

THE ATMOSPHERIC RESERVOIR

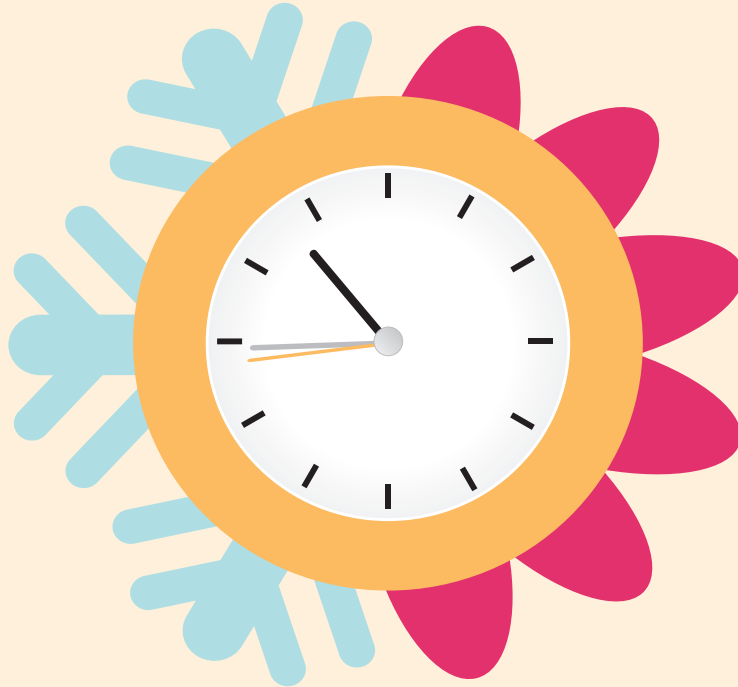
Examining the Atmosphere and Atmospheric Resource Management

"Saving Daylight?"

By Mark D. Schneider

The days have grown shorter and sunlight will reach a minimum of less than nine hours per day around the winter solstice. We can't buy sunlight, but over history attempts have been made to utilize it more completely. The origins of modern Daylight Savings Time (DST) date back to 1895 when George Vernon Hudson, a scientist from New Zealand, proposed the idea of a two-hour daylight savings shift. Hudson, along with many others during the last century, believed that additional late-day sunlight was more beneficial than extra light during the morning.

The U.S. adopted DST in 1918, but has seen varied use of it since that time. In the 1970s, DST was thought to have helped save electricity during the energy crisis. The idea was that an extra hour of sunlight would mean less usage of artificial lighting. More recently in 2005, Congress voted to extend DST by an additional four weeks and in 2006 the State of Indiana, previously split between DST and non-DST observers, became unified in its observance. Today there are still areas of the U.S. where DST isn't observed. These places include the States of Arizona and Hawaii,



Puerto Rico, the US Virgin Islands, and American Samoa. As you can see, DST isn't a federally mandated law, but simply left to individual states to vote on and implement.

There are debates about whether DST has positive effects on agricultural production and human health. North Dakotans can work and enjoy the outdoors later during DST. The trade-off is that the sun rises later, so early risers have to wait to greet it. Some farmers oppose DST because their work schedules follow sunrise more closely than "clock" time. Our biological clocks, or circadian rhythms, are stressed by any adjustments to their regular schedules. Patterns of brain activity, hormone production, and cell regeneration are altered by DST, jet

lag, and shift work. Jet lag affects us the most when travelling from west to east or "springing forward" (similar to the beginning of DST) and least when travelling from east to west. In jobs where shift work is required, workers' circadian rhythms are disturbed and this often causes sleep disorders.

An interesting alternative to the current "spring ahead, fall back" method of DST would be to remain on daylight savings time year-round. This would eliminate the need to adjust our clocks.

Worldwide, the use and definition of DST has changed many times over the last century and odds are that some new form of it could take shape in the future.

By the end of December, the length of each day will begin to increase and soon spring will once again present us with the possibility of prolonging our evenings and "saving" daylight. Remember to set both your body and alarm clock forward an hour on March 8.

Atmospheric Resource Board
North Dakota State Water Commission
900 East Boulevard, Bismarck, ND 58505
(701) 328-2788 • <http://swc.nd.gov>

ND Weather Modification Association
PO Box 2599, Bismarck, ND 58502
(701) 223-4232