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## Water Conservation

According to the Palouse Water Conservation Network ([www.pwcn.org](http://www.pwcn.org)), there are many water conservation measures that can be implemented on a personal level in the household. To conserve water, one can start with faucets:

- Never let water run continuously
- While waiting for water to get hot, collect cold water for other uses
- Install low flow aerators on all faucets
- Repair dripping faucets or running toilets

In the bathroom:

- Take showers, not baths (baths use more water)
- When in the shower, run water only when rinsing
- Don't flush toilet after each use
- Place filled water jugs in toilet to displace volume

In the kitchen:

- Don't run dishwasher until it's full
- Compost or throw out food scraps instead of using garbage disposal
- For cold water, keep pitcher in refrigerator
- For warm water, heat in microwave or on stove

To assist members of the community in implementing these conservation methods, the City of Moscow Water Department offers low flow shower heads, toilet tank bags to displace the amount of water per flush, flow restrictors for faucets along with other water saving devices such as timers for automatic sprinkler shut off and low-flow hose attachments. These devices are free of charge to Moscow water ratepayers.

For outdoor irrigation, it's best to water lawns and gardens between the hours of 6pm and 9am. This allows the majority of the water to be taken up by the soil rather than evaporating due to the sun and warmer temperatures. The City of Moscow imposed this idea as a voluntary water restriction in 2003, but water use actually went up from 577 million gallons in 2002 to 667 million gallons in 2003. Because of this, the adoption of a mandatory water restriction ordinance is being contemplated by the City of Moscow for the summer of 2004 ([www.pwcn.org](http://www.pwcn.org)).

Currently, this ordinance is in its draft stage and is being prepared by the Moscow City Council.

According to James Johnson in a presentation given to the Moscow City Council (2004), there are creative water conservation practices currently used in Moscow. A waterless urinal is being used as a pilot project at the North Idaho Athletic Club in Moscow. This urinal saves 50 gallons or more per day. Upon satisfactory completion of the pilot project, waterless urinals will be considered code compliant within the City of Moscow.

Johnson also addressed the concept of rainwater harvesting, the idea of collecting rainwater from the roofs of houses. According to Johnson, an average roof sheds 160 gallons of rainwater



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per hour during a moderate rainfall. Rainwater can be collected from the roof in storage tanks and then re-used for outdoor irrigation.

In addition to these personal conservation measures, a larger scale proposal currently being considered and studied in the greater Moscow area is a tiered water rate structure. With this in place, ratepayers who use more water would pay higher rates than those who use less.

Economic and Engineering Services (EES), of Bellevue, WA, has developed a plan for a tiered water rate structure for the City of Moscow. This plan is currently open for review and comment by the City, and a final rate proposal is due in May. In a memo to the City of Moscow, EES has proposed rate options for single-family homes, duplexes and commercial sites. For single family homes and duplexes, the present fixed charge is \$10.90 per month, along with a commodity charge of \$1.32/hundred cubic feet (CCF) of water used in the winter months and \$1.70/CCF for the summer months. It is proposed to keep the fixed charge the same, but to change the commodity charges.

<i>Single Family Home</i>		<i>Duplex</i>	
0-7 CCF	\$1.25/CCF	0-10 CCF	\$1.25/CCF
7-15 CCF	\$1.63/CCF	10-20 CCF	\$1.63/CCF
Over 15 CCF	\$2.30/CCF	Over 20 CCF	\$2.30/CCF

EES also proposes a second option for tiered rates to maintain some consistency with the existing seasonal rate. The summer period would remain the same as in the first option, but the winter period would drop the third block because water demands are not as high as the peak use season of the summer, when conservation is needed.

For commercial rates, the fixed charge is \$19.75/month with winter commodity charges of \$1.32/CCF and summer charges of \$1.70/CCF. Again, the fixed charge is proposed to remain the same with a change in the commodity charge.

<i>Commercial</i>	
0-50 CCF	\$1.30/CCF
Over 50 CCF	\$1.75/CCF

In economic theory, this tiered rate structure would create water conservation, but there is concern that a more expensive water bill would not bother those with high incomes.

In addition to these water conservation measures, there are other being looked into by hydrogeologists from the University of Idaho. These possibilities include the feasibility of artificially recharging the slower recharging Grande Ronde aquifer with water from the faster recharging Wanapum aquifer. Another option currently being researched is the feasibility of large-scale rainwater harvesting on the Palouse by designating an area of the surrounding fields as a collection site and funneling rain water into catchment basins which can store the water for future use.