

FACETS of Freshwater



December 2015

Lutsen Bay Sunrise
by Mark Paulson

December Monthly Normals from the MN Weatherguide Calendar

Temperature: Max 27.1 F Min 12.3 F

Precipitation: 1.16 in. Snowfall: 11.5 in.

 FRESHWATER SOCIETY

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Maybe we should be called “The Friends of Groundwater Society”

We’ve been doing a lot of thinking about the price of water as we prepare the next in our continuing series of reports on the sustainability of groundwater supplies. Our water bills are *ridiculously* cheap and do very little to catch our attention when it comes to slowly squandering our wealth of water. We know this because the Freshwater Society has convened experts and authored reports on the topic for decades. Lately our work has been examining the behavioral aspects of our glacial progress to ensure long-term sustainable supplies.

As we’ve researched how communities come to grips with curtailing water waste, it is abundantly clear that when smacked with an in-your-face drought and plummeting reservoir levels, southwestern states were able to curtail water use by greater than 20 percent. Less arid communities have produced similar reductions when boil orders or temporary shut downs of water plant intakes have occurred. So we can be more efficient.

The price of water is SO cheap that even doubling the rates would not have much of an effect locally because the money involved is still not sufficient to change enough behaviors. By this I mean water consumption behaviors, not all behavior. Plenty of people would light torches and sharpen pitchforks to march on city halls over such an increase.

But what if local water rates were sufficient to fully pay for the treatment, distribution, maintenance, end-of-lifespan replacement of mains and smart meters (to address water losses), soil moisture sensors (to idiot-proof irrigation systems), and incentives for water efficient appliances? These measures would slowly but surely coax our use downward. No emergencies. No big bills.

So what are we talking about when it comes to the cost of water? Let’s use a willing volunteer (me) to lay out the annual cost of household-related expenses. Water is ridiculously cheap given that its value is well above what we pay.



Steve Woods

...Groundwater Society (continues on page 2)

FRESHWATER SOCIETY

The Freshwater Society is a non-profit organization dedicated to educating and inspiring people to value, conserve and protect water resources.

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2424 Territorial Road, St. Paul, MN 55114,
651-313-5800 or at freshwater@freshwater.org.

Visit the Freshwater Society web site at
www.freshwater.org.

Master Water Stewards Graduate – 80 Stewards now applying their skills!

Congratulations to the 2015 class of Master Water Stewards who graduated this December! Thanks to them, neighborhoods are equipped to stop stormwater pollution in our lakes and streams. Along with the previous two classes, these stewards have stopped 1,134,400 gallons of stormwater pollution from entering our waterways each year. Freshwater Society is expanding the Master Water Stewards program in 2016 to eight metro area watershed districts and cities. Join this growing community of Stewards by applying at masterwaterstewards.org.



2015 Master Water Stewards

The Next Moos Family Lecture is April 13!

George Hawkins, CEO and General Manager of the DC Water and Sewer Authority, will discuss how our thinking about environmental protection has evolved and the implications for cities. DC Water operates the largest wastewater treatment plant in the world and has launched an ambitious and innovative program to improve aging infrastructure in the Washington DC region to comply with strict environmental requirements. A recently completed digester system is generating 10MW of electricity – enough for about 7,500 homes. Join us for an exciting evening with one of the rock stars of the water utility world.

Evolution to Cleaner Water and Greener Water Companies

April 13

University of Minnesota,
St Paul Student Center Theater

5:30 PM Reception
7:00 PM Lecture



George Hawkins

Groundwater Society (cont'd from pg.1)

2014-15 Annual Costs for a Shoreview Home
3-BR, 2.5 occupants, semi-wooded 0.3-acre lot on sandy soils

Property tax	\$4890
Cell phone (2-lines)	2470
Homeowner insurance	1320
Electricity	880
Natural gas	820
Internet	710
Landline/Long distance	620
Garbage/recycle	330
Sanitary sewer	280
Basic cable	270
Water	130
City stormwater fee	90
Composting service	70
Street lighting fee	40

The city could double my water bill and it would still be less than the cost of the **lowest** level of cable service. If nothing else, the costs illustrate our willingness to pay for some things while balking at paying for things our society depends upon like water, sewer, transmission lines, and as commentator Stephan Vance noted – roads:

We seem to have no limits for funding our personal entertainment, and our gadgets, and our hundreds of television channels, but to tell a North American that they need to pony up some dough so the road doesn't crumble beneath them on their way to work is much tougher to sell.

Look for our Groundwater report in 2016.

Regards,
STEVE WOODS

Freshwater Society Executive Director

Excerpts from the essay “Winter” by our founder, Dick Gray

From fall to winter is when these seasonal changes hit home with the fact that another season is “in the can.” As the leaves change color in October and start to fall, so do hopes that the weather will stay as nice as it has been for the past several months. We know what’s coming – a hiatus between one year and the next. For me, the “next year” begins early in November because so many things are set at that time in preparation for the coming spring. The period between early November and early April – five months – is a time that is distinct from the rest of the year.

I love winter. That doesn’t mean I’m perverse, it just means I accept and join the cold and ice and snow on short days and long nights as necessary steps, as parts of the process making way for another glorious spring-summer-fall period in Minnesota.

It’s always fascinating to me to observe the same progression of freezing that occurs each year – from small, shallow ponds to along the shores of the small lakes to larger ponds and shallow lakes to the eventual locking in of the rivers and large bodies of water. I tell myself not to forget the code of physics that prevails – that water is heaviest at 39.2 degrees Fahrenheit and as the surface waters cool, they become heavier than the lower warmer waters, and the waters “turn over,” preparing the lake or pond for the winter by bringing freshly

Rum River by Christy Bruggenteis



oxygenated waters to the deeps to allow the fish to survive under the ice and dead algae and weeds to decompose. It’s a marvelous mechanism of survival and fundamental to our northern environment.

–Dick Gray

Decrease your salt use!



If you live in the midwest, you know winter. We respond to the brutal season by using winter maintenance procedures that keep us safe. Salt works in moderation, but is VERY tough on lakes and rivers. It’s up to all of us to do our part to reduce salt use.

The photo above illustrates the amount of salt necessary to cause ice melt. Salt is for melting, not traction. Any more is just excess and will only contribute to the chloride pollution in our waters.

One 12 ounce coffee mug of salt is enough to cover about 60-70 feet of sidewalk or 20 feet of your driveway.

- At temperatures below 15° Fahrenheit, salt becomes ineffective. Consider using sand instead for traction.
- Store ice melting products in airtight containers to maintain maximum effectiveness.
- Watch a homeowner [video](#).
- Wear boots or shoes with good traction so you can walk safely to your destination.

Freshwater Society will be hosting the 15th Annual Road Salt Symposium on February 4, 2016 at the MN Landscape Arboretum in Chaska, MN.

[Learn more or register at www.freshwater.org.](http://www.freshwater.org)

DONOR PROFILE



Julie Blackburn
St. Paul, MN
Environmental Consultant with RESPEC
Lessard Outdoor Heritage Commission member

Do you have a favorite water memory from your childhood?

I’ve got two! My family ran a resort on Gull Lake and it was a mixture of intense work over the summer and a playground all year round for a young girl who liked being outside and catching a few fish. The other one is Beauty Lake in Pillsbury State Forest. It was, and is, my “Walden” – the place I go to reconnect with the planet and recharge my batteries.

What pressing issues do you see in the realm of water management?

My work takes me all over the country so I get to see water issues from many places. We continue to ‘mine’ or ‘harvest’ water without much thought or policy for insuring that the water is being replenished. Groundwater is of particular concern. Without action we will no longer have water that sustains our agricultural industry, feeds our growing population, or supports the natural resources of which we all depend.

Why do you support the Freshwater Society?

I’ve been on the board for two years. I give of my time and also financially. I started because of a feeling of responsibility to support an organization that drives change. I was fortunate to have benefited from a lifetime on, in, or around the water – and I’m in a technical and financial position to see that others benefit from those waters as well.

Any favorite memories on the water from your adult years?

Let’s see, not counting those monster fish I’ve hauled in, I would say that I fondly think of the serenity of the Lebanon Hills lakes and trails as the place I go to recharge my batteries now.

Empowering Minnesotans to Protect and Promote Clean Water

Registration is open for the second State of Water Conference, hosted by Freshwater Society, Conservation Minnesota, and University of Minnesota Extension. Kick off your spring with a few days in lakes country and equip yourself to tackle our biggest water resource issues. Scheduled for April 14-15 in Alexandria, the State of Water Conference will get you ready to protect the lakes and rivers that make Minnesota so unique.

The State of Water Conference brings together state agencies, non-profit organizations, universities and colleges, as well as citizen groups like lake associations, to learn about and discuss the issues facing Minnesota's waters. This conference offers workshops and break-out sessions on a variety of water topics to bring you the information, tools, connections, and resources you need to build local capacity and define your next steps to improve the health of water in your community.

Conference attendees will be able to select from 40+ presenters and 24 session topics, hear the latest news about water issues from Commissioners from Minnesota Pollution Control Agency and Department of Natural Resources along with the Executive Director of the Board of Water and Soil Resources. Attendees will also go in-depth into the issues with a half-day workshop (4 available).

Registration and class previews are available at <http://freshwater.org/state-of-water-conference/>. Register by January 31, 2016 to take advantage of Early Bird savings!

For questions, contact Jen Kader at 651-313-5807 or jkader@freshwater.org.

The State of Water Conference is hosted in partnership with:



Upcoming Events

JANUARY 30 – Big Island and Back Nordic Ski Dash, Lake Minnetonka

FEBRUARY 4 – 15th Annual Road Salt Symposium, MN Landscape Arboretum, Chaska

APRIL 7 – Ice OUT/Loon IN Fundraiser, Nicollet Island Pavilion, Minneapolis

APRIL 13 – Moos Family Lecture: George Hawkins, St. Paul Student Center – more information available soon at www.freshwater.org

APRIL 14-15 – 2016 State of Water Conference, Arrowwood Resort, Alexandria

SAVE THE DATE

MAY 2 – Water Reuse Conference, CHS Field, St. Paul – more information available soon at www.freshwater.org

Your timing is perfect! Join now and receive the 2016 MN Weatherguide!

Become a member or renew your Freshwater Society **membership** and you'll receive a **complimentary** 2016 Minnesota Weatherguide Environment Calendar!

Enjoy amazing regional photos, Nature Notes by Jim Gilbert, weather history, KARE 11 and MPR meteorological information, gardening tips and much more. Your purchase supports the protection of freshwater resources!

Join us at freshwater.org.



Gooseberry State Park by Mark Paulson