

Energy Efficiency

FACTSHEET



Hot Tub and Pool Conservation Tips

Tips for Hot Tub Users

- ◆ **Set the hot tub heater thermostat to maintain 102°F** - Which is the temperature recommended by most health departments for adults and children. Some hot tubs have been factory set to heat water to 104°F.
- ◆ **Shift hot tub water heating to off-peak times** - If your hot tub has a timer, you can help reduce peak loads and pressure on utility rates by programming the timer to “off” during peak hours - 6 a.m. to 10 a.m. and 5 p.m. to 9 p.m. If you have a well insulated, energy efficient hot tub, it will maintain the set temperature for several hours after the heater is turned off.
- ◆ **Turn down the thermostat when you’re on vacation** - If you are leaving for an extended period of time or won’t use the hot tub for a week or more turn the heat down or off. If you have an older, non-energy efficient hot tub, consider draining it if you will be gone during winter months. Such tubs can freeze which causes a great deal of damage to the equipment. Energy efficient hot tubs can maintain non-freezing temperatures for weeks with appropriate covers.
- ◆ **Reduce pumping cycles** - Normally filtration cycles for single and two speed pumps are set for four hours, twice per day. You may be able to reduce the filtration cycles to three hours, twice a day - during off-peak hours. This adjustment should be based on your usage pattern, so you can maintain clear, clean and safe water. If your hot tub has a low-wattage, continuous circulation pump - leave it alone, it’s designed to run all the time.
- ◆ **Use a hard (foam) cover with good insulative qualities** - Standard covers have an insulating value of approximately R-12. Keeping a cover in good condition is essential because most heat loss will be through the spa cover. Replace the cover if the interior foam is broken or water-saturated. A waterlogged cover will increase energy consumption from heat loss. Make sure the cover and tub lip fit snugly. Use the straps to latch the cover when the hot tub is not in use; this will reduce heat leakage and provide a safety measure. To handle the cover more easily and extend its life, a lift system is recommended.
- ◆ **Add a floating blanket** - An energy-efficient floating thermal blanket will help retain heat and reduces the amount of moisture building up on the inside of your hard cover, extending its life. For example, adding a 1/4" closed-cell foam, floating blanket under the hard cover can increase the total R-value to 16.
- ◆ **Avoid wasting water** - Repair any leaks and adjust jets or use booster seats to adjust your height so you’re not sending streams of water on the deck.
- ◆ **Drain the hot tub only when necessary** - Maintaining a proper chemical balance will reduce the number of times you need to drain extra. Hot tubs that are heavily used by bathers should be drained every 3 – 4 months. When it’s time to drain, either drain to a sanitary sewer or use the water for lawn irrigation. Make sure no chemicals have been added for at least 48 hours before draining.
- ◆ **Create windbreaks around the hot tub** - Cutting wind exposure can reduce heat loss. Privacy panels, landscaping, or fencing can all be effective windbreaks.

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- ◆ **Buy only energy efficient spas and hot tubs** - Today, significant improvements in the construction, controls, and equipment (such as using preheated air for jets and low wattage pumps and lights) make hot tubs more energy-efficient than 5 or 10 years ago. When possible replace your hot tub with a newer, energy efficient model. An average sized energy efficient hot tub consumes 5-7 kWh per day, while a poorly insulated, inefficient hot tub may use 12-18 kWh per day.

Tips for Swimming Pool Users

- ◆ **Use a cover** - Covers reduce temperature loss during non-use times. They keep the pool cleaner and cut back on water lost from evaporation. Solar covers can add up to 10°F. taking some of the load off conventional heaters. If the solar cover is put on a month early, the sun alone may heat the water 20°F. You may want to consider a cover with a reel system. It makes it easier and more convenient to take the cover off and on - prolonging the life of the cover and saving energy.
- ◆ **Add a "chemical cover"** - Chemical covers produce a micro thin layer on the water's surface - reducing heat loss and saving energy.
- ◆ **Add a safety cover** - Safety covers reduce energy costs and add a protection barrier for small children, non-swimmers, pets, or uninvited guests.
- ◆ **Set pool temperature to 78°F** - The Red Cross recommends 78°F for swimmers. Each rise of one degree significantly increases energy costs. If you want higher temperatures, then consider alternative forms of heat such as solar covers and solar systems. Service your heaters annually to ensure they function at top efficiency. Or, replace older heaters with newer more energy efficient units.
- ◆ **Follow the recommended circulation times** - Circulation times can vary - follow your manufacturer or builder's recommendations. The basic rule for a residential pool is to circulate water as needed. Eight hours a day may be enough - adjusting circulation up or down as necessary - to keep the water clean, clear, and safe.
- ◆ **Clean filters only when necessary** - For sand filters make sure the sand bed is fresh to lengthen the time between backwashing. By changing the sand or at least running a chemical cleaner through the sand you also help reduce the need to backwash. If you backwash sand filters too early, you waste both water and power, and reduce efficient operation. For cartridge filters be sure to size the filters properly - you'll save time and money by lengthening the time between cleanings. Also, watch your pressure gauges and look for an 8-10 psi increase before cleaning.

- ◆ **Install energy efficient motors or a smaller pump or motor**
- ◆ **Add a time clock** - Use a programmable timer to automatically regulate the hours of operation. You can limit the total number of hours that the pump will operate and you can also set it to run during off-peak hours 10 a.m. to 5 p.m. and 9 p.m. to 6 a.m.
- ◆ **Correct any leaks or service problems as they occur** - Do not allow problems with your pool to linger.
- ◆ **Inspect automatic pool cleaners to make sure they are in peak operating condition** - Use automatic pool cleaners to maintain the cleanliness of your pool, but not for major clean-ups. Leaf rakes and leaf eaters do a better job of removing large debris than any automatic cleaner. Consider changing to a cleaner that can operate separately from the rest of the system.
- ◆ **Have users keep the water in the pool** - Encourage games that focus on keeping the water in the pool. Jumping, splashing, and water fights consume water that has been heated and chemically treated.
- ◆ **Drain pools -rarely** - Properly maintain your pool to maximize the useful life of the water. Maintaining a proper chemical balance will keep the water clear, clean and safe. Consider alternative forms of care to help keep the water fresh and reduce time spent on pool maintenance. Pools seldom require draining. Consult a professional before draining your pool.
- ◆ **Create windbreaks around the pool** - Cutting wind exposure can reduce loss of both heat and water. Privacy panels, landscaping, or fencing can all be effective windbreaks.

If you have questions regarding the content of this factsheet, please contact the National Spa and Pool Institute's (NSPI) Western Washington Chapter, Blair Osborn, (206) 286-0700. For more information on energy efficiency visit the EnergyIdeas Clearinghouse website at www.EnergyIdeas.org or call on your professional pool and spa dealers to help you make informed choices on all aspects of your pool or spa operation.

The EnergyIdeas Clearinghouse provides information on a broad range of energy technologies for customers of Pacific Northwest utilities. EIC provides a searchable website and has a team of energy specialists ready to respond to technical information requests by phone or email. Funded by the Northwest Energy Efficiency Alliance.

Web: <http://www.EnergyIdeas.org>

Regional Hotline: 1-800-872-3568

Email: info@energyideas.org

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