



## LOCAL GEOLOGIC TERMINOLOGY

By Rachel Hunt, GeoEngineers

Caliche, also known as hardpan, is a shallow layer of soil or sediment where particles have been cemented together by the precipitation of minerals and is usually found in arid environments within soil conditions that have poor drainage, such as silt and clay.

Caliche is typically formed when calcium carbonates, magnesium carbonate, gypsum, silica, or iron oxide, are leached from upper soil horizons or delivered to the site from runoff and downward percolated into the soils. The calcium carbonate then precipitates into the soil to form the caliche layer.

Caliche can also form by upward movement of water through capillary action or from beneath vegetation. As the water evaporates out of the soil or is extracted by vegetation, dissolved materials precipitate, and over time, cements the soil. In each formation scenario, the calcium carbonate first precipitates as small grains or thin coatings on grains or soil particles. As the grain coating thickens, adjacent grains become cemented together, and will eventually form a continuous subsurface layer.

## March 2021 G-I Announcements

### First 2021 G-I Lecture

- The Southern Idaho Chapter G-I Institute has been selected as one of the locations for the 2021 Cross-USA Lecture series. Our presenter is Liz Smith with Terracon.
- The virtual or in-person presentation date TBD. In the meantime, more info about Liz Smith can be found on the [GI website](#).
- We greatly appreciate if G-I members fill out this [survey](#) for possible lecture topics. This will help make the lecture a fun and educational experience for all.



Liz Smith, P.E., G.E., D.GE, M.ASCE is a Senior Principal and National Transportation Program Manager at Terracon Consultants Inc. in Texas

## STUDYING FOR UPCOMING APRIL PE EXAM?

April 22<sup>nd</sup> (Breadth). April 23<sup>rd</sup> (Depth)

[RSVP](#) for GeoEngineers FREE virtual PE exam study sessions for geotechnical engineering. Feel free to send the flyer to anyone taking the PE exam this spring.

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For settlement of pile foundations, which of the following statements is true?

- a) Downdrag forces reduce settlement
- b) Elastic shortening of piles reduces pile settlement
- c) Bearing capacity of a pile group is usually less than the sum of individual capacities
- d) Compaction piles are an effective choice for cohesive soils

## Attend the annual G-I committee meetings virtually

All Technical Committees (Deep Foundations, Earthquake Engineering, Pavements, etc) are meeting virtually this month. Register for G-I committee meetings [here](#). See flyer for details.

### **Help the Local Chapter!**

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The G-I chapter are in need for sponsors. This will help provide more out-of-state lectures to the Boise area. Additionally, looking for local case studies to add to the newsletter. Contact Dan if interested.

## SIC BOARD MEMBERS

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