OUTDOOR FEATURES

Pools and Outdoor Water Features

Optional Water Efficiency Measure: May contribute to the 30 percent water efficiency requirement, depending on the chosen WaterSense® Approved Certification Method (WACM).

UNDERSTAND

- Thoughtful residential swimming pool design can help save pool owners water, energy, and money. To increase water efficiency, consider addressing issues related to evaporation, water quality, leaks, or pool usage.
- Providing a pool cover and installing a more water-efficient pool filter are the two most effective ways to reduce swimming pool water usage.

Design and Maintenance Guide for Pools

WaterSense's *Jump Into Pool Water Efficiency* guide at www.epa.gov/system/files/documents/2022-09/ws-outdoor-pool-guide.pdf for residential pool owners and maintenance professionals explains how to achieve water efficiency in residential swimming pools. It includes details on using a pool cover, selecting the most appropriate filter type, and improving energy efficiency. The guide is a great resource for anyone responsible for installing, designing, or maintaining a pool.

Learn more about water efficiency for pools at WaterSense's Pool Water Efficiency web page at www.epa.gov/watersense/pool-water-efficiency.

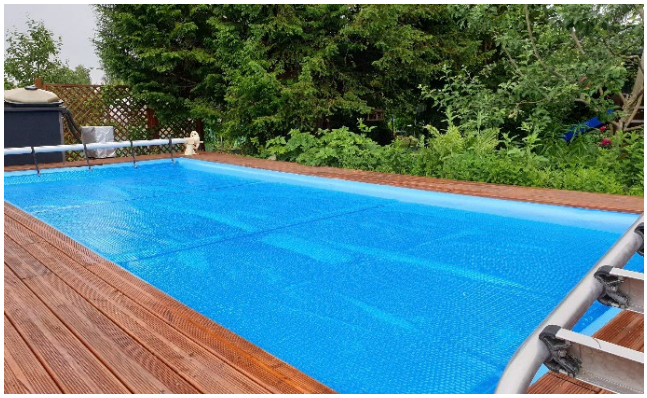
BUILD

- **SELECT** a high-performance filter that minimizes or eliminates water consumption from backwashing. Filter backwash, in which water is sent backwards through a filter to remove debris, can account for up to a quarter of pool water consumption. Filters with less frequent backwash will help reduce water waste. Cartridge filters are the most water-efficient because they do not require backwashing. Diatomaceous earth (DE) or glass filters also reduce water usage compared to commonly used sand filters. Install a pressure gauge with the filter to help indicate when backwashing is necessary.
- **INSTALL** a separate water meter to help homeowners and multifamily property owners actively monitor pool water consumption and identify potential leaks.
- **DESIGN** the pool to easily accommodate a pool cover and associated equipment for employing the pool cover (e.g., reels, motors). Covering a pool during periods of inactivity will reduce water loss due to normal evaporation.
- **PLAN** landscaping surrounding the pool to reduce evaporation. Landscaping or other physical barriers, such as stone walls or fencing, can increase wind protection. Increasing shade through landscaping can also keep the pool cooler. Be sure to select plants that do not contribute more debris to the pool.
- **INSTALL** a gutter or grate system to catch water from splashing or drag-outs and return it to the pool.

VERIFY

- **CONFIRM** that there are no wet spots around the pool or air bubbles in the water return pipeline or in the pump strainer. Wet spots or bubbles are a sign of leakage from the pool liner, the pump seal, pool piping, the pool-to-pipe connection, pool edges, or pipe joints.
- **VERIFY** that a pool cover is installed.
- **IDENTIFY** the type of pool filter that is used.

**NOTE: Consult with the Home Certification Organization for specific verification protocols.*



Ornamental Water Features

Ornamental water features can be more water-efficient by following some basic guidelines. Water features should recirculate water from the feature itself and serve a beneficial use such as wildlife habitat, stormwater management, and/or noise reduction. The water consumption of an ornamental water feature can be reduced if smaller pumps, lower pumping rates, and/or pressure-reducing valves are used to reduce water flow. The higher the water flow, the more water wasted due to evaporation. If the water feature includes cascading water, select one that falls down, rather than shoots up, to minimize evaporation. Placing the water feature in a shady area further reduces evaporation.

Recirculating the water reduces the amount of potable water used in an ornamental feature and helps to prevent algae growth in the feature. Two types of pumps are available for recirculating water—submersible pumps and surface (or line) pumps, which are more expensive and require extra plumbing.

Pool Covers

WaterSense estimates that, depending on climate, an uncovered 500-square-foot swimming pool could lose between 12,000 and 31,000 gallons of water per year due to evaporation, with this number being even higher for heated pools. Pool covers are the most effective method of reducing water loss from evaporation. When in use, solid pool covers can reduce evaporation by more than 90 percent and, in the case of heated pools, save between 50 and 70 percent of pool heating costs.

Type	Effectiveness at Reducing Evaporation	Can It Serve as a Safety Cover?	Additional Information and Considerations
Solid/mesh/hybrid	Up to 95 percent	Yes	Mesh covers are lighter weight than solid covers but allow more evaporation to occur.
Solar (bubble cover, solar rings, thermal)	50 to 95 percent (varies based on shape and coverage)	No	Solar covers are designed to use the sun's energy to heat the pool.
Liquid evaporation suppressant	15 percent	No	Non-toxic, chemical evaporation suppressant is applied to the pool surface on a regular basis.