
FROM THE STATE GEOLOGIST

By John P. Bluemle

MILESTONES



As I write this column in late May, Devils Lake has reached a level just about as close as it's possible to be without actually flowing freely into Stump Lake (the level of Devils Lake this morning is 1446.72 feet above sea level; at 1447.3 feet it will flow into Stump Lake). Devils Lake reached this threshold level sooner and more quickly than most of us had expected, hurried by the very wet May weather we've been experiencing in North Dakota this year.

For the people in the Devils Lake area, in the surrounding cities and towns, on the Spirit Lake Indian Reservation, and on the farms bordering the lake, many of them now flooded, this is just one more event in the seemingly endless list of frustrations they've faced over the past several years. It is perhaps of some consolation that with the lake overflowing naturally into Stump Lake, any further rise should be somewhat slower while the additional water drains eastward. But for the people in the immediate Stump Lake area, the overflow means the start of a more rapid rise in that lake. And, of course, if and when Stump Lake matches the level of Devils Lake, the combined, larger lake will continue its inexorable rise toward eventual overflow into the Sheyenne River. There haven't been any winners in all of this.

What does it all mean, Devils Lake rising so high it overflows through the Jerusalem Outlet, spilling water into Stump Lake? It's geology in action — yet another milestone in the relentless rise of the water over the last several years, a response to the wet cycle we've been experiencing throughout the state since the 1940s and continuing with increased vigor during the 1990s. I've been working on the geology of Devils Lake for half a lifetime and, as a geologist, I've known and reported that all of these events were possible. Some people, maybe most people I've talked to over the years, have had a hard time accepting that all of this could happen — even as it actually did.

But it's not the point of this column to say "I told you so!" My point is, in a geologic context, *if something can happen, it will* — eventually. My geologic version of Murphy's Law. It may not be in your lifetime or mine, but it *will* happen (although in this case, Devils Lake has definitely reached this

milestone in our lifetime, the first time it has flowed into Stump Lake in over 160 years). It's just as certain that the level of Devils Lake will eventually fall, not just to pre-flood levels, but dry out completely. When that happens, Devils Lake will be nothing more than a fading memory, a dry and dusty alkaline flat, as it has been perhaps a half dozen times since the lake first formed, ten thousand years ago.

Most of us — geologists and laymen alike — hope that these kinds of milestones don't happen in our lifetimes. We gamble that they won't, and indeed, most of them don't. We aren't always lucky enough to win that gamble. The 54-foot flood that inundated Grand Forks in 1997 was another example of geology in action, but that too was a not unusual event to a geologist. It's an unfortunate truth that nearly all of the big geologic events are negatives. San Francisco will eventually be destroyed in an earthquake. There's a danger in living there, but the residents gamble that the "big one" won't happen in their lifetimes, or the lifetimes of their children and grandchildren. But it will happen eventually. Similarly, people living near Pompeii (or Martinique, or Mt. Rainer, or any of dozens of dangerous volcanoes) are someday going to face a major eruption. Grand Forks will eventually experience a 60-foot flood, as it has numerous times in the recent geologic past, but we all hope it won't happen during our lifetimes.

How is a geologist supposed to respond to all of this? On one hand, we have the same feelings and frustrations as anyone else when our land or property is damaged or destroyed by a geologic event. But at the same time it's also our job, our goal to understand and experience as many of these kinds of events as possible and explain them in such a way that our public officials can deal with them effectively.

I've seen lists compiling things every geologist might hope to experience "in person." Not all of them are disasters. In fact, most of them are actually very positive events or experiences. Many geologists try their best to "do" as many of these things as they possibly can during their lifetimes. For example, my personal list of "accomplishments" includes such things as walking up to and touching (and working on) a glacier; personally experiencing an earthquake (I happened to be staying near Assisi, Italy a couple of years ago when that disaster struck); seeing geysers erupt in Yellowstone Park and other places (but I still need to see the "original" geyser in Iceland); and seeing for myself the original type section of an unconformity at Siccar Point, and other classic geologic sec-

tions described by James Hutton and other early geologists in Scotland. I've also had the opportunity to study the Grand Canyon, probably one of the most instructive places any geologist could ever visit. These are just some of the spectacular things that come to mind; there are others, and every geologist has his or her own personal list.

Or how about some of the less spectacular, but just as important geologic events and features closer to home? I've experienced the remarkably flat plain of glacial Lake Agassiz in eastern North Dakota and the rugged and unique badlands along the Little Missouri River. Both of these I've loved and appreciated. Add to these the dunes of the Sheyenne Grasslands and the [now full!] prairie potholes of the Missouri Coteau. I've had the opportunity to see — and recog-

nize and describe for the first time — the remarkable ice-thrusts at Anamoose and Blue Mountain, Sully's Hill and other places in North Dakota. Every North Dakotan should see and experience these things, and appreciate them for what they are — geologic elements of our truly fascinating State.

And now, of course, along with many of the rest of you, I've lived through and experienced two more North Dakota milestones of historic proportions — the inundation of the entire City of Grand Forks by the Red River of the North, and Devils Lake spilling into Stump Lake. Both are truly historic events.

Despite the disasters, for me at least nothing is more interesting than geology in action!