



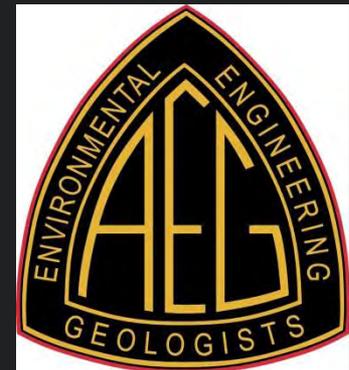
APPALACHIAN LANDSLIDE CONSULTANTS, PLLC
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LANDSLIDE HAZARDS - A North Carolina perspective

Jennifer B. Bauer, L.G.

Jennifer@appalachianlandslide.com



PEEKS CREEK
DEBRIS FLOW
FRANKLIN, NORTH
CAROLINA

SEPTEMBER 16,
2004

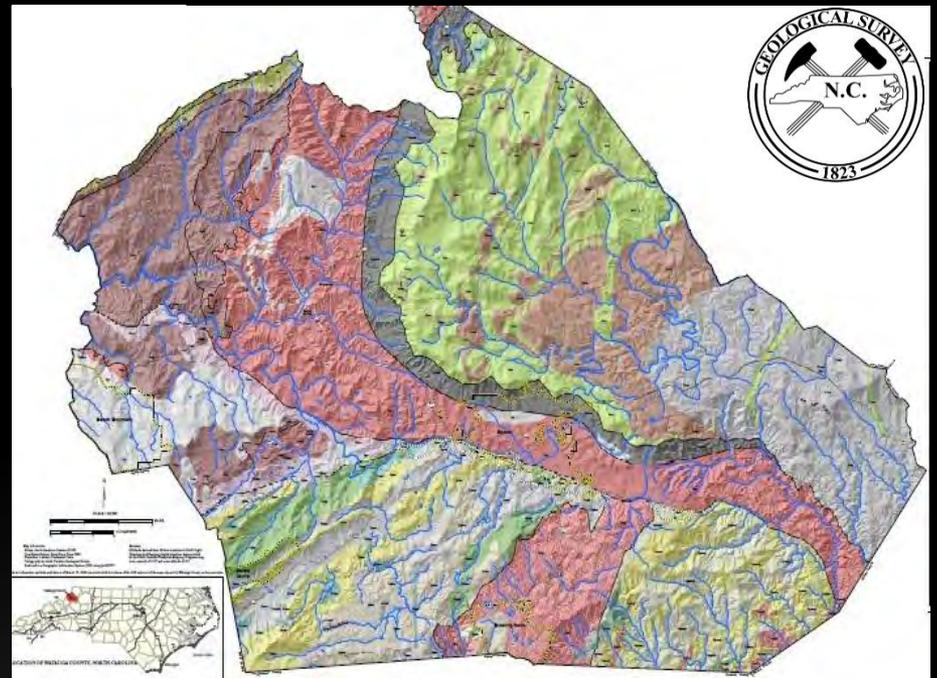
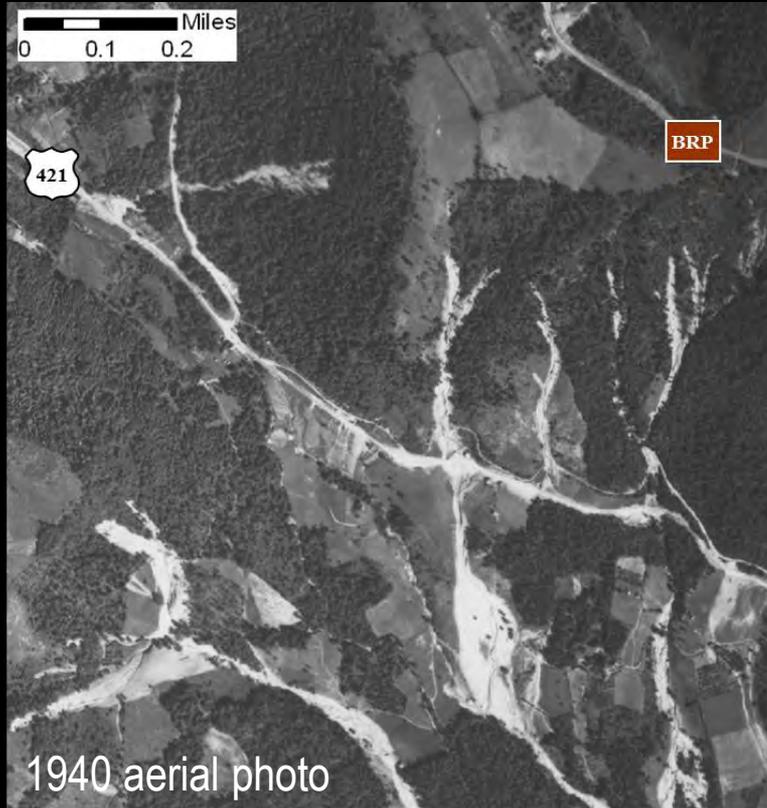


Photo from NCGS

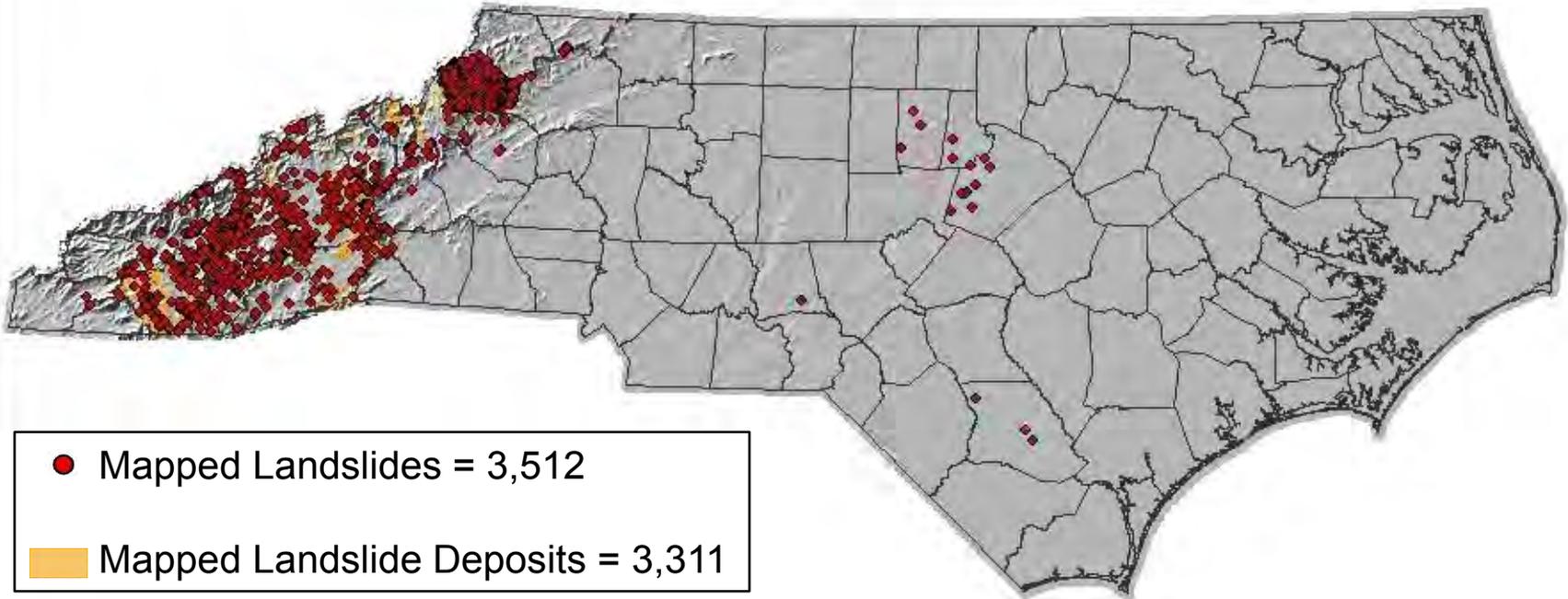


Photos from NCGS

NCGS LANDSLIDE MAPPING



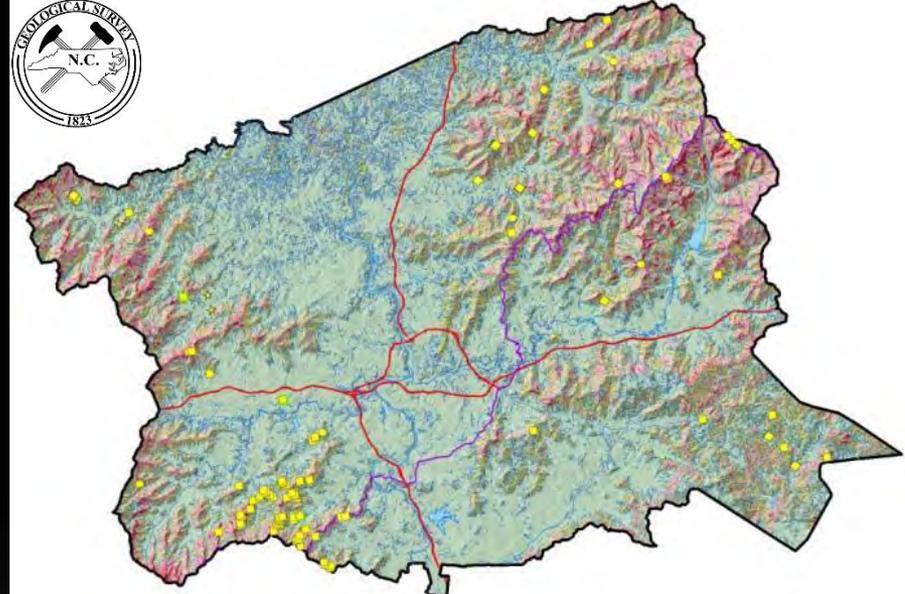
NORTH CAROLINA LANDSLIDE INVENTORY



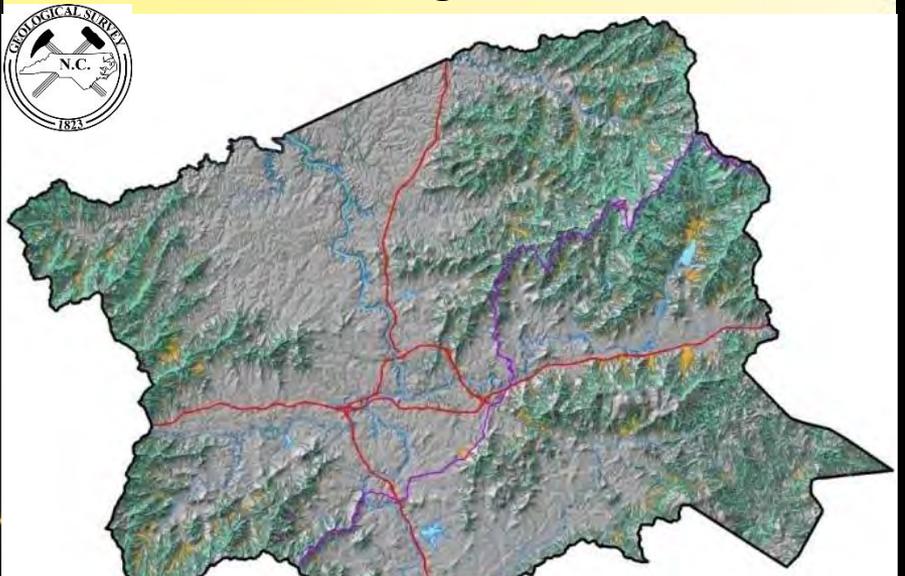
- 48 people killed since 1916
- > 85 homes & other structures damaged or destroyed

locations in ALC/NCGS database

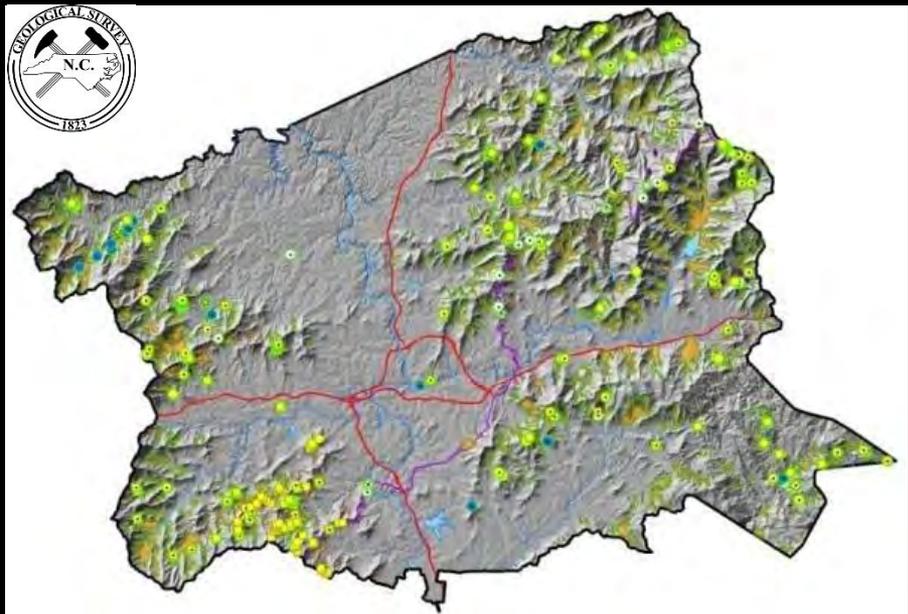
NCGS LANDSLIDE HAZARD MAPS



**Stability Index Map –
where landslides might start**

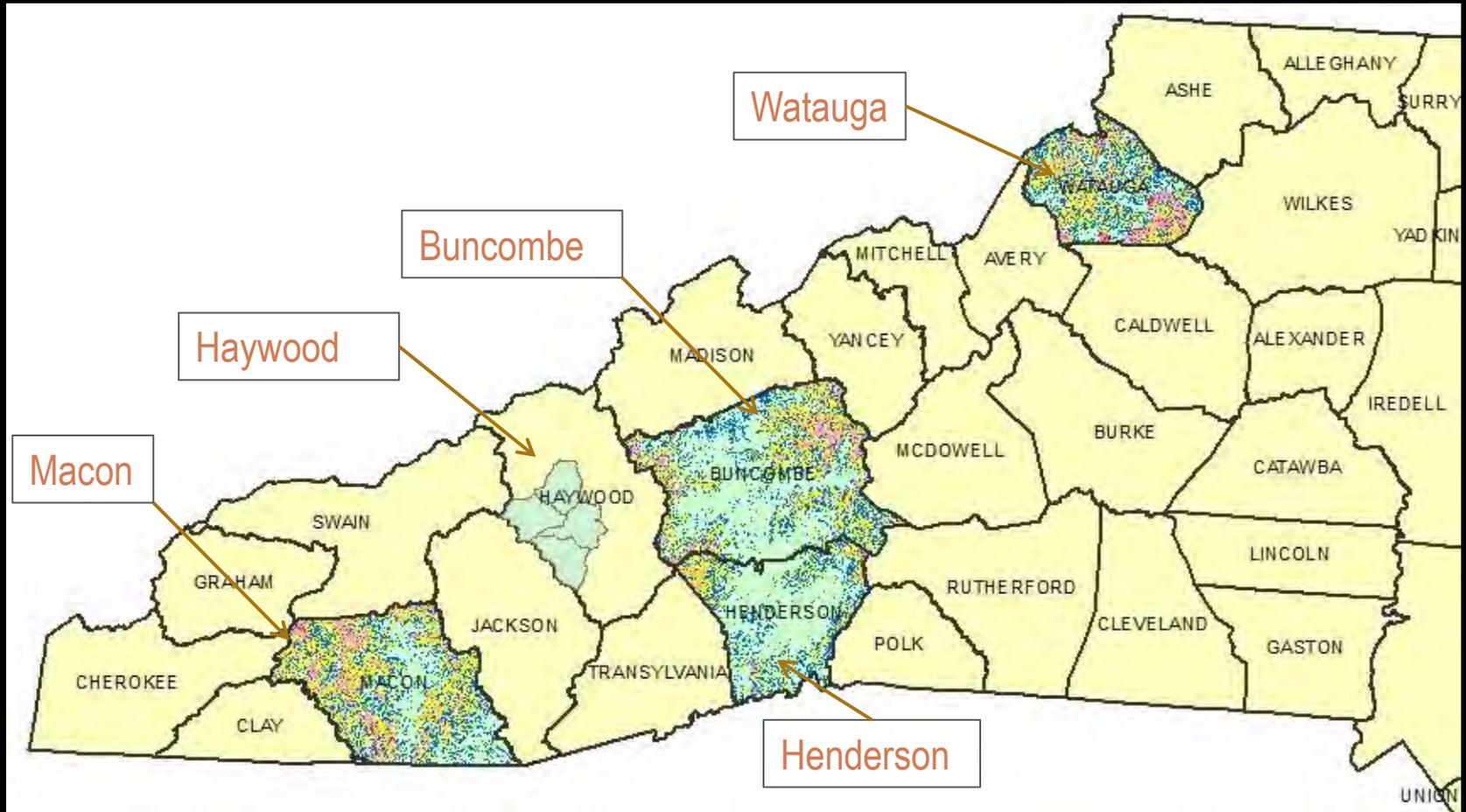


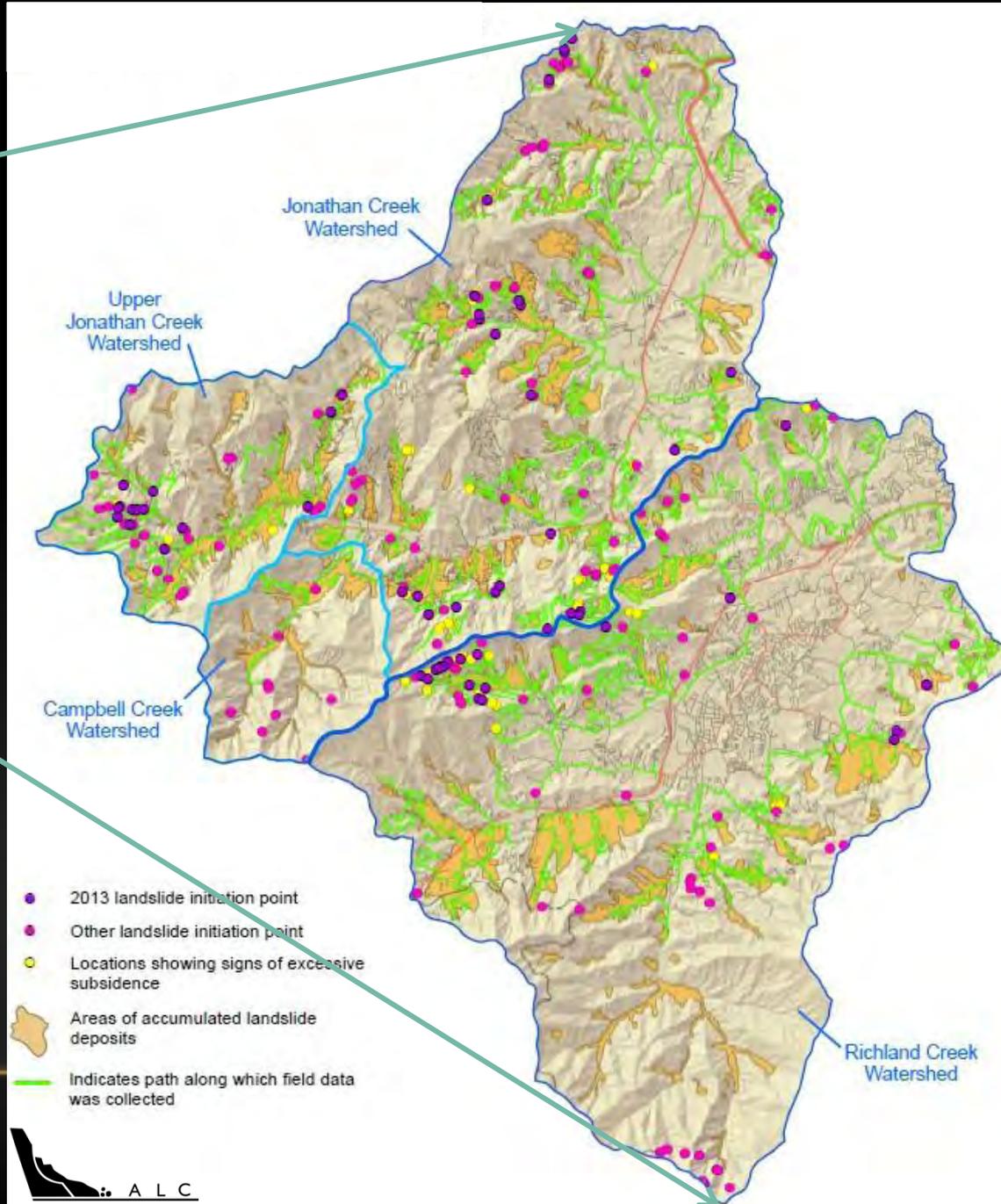
**Potential Debris Flow Pathways Map –
where landslides might go**



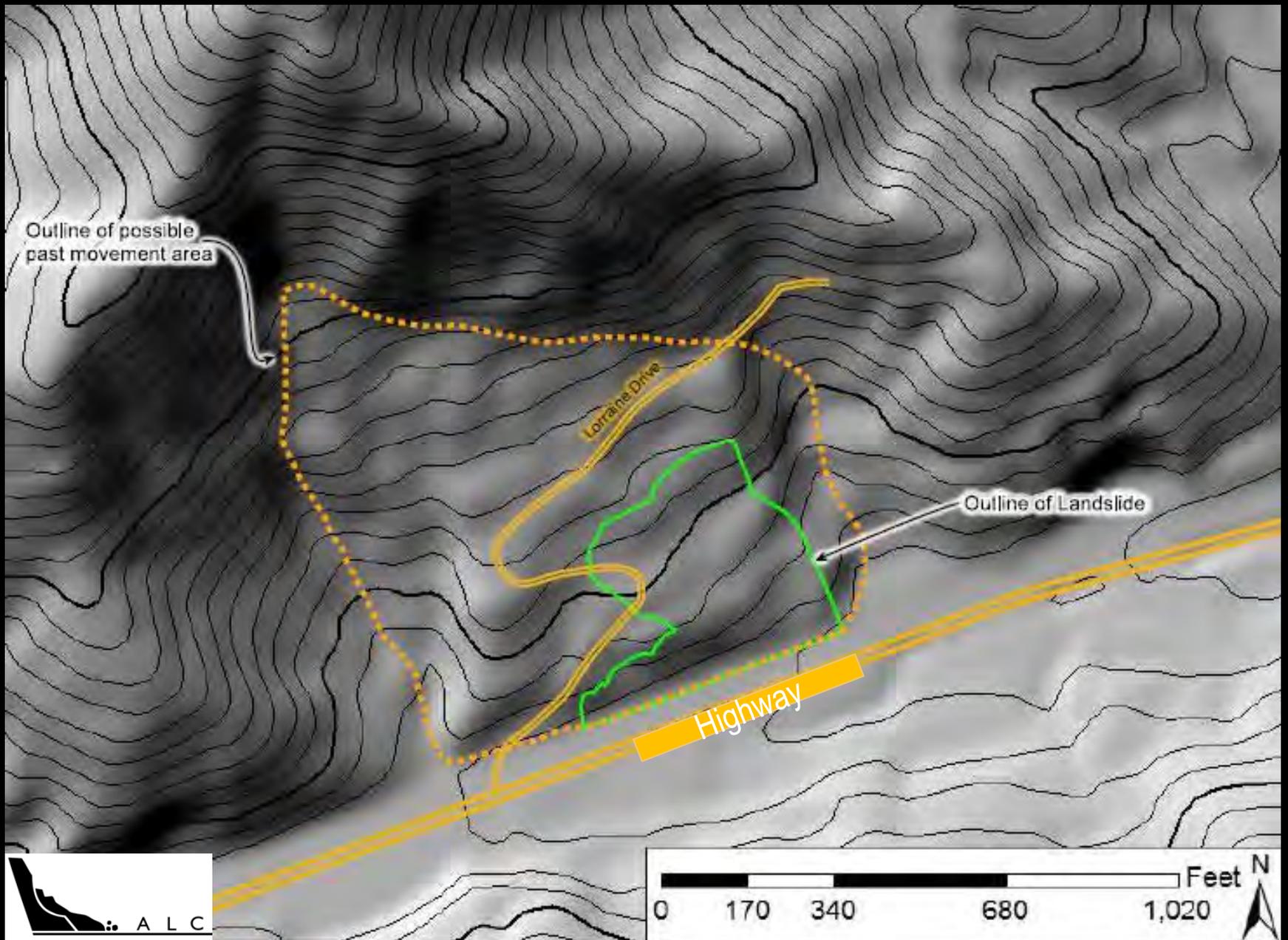
**Slope Movements - Slope Movement
Deposits Map–
where landslides have occurred or are
occurring.**

NORTH CAROLINA LANDSLIDE HAZARD MAPPING





WATERSHED SCALE LANDSLIDE MAPPING

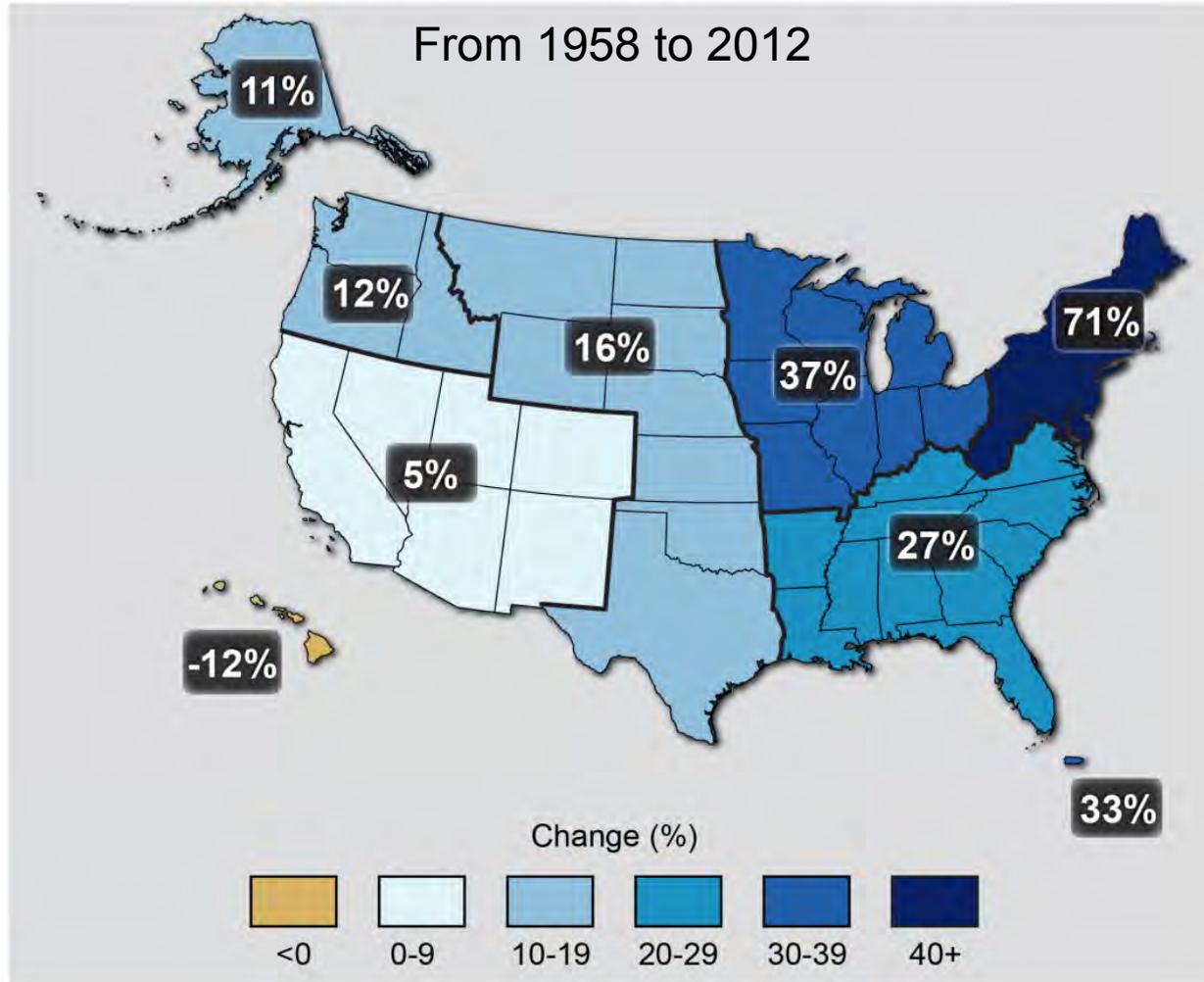


2004 LiDAR base map

2014 NATIONAL CLIMATE ASSESSMENT

Observed Change in Very Heavy Precipitation

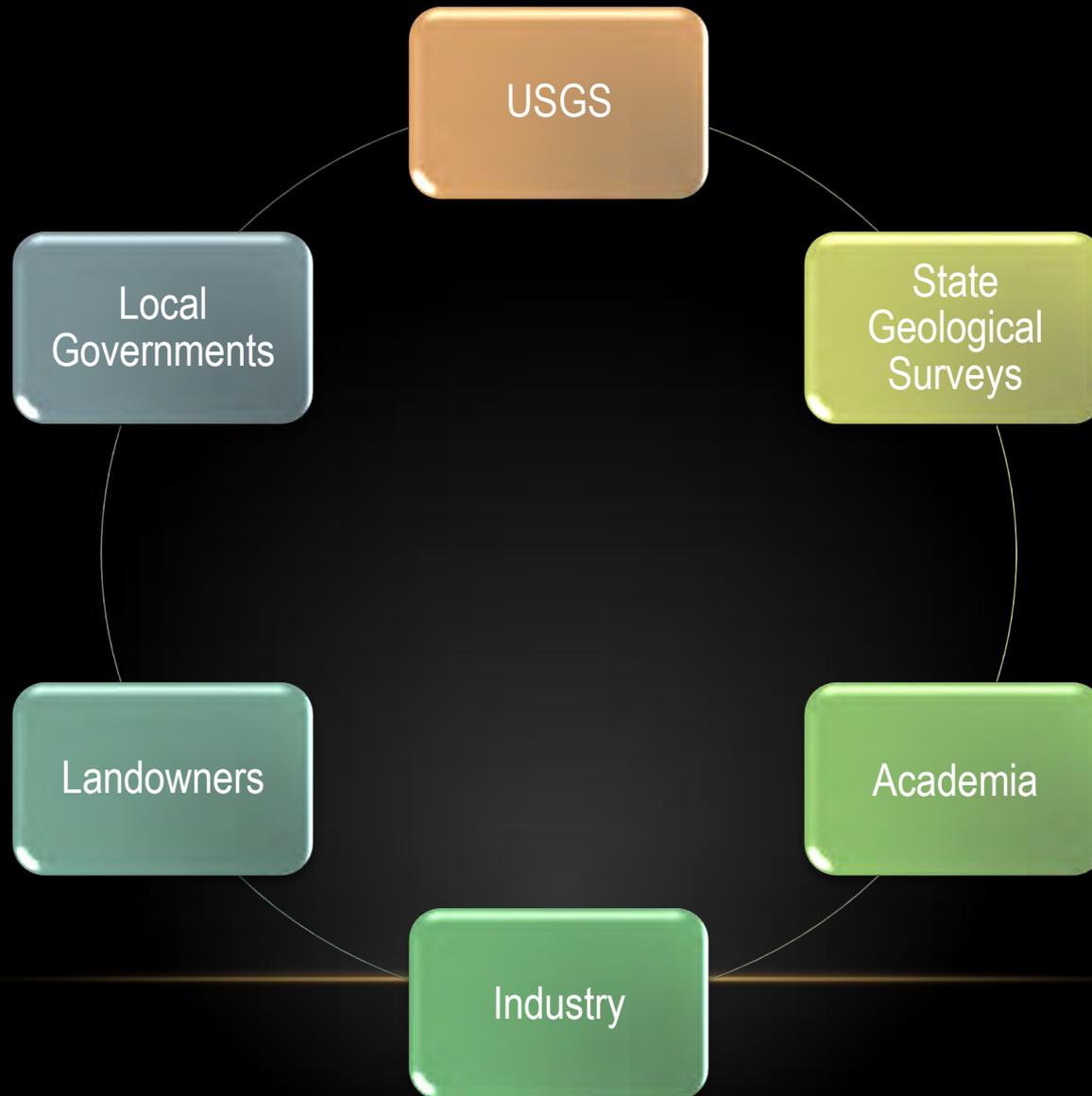
From 1958 to 2012



GOING FORWARD

- Personal connection critical
 - Maps provide information needed for awareness and informed decisions – need consistency in and across states
 - Engage all stakeholders early in the process
-

CONTINUED COLLABORATION





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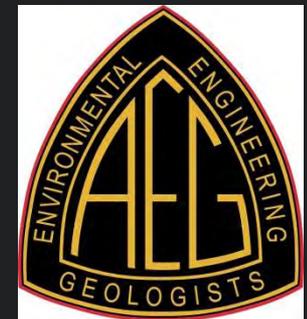
Thank You!

Jennifer B. Bauer, L.G.

Principal Geologist/Co-owner

jennifer@appalachianlandslide.com

Acknowledgements: Association of Environmental &
Engineering Geologists



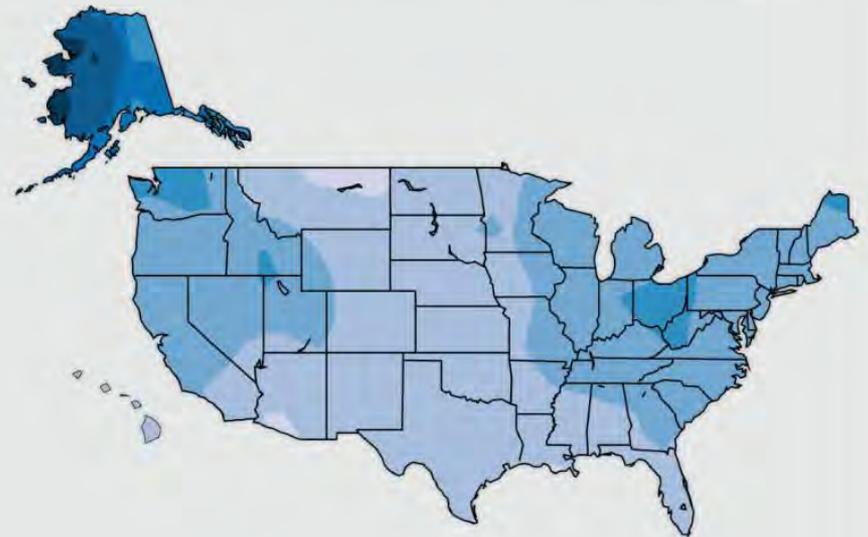
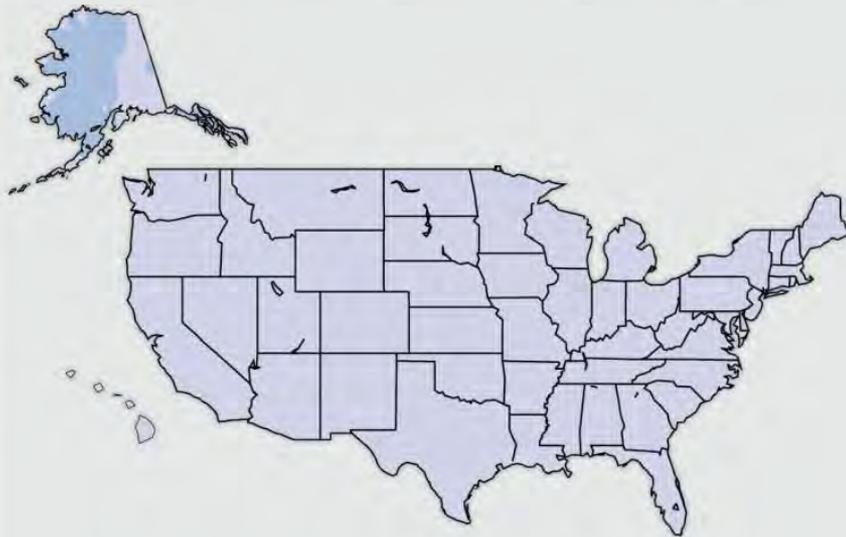
2014 NATIONAL CLIMATE ASSESSMENT

Projected Change in Heavy Precipitation Events

Change from 1981-2000 to 2081-2100

Rapid Emissions Reductions (RCP 2.6)

Continued Emissions Increases (RCP 8.5)



Future Change Multiplier

