

# Richard H. Jahns Lectures in Engineering Geoscience

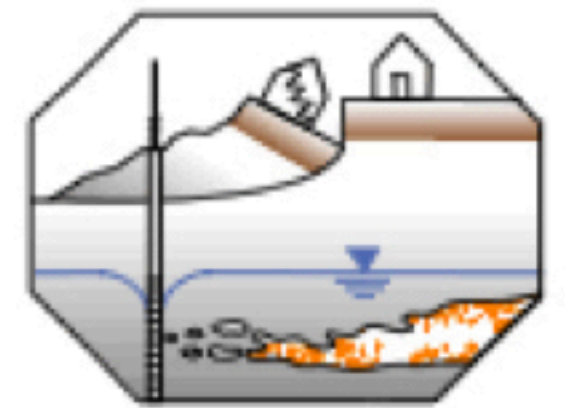
2022-23

Vince Cronin



ASSOCIATION OF  
ENVIRONMENTAL  
& ENGINEERING  
& GEOLOGISTS

THE  
GEOLOGICAL  
SOCIETY  
OF AMERICA®



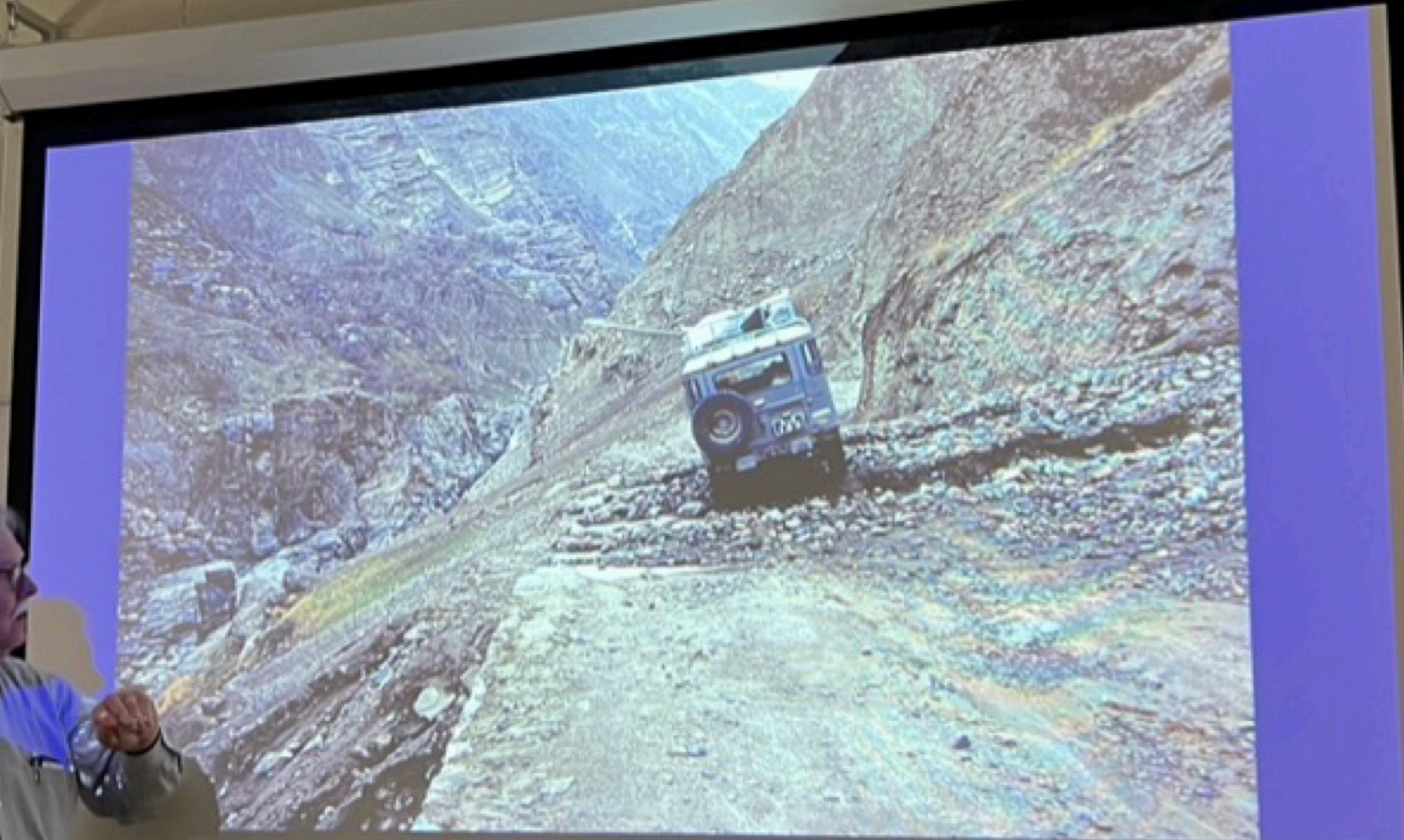
ENVIRONMENTAL & ENGINEERING  
GEOLOGY DIVISION

<https://CroninProjects.org/Jahns/>

Dick Jahns



~50 face-to-face presentations



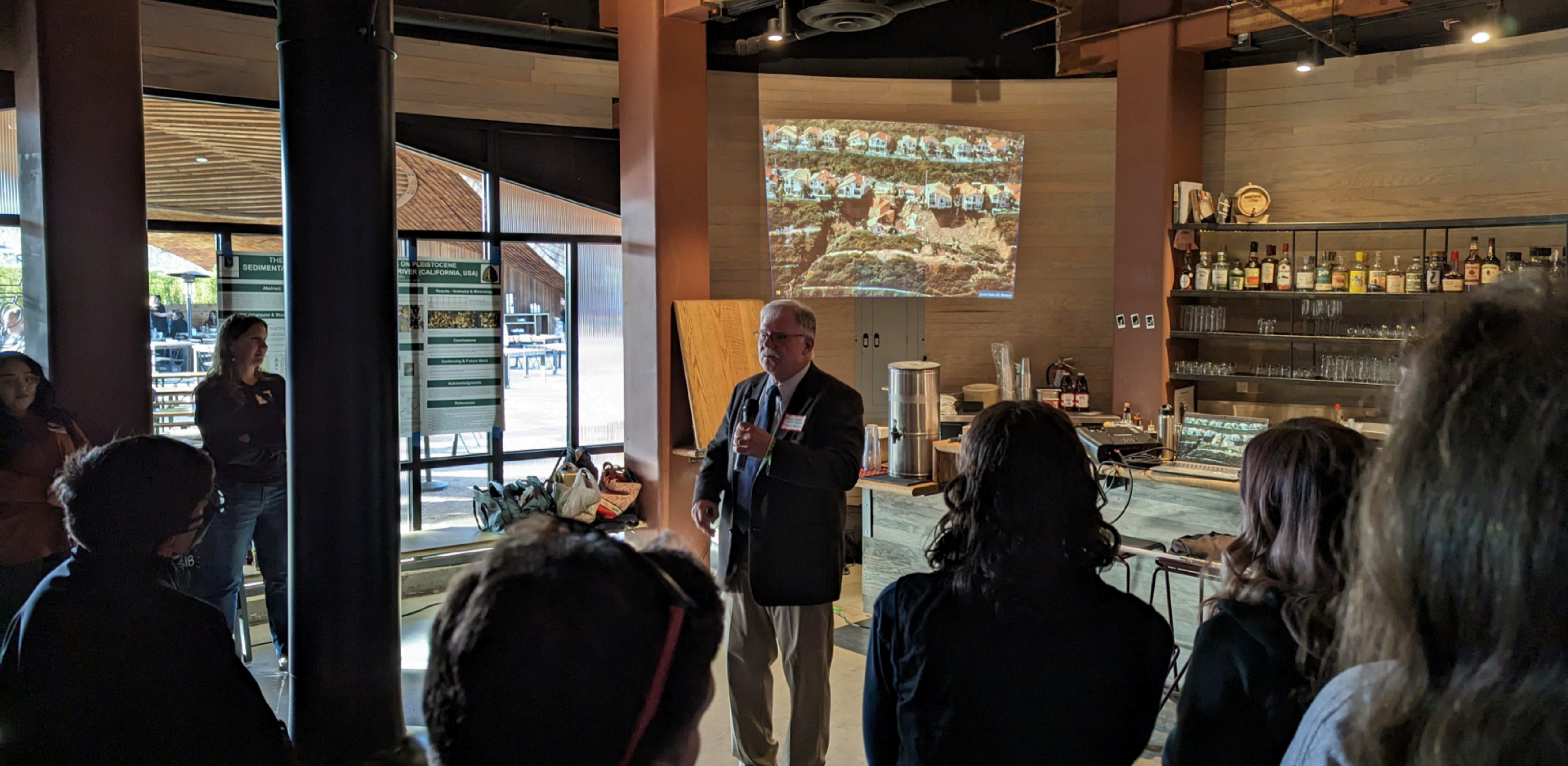
**1 consulting company**



27 colleges and universities

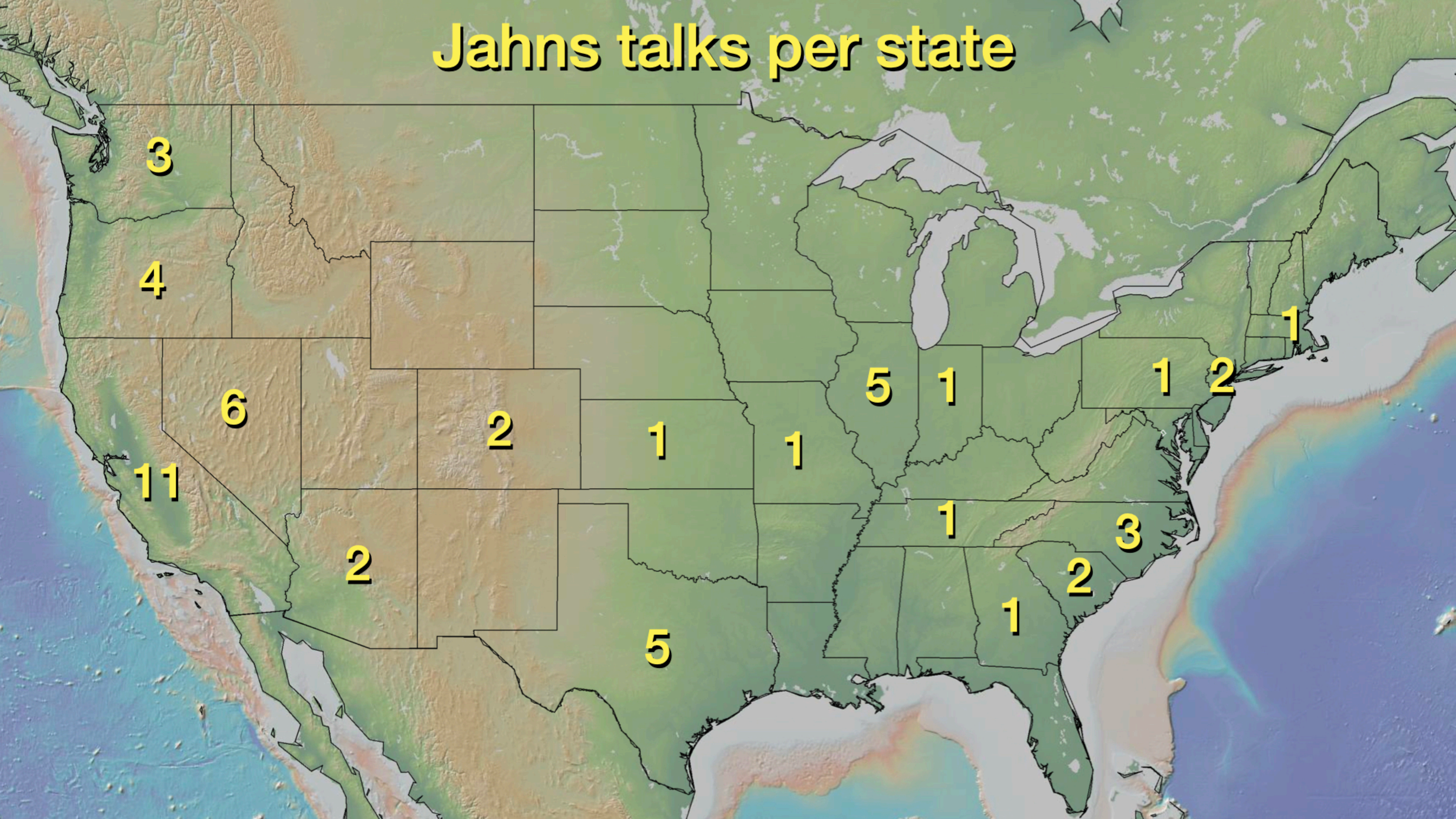
**1 field conference involving students  
from several universities**





**17 AEG Chapter events**

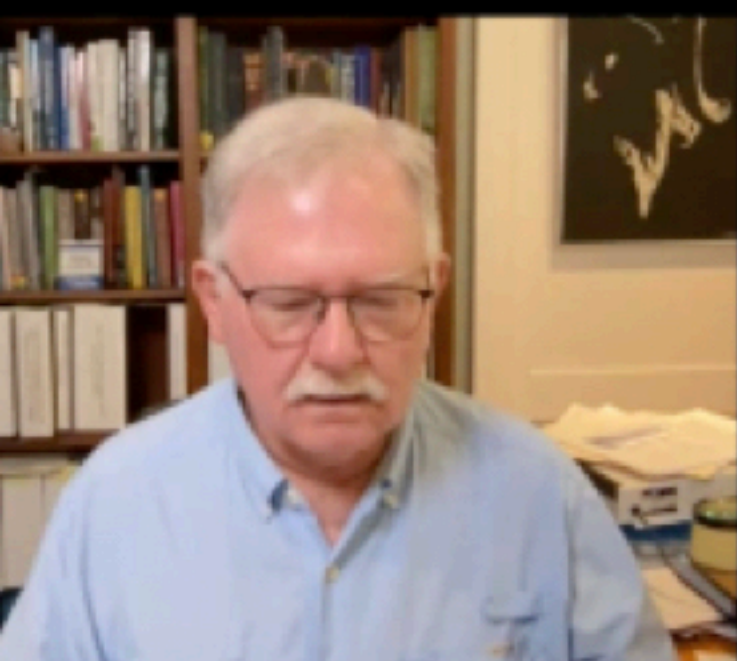
# Jahns talks per state



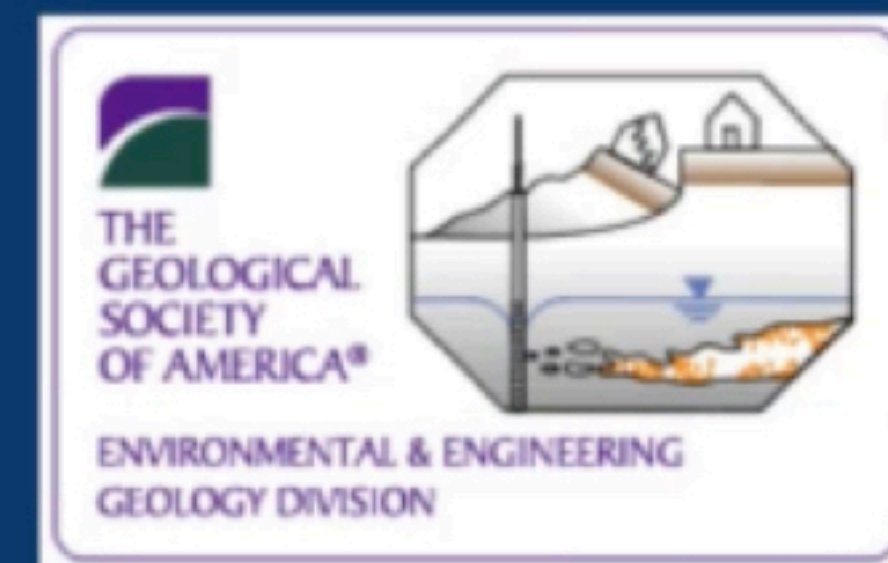
# Richard H. Jahns Lectures in Engineering Geoscience

2022-23

Vince Cronin



Dick Jahns



<https://CroninProjects.org/Jahns/>

**3 Jahns-related webinars**





**>8,000 miles of driving**

39 flights





48 nights in hotels

A large, white, two-story house with a grey roof and a red brick chimney. The house has multiple windows and a central entrance. To the right, there is a smaller white structure with a porch. The house is surrounded by trees, including a large evergreen in the background. A white fence runs across the middle ground, separating the house from a grassy field in the foreground. A dark grey banner is at the bottom left, and text is in the top right.

Thanks, Scott Burns!

**10 nights in private homes**



Loren Lasky and others from the AEG New York-Philadelphia Chapter



Chris Stohr and others from the AEG Chicago Chapter



Merrily Graham and others from the AEG Great Basin Chapter



University of Illinois Urbana-Champaign students after Jahns lecture





Students at the AEG New York-Philadelphia Chapter meeting

AEG JAHNS LECTURE  
SPONSORS  
BCG AND SCHNABEL

THE ROSE

WELCO  
THE N

1119

**Eakers  
Department Store  
1953-1985**

In 1953, August Gaines Eaker transformed the Plunge into the Eakers Department Store, giving it a new mid-century modernist facade with plate glass windows on the street level and a set of ribbon windows on the second floor. Eakers thrived for more than 30 years until the chain went out of business in 1985, leading to the closure of the Golden store.

The Golden Plunge  
1913-1953

Venue for the AEG Mile High Chapter meeting, Golden, Colorado

How can engineering geology help society meet the challenge of a changing climate?



**How can engineering geology help society meet the challenge of a changing climate?**

**1. Develop your relevant knowledge and skills.**

# How can engineering geology help society meet the challenge of a changing climate?

1. Develop your relevant knowledge and skills.
2. Communicate reliable information to help society develop its understanding. Teach through your words and actions.

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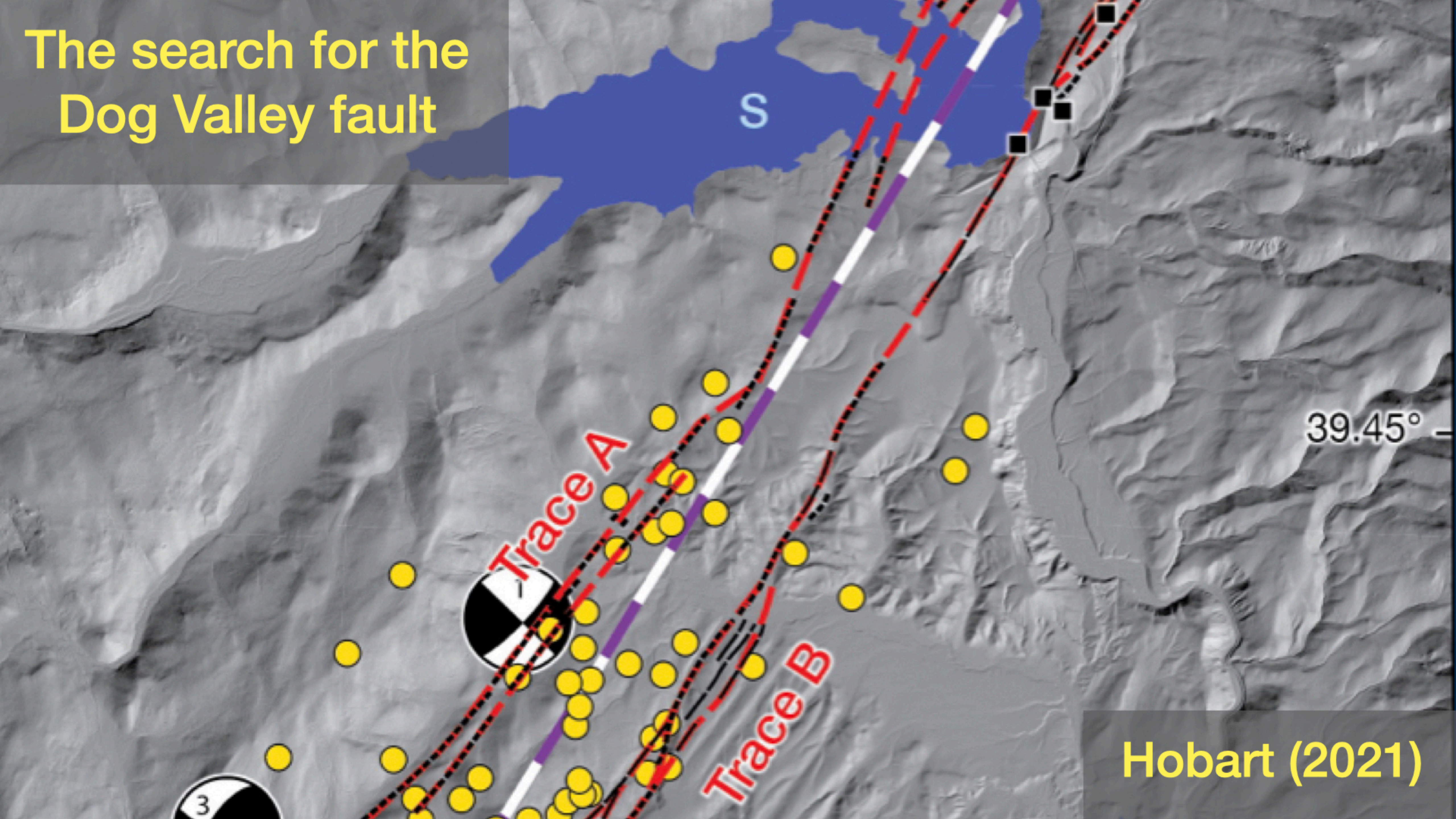
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2. Communicate reliable information to help society develop its understanding. Teach through your words and actions.
3. Apply your knowledge and skills to develop, propose, and implement solutions.

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<https://CroninProjects.org/Jahns/EngGeolClimateChange/>

# The search for the Dog Valley fault



Hobart (2021)



# Flood path from Stampede Reservoir along Little Truckee and Truckee Rivers

Stampede Reservoir  
≤226,500 acre ft  
lake elevation ~5914 ft  
~1480 ft above Reno

Boca Reservoir  
≤41,110 acre ft  
lake elevation ~5614 ft  
~1180 ft above Reno

Verdi

Reno

Sparks

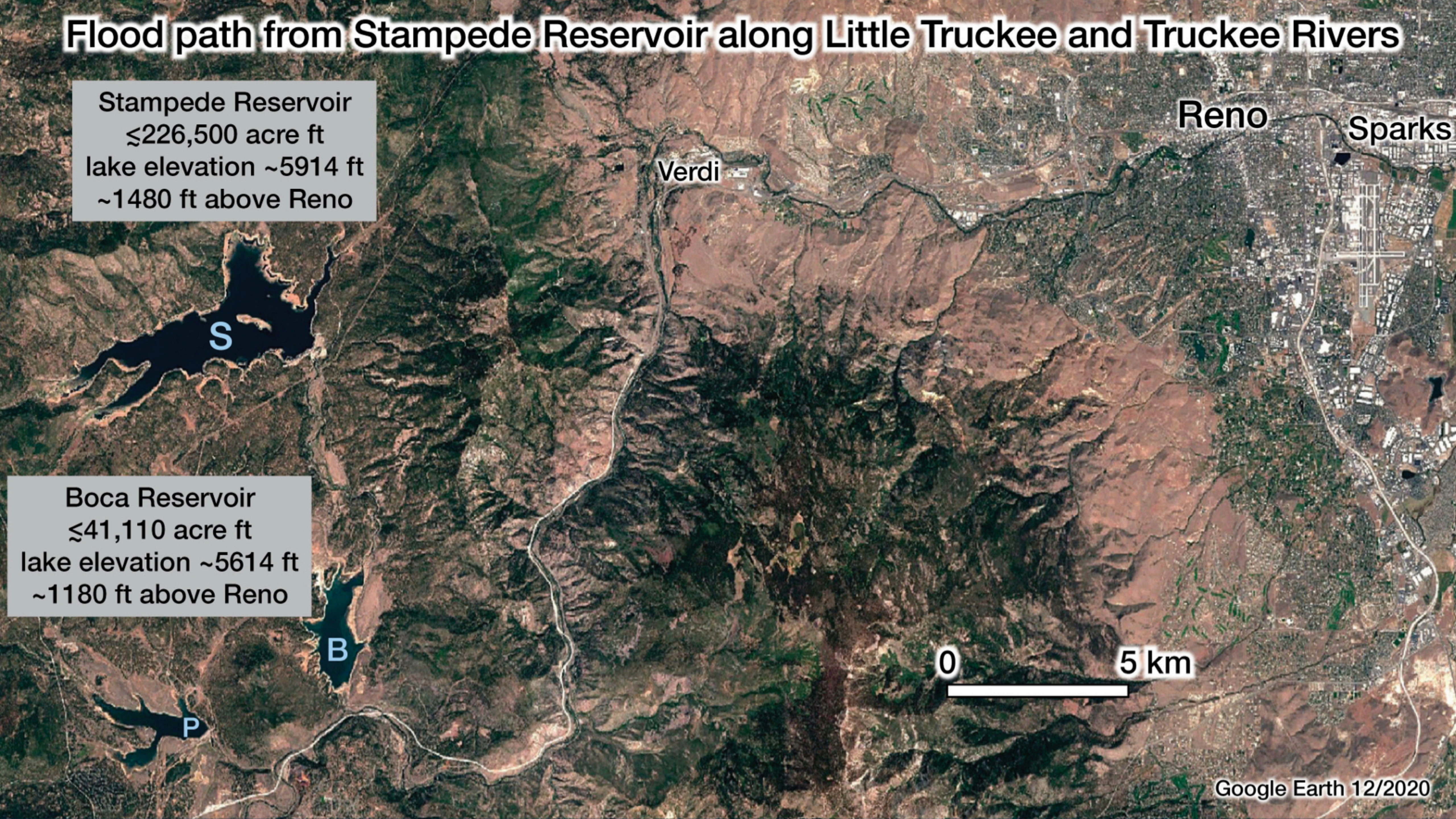
S

B

P

0

5 km



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Reno

Sparks

Verdi

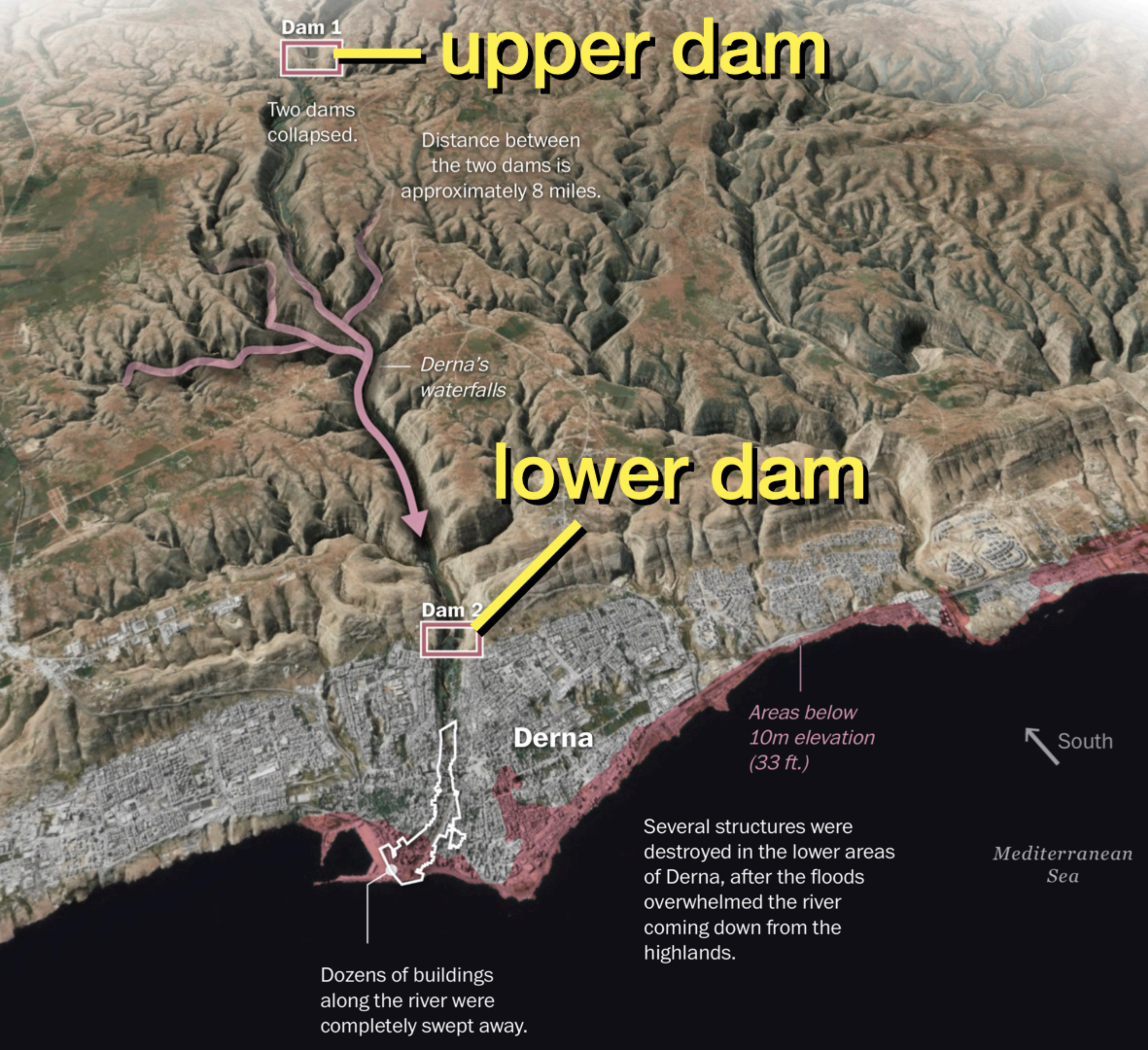
S

B

P

0

5 km



Dam 1

**upper dam**

Two dams collapsed.

Distance between the two dams is approximately 8 miles.

Derna's waterfalls

**lower dam**

Dam 2

Derna

Areas below 10m elevation (33 ft.)

South

Mediterranean Sea

Several structures were destroyed in the lower areas of Derna, after the floods overwhelmed the river coming down from the highlands.

Dozens of buildings along the river were completely swept away.

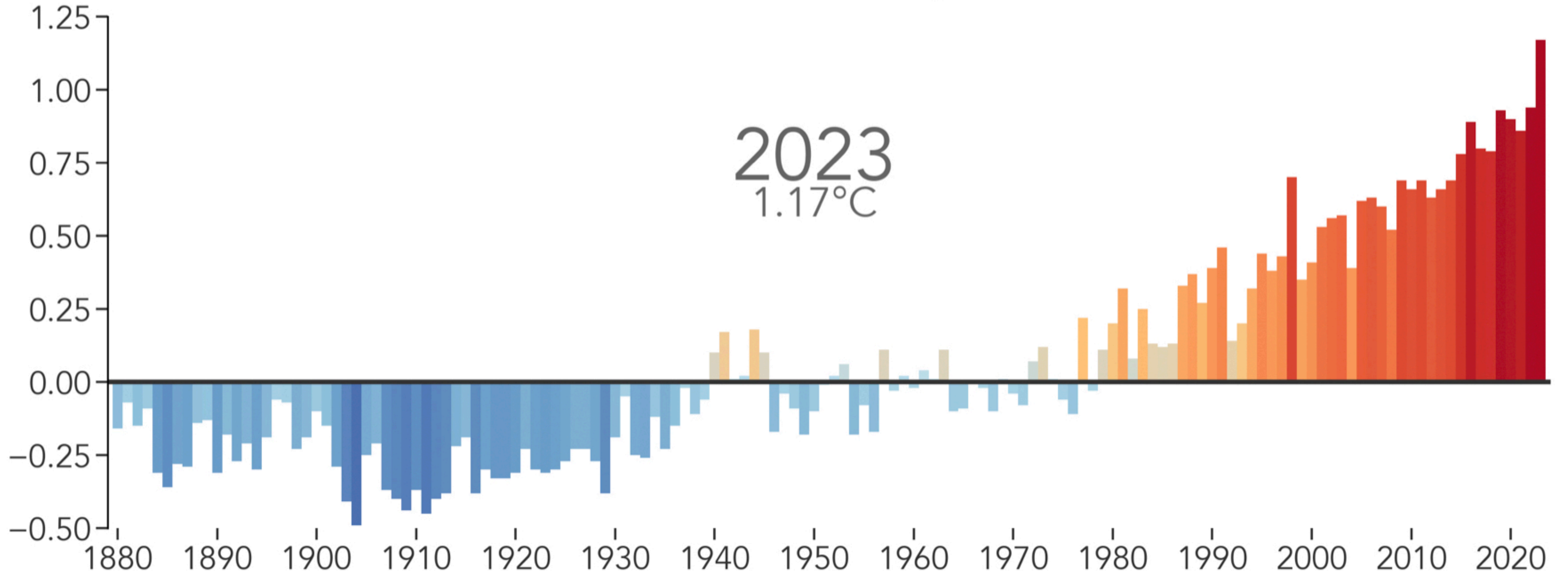
Failure of the upper dam above Derna, Libya, caused subsequent failure of the lower dam.

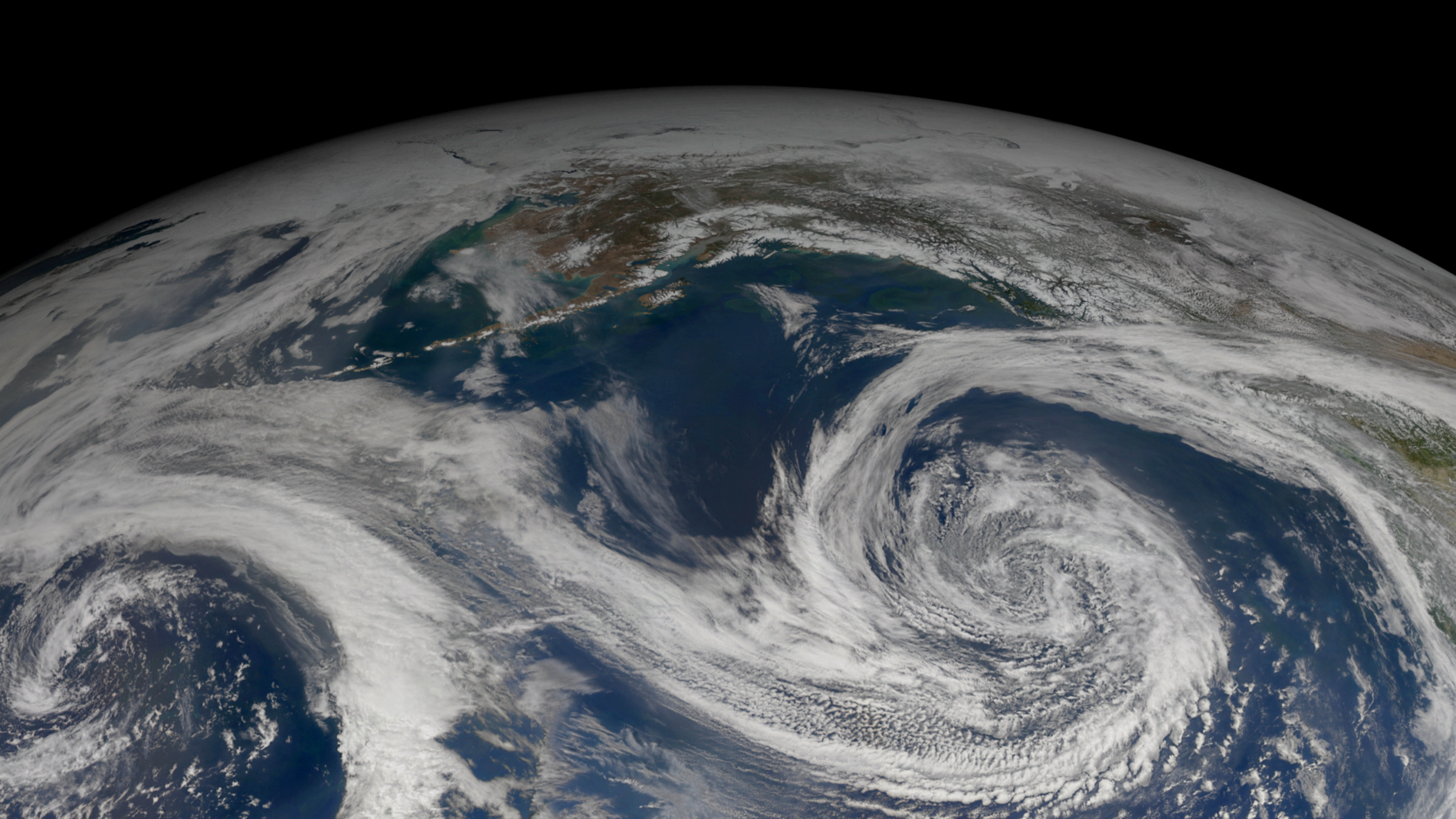
~12,000 known dead, ~10,000 missing and presumed dead

Washington Post graphic

# Summer 2023 Continues Long-Term Warming Trend

June, July, and August Global Temperature Anomaly (°C compared to the 1951-1980 average)





A satellite view of Earth from space, showing a curved horizon and a dense layer of white clouds over the blue oceans. The landmasses are visible in shades of brown and green. The text is overlaid in the center of the image.

**How do we develop engineering  
geoscientists with the knowledge  
and skills to be useful in a  
warming world?**



Free On-Street Parking Sat & Sun

CR OPERA AIDA  
JUNE 20 & 22

2nd AVE

2nd AVE

Photo by Don Becker, USGS: Cedar Rapids, Iowa, June 13, 2008  
<https://www.flickr.com/photos/usgeologicalsurvey/2593496323/>





Photo from the U.S. Coast Guard





Atmospheric river drenching the Pacific Northwest of the US on February 5, 2023  
[https://eoimages.gsfc.nasa.gov/images/imagerecords/146000/146267/pacific\\_goe\\_2020036\\_lrg.jpg](https://eoimages.gsfc.nasa.gov/images/imagerecords/146000/146267/pacific_goe_2020036_lrg.jpg)





[https://commons.wikimedia.org/wiki/  
File:Oroville\\_dam\\_spillway\\_2017-02-11.jpg](https://commons.wikimedia.org/wiki/File:Oroville_dam_spillway_2017-02-11.jpg)



**Input**

**Formal Disciplinary  
Education**

**Output**

**Next Step  
for Students**

undergraduate  
students

**College/University  
Geoscience Dept**

Geosci BA/BS

grad school or ?

**Input**

**Formal Disciplinary  
Education**

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undergraduate  
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Geoscience Dept**

Geosci BA/BS

Geosci MS

grad school or ?

grad school or ?



## Input

## Formal Disciplinary Education

## Output

## Next Step for Students

undergraduate  
students

College/University  
Geoscience Dept

Geosci BA/BS

Geosci MS

Geosci PhD

grad school or ?

grad school or ?

postdoc or ?

## Input

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Geosci MS

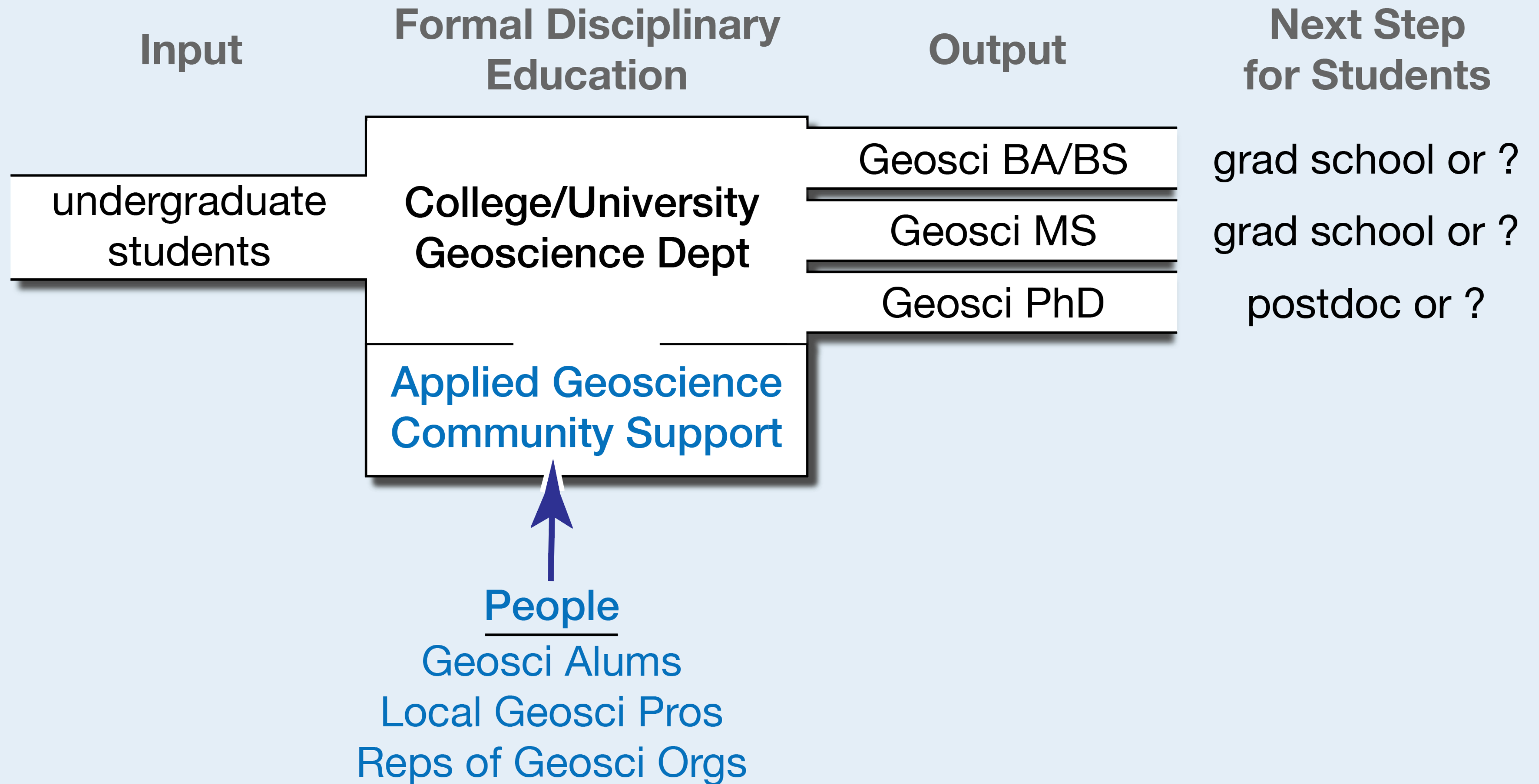
Geosci PhD

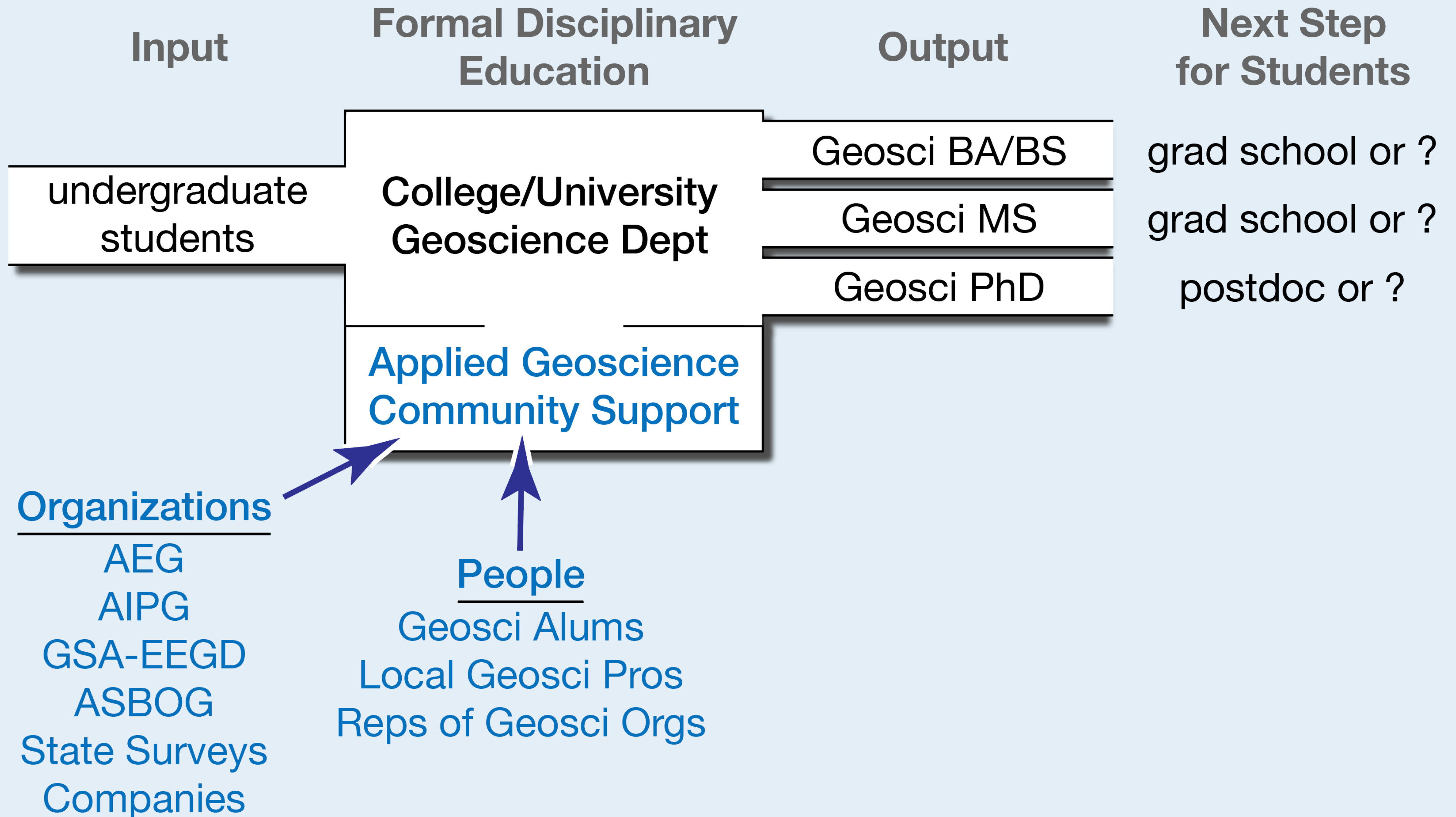
grad school or ?

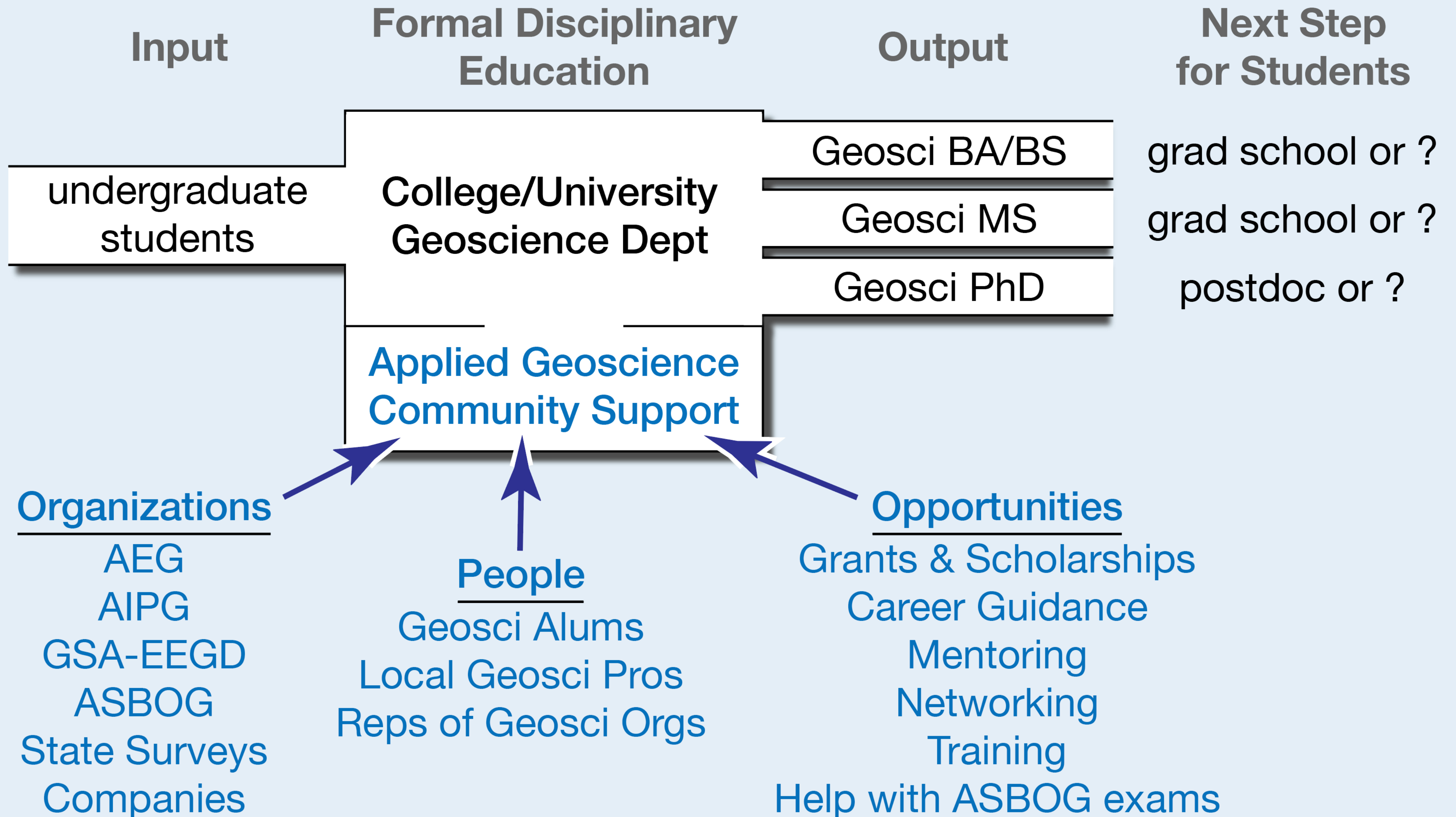
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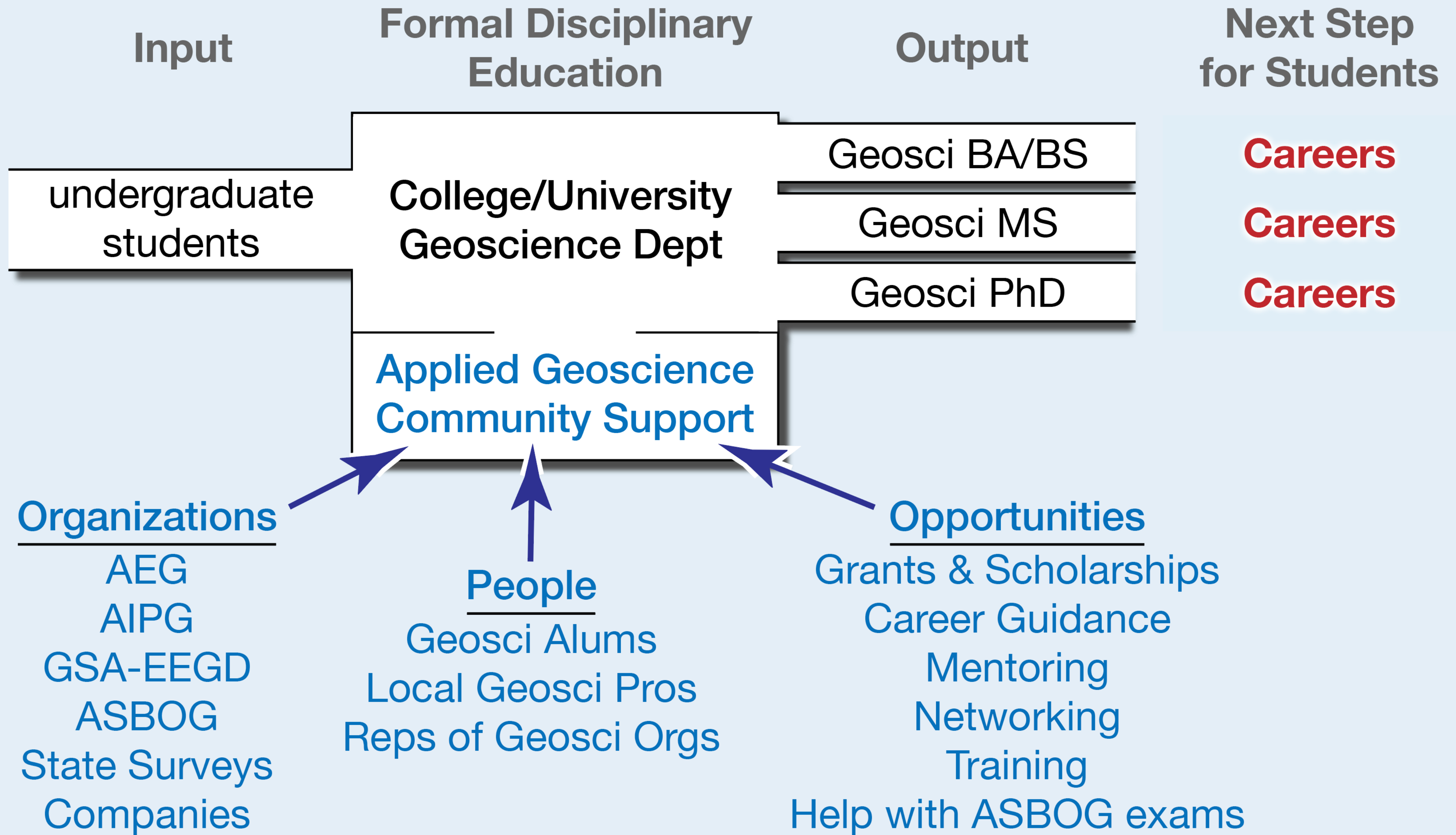
postdoc or ?

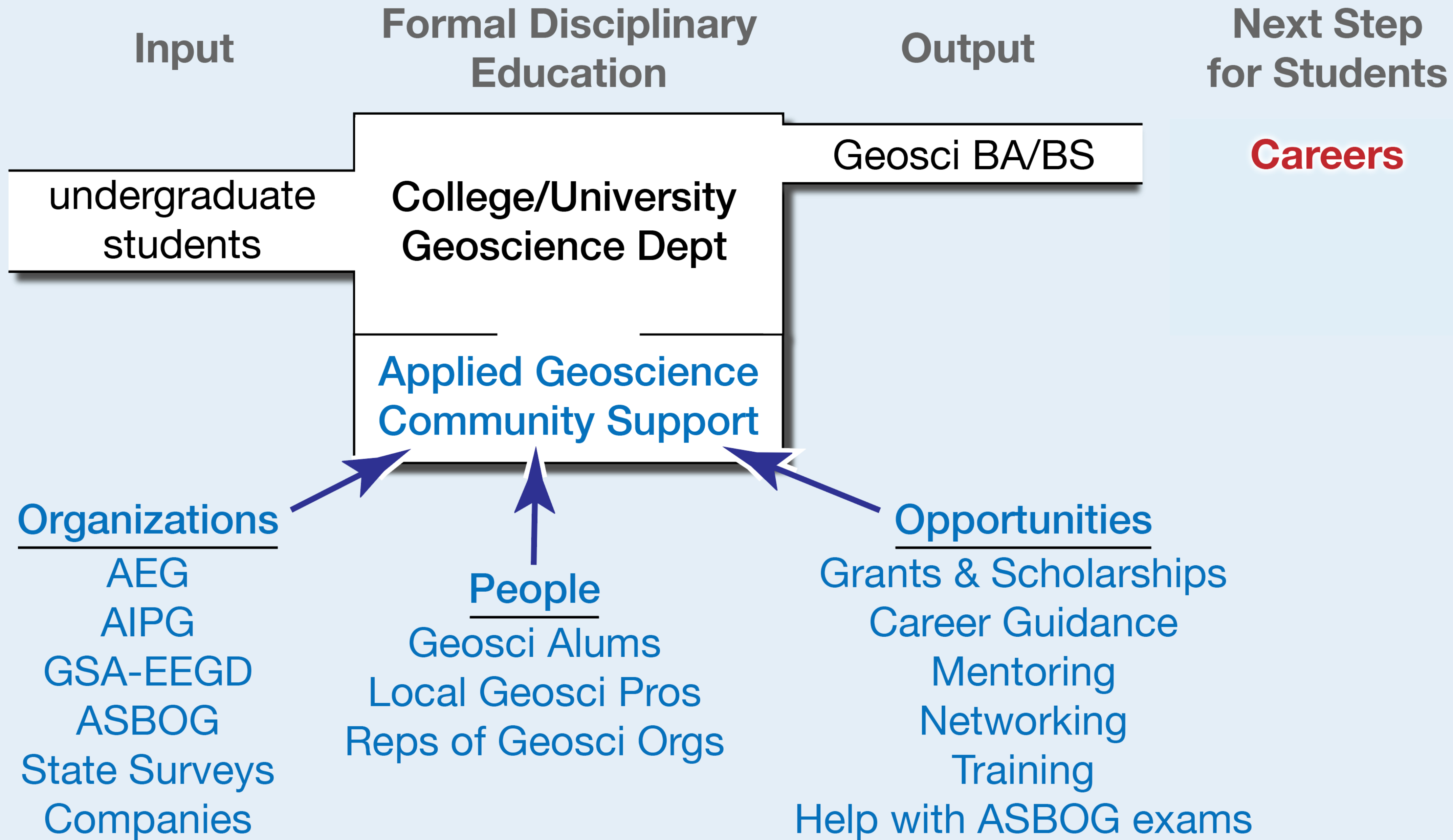
Applied Geoscience  
Community Support











Show them the path. They'll take it.



Students at the AEG New York-Philadelphia Chapter meeting





<https://croninprojects.org/Jahns/>