     |                       | Jan.                       | Feb.                       | March                      | April                      | May                        | June                       | July                       | Aug.                       | Sept.                      | Oct.                       | Nov.                       | Dec.                       |
| Majority Nozzle Type               | Times/week | PR   | Sandy soil capacity | (Minutes to reach 8") | Watering schedule (in min) | Watering schedule (in min) | Watering schedule (in min) | Watering schedule (in min) | Watering schedule (in min) | Watering schedule (in min) | Watering schedule (in min) | Watering schedule (in min) | Watering schedule (in min) | Watering schedule (in min) | Watering schedule (in min) | Watering schedule (in min) |
| Hunter Pro 10A                     | 2          | 2.00 | 0.80                | 16                    | 6                          | 8                          | 12                         | 17                         | 20                         | 23                         | 19                         | 18                         | 16                         | 12                         | 8                          | 5                          |
| Hunter Pro 12A                     | 2          | 2.06 | 0.80                | 16                    | 5                          | 7                          | 12                         | 17                         | 19                         | 23                         | 18                         | 18                         | 15                         | 11                         | 7                          | 5                          |
| Hunter Pro 15A                     | 2          | 1.65 | 0.80                | 19                    | 7                          | 9                          | 15                         | 21                         | 24                         | 28                         | 23                         | 22                         | 24                         | 18                         | 11                         | 7                          |
| 3X/Week Water Schedule             |            |      |                     |                       | Jan.                       | Feb.                       | March                      | April                      | May                        | June                       | July                       | Aug.                       | Sept.                      | Oct.                       | Nov.                       | Dec.                       |
| Majority Nozzle Type               | Times/week | PR   | Sandy soil capacity | (Minutes to reach 8") | Watering schedule (in min) | Watering schedule (in min) | Watering schedule (in min) | Watering schedule (in min) | Watering schedule (in min) | Watering schedule (in min) | Watering schedule (in min) | Watering schedule (in min) | Watering schedule (in min) | Watering schedule (in min) | Watering schedule (in min) | Watering schedule (in min) |
| Hunter Pro 10A                     | 3          | 2.00 | 0.80                | 16                    | 4                          | 5                          | 8                          | 11                         | 13                         | 16                         | 12                         | 12                         | 16                         | 12                         | 8                          | 5                          |
| Hunter Pro 12A                     | 3          | 2.06 | 0.80                | 16                    | 4                          | 5                          | 8                          | 11                         | 13                         | 15                         | 12                         | 12                         | 15                         | 11                         | 7                          | 5                          |
| Hunter Pro 15A                     | 3          | 1.65 | 0.80                | 19                    | 4                          | 6                          | 10                         | 14                         | 16                         | 19                         | 15                         | 15                         | 24                         | 18                         | 11                         | 7                          |

- 3. Scheduling
  - Prepare a seasonal schedule based on irrigation parts, rather than full survey

# Irrigation Case Study

| (General) Best Management Practices for Water Reduction - Outdoors                                                                                                                                                                                                                                                                                                          | Difficulty to achieve: 1=least difficult |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------|
| Check location of spray heads; ensure that they are working properly and water is not being directed onto other surfaces, such as sidewalks.                                                                                                                                                                                                                                | 1                                        |
| Review heads and make sure they match on each zone; avoid mixing rotors and spray heads in the same zone.                                                                                                                                                                                                                                                                   | 1                                        |
| Review timers and adjust timing seasonally.                                                                                                                                                                                                                                                                                                                                 | 1                                        |
| In grass areas prone to run-off: Implement a Cycle/Soak regimen to keep water from flowing off grades.                                                                                                                                                                                                                                                                      | 1                                        |
| Use organic mulch around trees and in plant beds to reduce evaporation. Renew annually.                                                                                                                                                                                                                                                                                     | 1                                        |
| Educate facility staff, building occupants, employees, and visitors on water management program goals and initiatives. In your newsletter or emails, include indoor and outdoor conservation tips - available at <a href="http://epwater.org/conservation">http://epwater.org/conservation</a> and EPA Watersense programs.                                                 | 1                                        |
| Cover all backflow preventers with an appropriate (ASSE 1060) enclosure, to avoid freezing and subsequent major water loss.                                                                                                                                                                                                                                                 | 1                                        |
| Ensure irrigation schedule is appropriate for climate, soil conditions, plant materials, grading, and season. See attached schedule.                                                                                                                                                                                                                                        | 1                                        |
| Less frequent, deeper irrigation will encourage deeper root growth and reduce water use, so consider watering once/day, on the recommended schedule (provided) for each type of vegetation. Water multiple times per day only when establishing new turf, and only after requesting a watering permit from the Water Conservation Department at EPWater, at 915.594.5508.   | 1                                        |
| Install WaterSense labeled weather-based irrigation controllers or consider irrigation controllers with rain or soil moisture sensors. Use a model that allows access with a phone app, if Wifi is available.                                                                                                                                                               | 2                                        |
| Replace bubbler irrigation with drip irrigation to water plant beds, where possible.                                                                                                                                                                                                                                                                                        | 2                                        |
| Have an irrigation professional certified by a WaterSense labeled program conduct an irrigation audit annually.                                                                                                                                                                                                                                                             | 2                                        |
| As trees and shrubs die out, replace with native or drought-tolerant species.                                                                                                                                                                                                                                                                                               | 2                                        |
| Maintain proper pool chemistry to limit pool cleaning and drainage events.                                                                                                                                                                                                                                                                                                  | 2                                        |
| Use pool covers to control evaporation loss. (Apply for an EPWater rebate for pool cover purchase.)                                                                                                                                                                                                                                                                         | 2                                        |
| Establish a landscape committee to walk the site weekly, with a checklist and very specific parameters: identify leaks, dead plants, dry grass spots, areas not receiving water, chipped or damaged nozzles, leaning heads, buried heads and water runoff. Provide weekly list to landscape contractor.                                                                     | 2                                        |
| Install master valves on all irrigation main lines.                                                                                                                                                                                                                                                                                                                         | 2                                        |
| Replace lowest spray heads on each landscape with spray heads that include check valves; or add check valves to existing spray heads.                                                                                                                                                                                                                                       | 3                                        |
| Reduce turf areas to functional turf only, where possible. Plant water-smart plants in place of grass on slopes or in areas narrower than eight feet; good replacement plants for full cover include blue rug juniper, trailing rosemary, ice plant. Treat areas with bermuda fully to remove rhizomes and stolons prior to planting, and use an appropriately-sized mulch. | 3                                        |

- 4. Recommend
  - Report includes best management practices.
  - General report includes purchase and rebate suggestions

# WaterWise Business Rebate Program

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Could your business benefit from a water efficient equipment upgrade? If so, you may be eligible for a rebate of up to \$30,000 to cover equipment cost.

50%

OF EQUIPMENT  
COST

\$30,000

UP TO

Visit [epwater.org/businessrebate](https://epwater.org/businessrebate)  
for eligibility requirements and to apply.  
Applications accepted while funding lasts.





## Supreme

Replaced two large open pocket washers with one 10-mod Continuous Batch Washer tunnel. Estimated yearly water savings of 2,400,000 gallons.

## Magoffin Home

Replace 136 of 179 sprinkler heads with WaterSense Pressure Regulating models. Estimated yearly water savings of 241,000 gallons.



## Prontowash

Replace eight Maytag top-load washers with Speed Queen front-load washers. Estimated yearly water savings of 200,000 gallons.

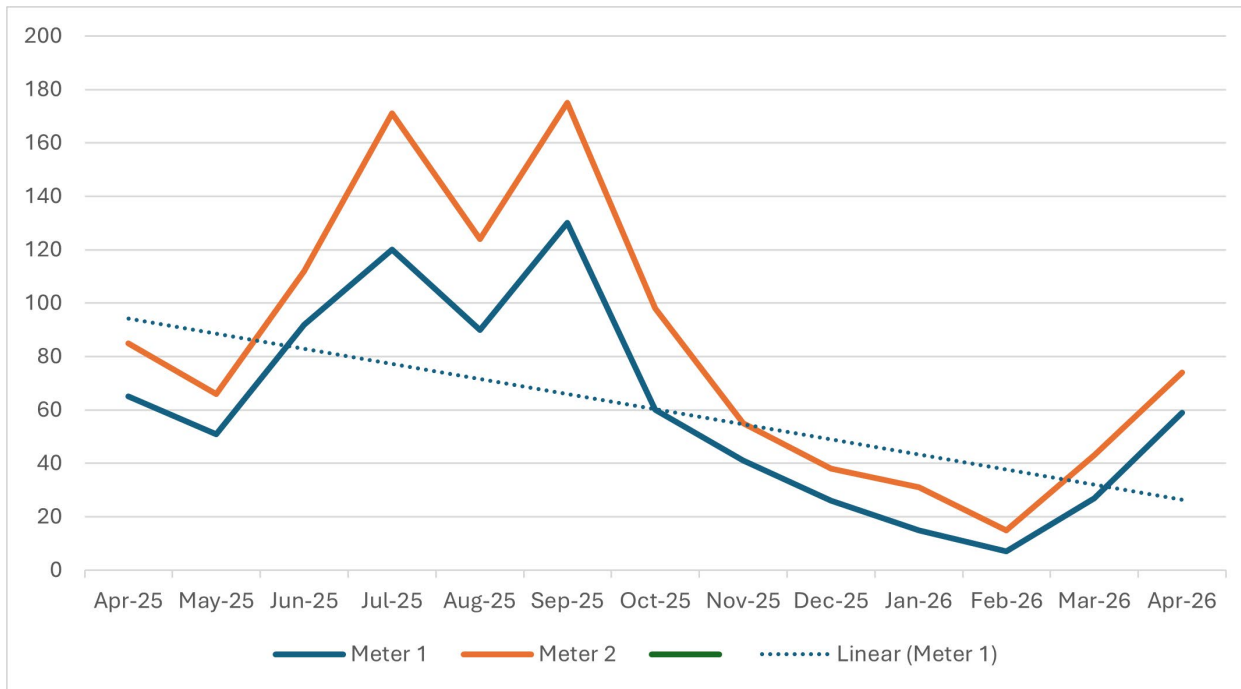
# Commercial Flat Rate Rebate

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- Offered to businesses upgrading to water-efficient equipment.
- Unlike the WaterWise Business Rebate, businesses can apply **after** purchase and installation.
- Maximum rebate amount: **\$30,000 per property.**



# La Mesa Apartments Case Study



- La Mesa Apartments used our flat rate rebate program to replace 110 old, inefficient toilets
- The rebate covered the full cost of each commode
- The property has saved 250,000 gallons since the audit and toilet replacement

# How can this benefit you and your business?

- Substantial savings even from fairly simple modifications
- Save Now AND Save Later
- Do you have planned improvements already?
- Do you have any old fixtures or equipment at your business or facility?



<https://www.epa.gov/watersense/commercial-buildings>

# Residential Rebate Programs

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- WaterSense HET Toilets
- Energy Star Washing Machines
- WaterSense Irrigation Controllers
- Rainwater Harvesting
- Laundry to Landscape systems
- Pool Covers
- Pool Filters

# What can you do to help?

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- Fix leaks
- Turn off water while brushing teeth or shaving
- 5-minute showers
- Full loads of laundry and dishes
- Monitor irrigation system

# Be mindful of everything that uses water



- Recycle, recycle, recycle!
- Turn up thermostat when you're not home
- Turn off lights when you leave the room
- Donate old clothes
- Don't waste food



# Questions?

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