



2006-2007

October Meeting Notice

Minnesota Geotechnical Society

Glacial Geomorphology

Carrie Jennings, Senior Scientist, Minnesota Geological Survey, U of M

Minnesota has been ice-covered for much of the past two million years but the last glaciation, the Late Wisconsin, at its peak about 26,000 years ago, sent two ice lobes through what is now the metro area. The ice conveyed exotic material into haphazard piles of dirt, sand, gravel and ice leaving most of the metro in a general state of glacial disarray. However, subsequent modifications by meltwater created the landscape we see today. Water from the wasting ice funneled beneath the ice through tunnels, spread beyond the ice in broad-braided sheets, or deeply incised the bedrock as glacial rivers started the clock on the unstoppable process of waterfall retreat. The Minnesota River gorge was created as glacial meltwater, stored in Lake Agassiz, spilled south through glacial River Warren. It was further deepened as River Warren Falls, initially positioned in downtown St. Paul, migrated upstream. All tributaries to River Warren that were passed by the retreating waterfall also developed waterfalls.

Water fall retreat exposed the flat-lying, Paleozoic, sedimentary rocks that formed when shallow tropical seas covered the area. Wherever the glacial cover has been completely stripped away, the more resistant of the bedrock units control elevation. The hard bedrock layers impeded down-cutting resulting in the formation of strath terraces in places. The varying permeability of the bedrock units controls lateral groundwater movement. Springs emerge along several contacts as the gorges of the Mississippi and Minnesota rivers and create sapping basins and caves.

Date: Wednesday, October 11, 2006

Location: Majors Sports Cafe (formerly Big City Tavern, formerly KFAN)
2801 Snelling Ave
Roseville, MN

Time: 6:00 Social Hour - Our thanks to CNA Consulting Engineers for their sponsorship.

7:00 Dinner – Salad, Rolls, Coffee/Soda and a choice of:

1. St Louis Style BBQ Ribs– Slow Roasted- Full rack served with French fries and Coleslaw
2. Feta Cheese and Sun-Dried Tomato Stuffed Walleye - Served over white cheddar mashed potatoes with a drizzle of lemon thyme butter sauce.
3. Manicotti – Fresh Pasta tubes filled with ricotta, mozzarella and parmesan cheeses. Baked in marinara sauce and finished with melted mozzarella.

8:00 Presentation – Carrie Jennings, Minnesota Geological Survey, U of M

(One professional development hour toward continuing education requirements for Professional Engineers is available).

Cost: \$25.00 members, \$30.00 non-members, and \$5.00 Full-time students, payable to MGS at the door.

Reservations: Requested by 12 Noon, Friday, October 6, 2005.

Please register via the website at <http://www.mngeotechnicalsociety.com/eventsmpls.asp> or call Greg Norris to indicate your dinner selection. Greg may be reached by phone: (763) 428-2242 or fax: (763) 428-8348

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