

# NEW PUBLICATIONS

All Survey publications (maps, posters, and reports) are available for free download from our website ([www.dmr.nd.gov/ndgs/Publication\\_List/](http://www.dmr.nd.gov/ndgs/Publication_List/)).  
Paper copies of 24K maps are \$5, 100K are \$10, and posters are typically \$15.

## GEOLOGIC INVESTIGATIONS

- Anderson, F.J., 2023, Offshore Glaciolacustrine Deposits of Glacial Lake Agassiz: The Brenna Formation in Grand Forks County, North Dakota (3 Plates, 1:125,000), North Dakota Geological Survey Geologic Investigation No. 271
- Starns, E.C. and Nesheim, T.O., 2023, Redevelopment of Madison Fields in Burke County Demonstrates Fracture Stimulation is Effective, North Dakota Geological Survey Geologic Investigation No. 272, 33 p.
- Anderson, F.J., 2023, Offshore Glaciolacustrine Deposits of Glacial Lake Agassiz: The Brenna Formation in Cass County, North Dakota (3 Plates, 1:125,000), North Dakota Geological Survey Geologic Investigation No. 273
- Kruger, N.W., 2023, K2O Grades of the Potash-containing Members of the Prairie Formation, Garrison 100K Sheet, North Dakota: North Dakota Geological Survey Geologic Investigation No. 274

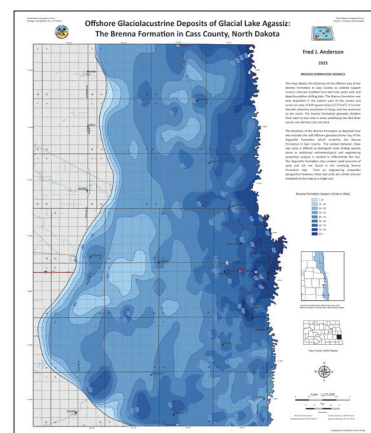
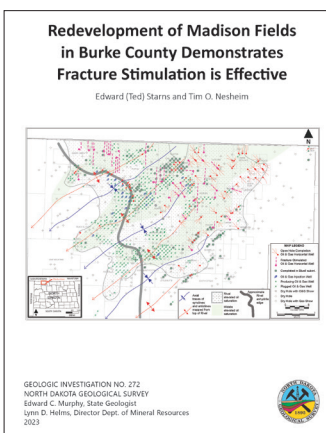
## LANDSLIDE MAPS - COUNTY SERIES

- Anderson, F.J., Moxness, L.D., and Maike, C.A., 2023, Landslide Areas in Cass County, North Dakota, North Dakota Geological Survey, County Landslide Map Series, Cass-L, 1:125,000.
- Anderson, F.J., Murphy, E.C., and Moxness, L.D., 2023, Landslide Areas in Dunn County, North Dakota, North Dakota Geological Survey, County Landslide Map Series, Dunn-L, 1:125,000.

## LANDSLIDE MAPS

- Anderson, F.J., 2023, Areas of Landslides Benedict SW Quadrangle, ND Quadrangle: North Dakota Geological Survey 24K Map Series No. Bndt SW - I3.
- Anderson, F.J., 2023, Areas of Landslides Benedict Quadrangle, ND Quadrangle: North Dakota Geological Survey 24K Map Series No. Bndt - I3.
- Anderson, F.J., 2023, Areas of Landslides Benedict NW Quadrangle, ND Quadrangle: North Dakota Geological Survey 24K Map Series No. Bndt NW - I3.
- Anderson, F.J., 2023, Areas of Landslides Clark Butte NW Quadrangle, ND Quadrangle: North Dakota Geological Survey 24K Map Series No. ClkB NW - I3.
- Anderson, F.J., 2023, Areas of Landslides Gladstone Quadrangle, ND Quadrangle: North Dakota Geological Survey 24K Map Series No. Glds - I3.
- Anderson, F.J., 2023, Areas of Landslides Merricourt SW Quadrangle, ND Quadrangle: North Dakota Geological Survey 24K Map Series No. Mrct SW - I3.
- Anderson, F.J., 2023, Areas of Landslides Merricourt SE Quadrangle, ND Quadrangle: North Dakota Geological Survey 24K Map Series No. Mrct SE - I3.
- Anderson, F.J., 2023, Areas of Landslides Merricourt NW Quadrangle, ND Quadrangle: North Dakota Geological Survey 24K Map Series No. Mrct NW - I3.
- Anderson, F.J., 2023, Areas of Landslides Merricourt Quadrangle, ND Quadrangle: North Dakota Geological Survey 24K Map Series No. Mrct - I3.
- Anderson, F.J., 2023, Areas of Landslides New Hradec South Quadrangle, ND Quadrangle: North Dakota Geological Survey 24K Map Series No. NwHr S - I3.
- Anderson, F.J., 2023, Areas of Landslides Robinson Coulee Quadrangle, ND Quadrangle: North Dakota Geological Survey 24K Map Series No. RbsC - I3.
- Anderson, F.J., 2023, Areas of Landslides White Butte East Quadrangle, ND Quadrangle: North Dakota Geological Survey 24K Map Series No. WhtB E - I3.
- Anderson, F.J., 2023, Areas of Landslides White Butte West Quadrangle, ND Quadrangle: North Dakota Geological Survey 24K Map Series No. WhtB W - I3.
- Anderson, F.J., 2023, Areas of Landslides White Butte NE Quadrangle, ND Quadrangle: North Dakota Geological Survey 24K Map Series No. WhtB NE - I3.
- Anderson, F.J. and Murphy, E.C., 2023, Areas of Landslides Boyle Quadrangle, ND Quadrangle: North Dakota Geological Survey 24K Map Series No. Byle - I3.
- Anderson, F.J. and Murphy, E.C., 2023, Areas of Landslides Bratburg Butte Quadrangle, ND Quadrangle: North Dakota Geological Survey 24K Map Series No. BrbB - I3.
- Anderson, F.J. and Murphy, E.C., 2023, Areas of Landslides Cinnamon Creek Quadrangle, ND Quadrangle: North Dakota Geological Survey 24K Map Series No. CnmC - I3.
- Anderson, F.J. and Murphy, E.C., 2023, Areas of Landslides Dickinson South Quadrangle, ND Quadrangle: North Dakota Geological Survey 24K Map Series No. Dksn S - I3.
- Anderson, F.J. and Murphy, E.C., 2023, Areas of Landslides Dickinson North Quadrangle, ND Quadrangle: North Dakota Geological Survey 24K Map Series No. Dksn N - I3.
- Anderson, F.J. and Murphy, E.C., 2023, Areas of Landslides Ice Box Canyon Quadrangle, ND Quadrangle: North Dakota Geological Survey 24K Map Series No. IcBC - I3.
- Anderson, F.J. and Murphy, E.C., 2023, Areas of Landslides Indian Butte Quadrangle, ND Quadrangle: North Dakota Geological Survey 24K Map Series No. IndB - I3.
- Anderson, F.J. and Murphy, E.C., 2023, Areas of Landslides Lehigh Quadrangle, ND Quadrangle: North Dakota Geological Survey 24K Map Series No. Lhgh - I3.
- Anderson, F.J. and Murphy, E.C., 2023, Areas of Landslides Lone Butte Quadrangle, ND Quadrangle: North Dakota Geological Survey 24K Map Series No. LonB - I3.
- Anderson, F.J. and Murphy, E.C., 2023, Areas of Landslides Long X Divide Quadrangle, ND Quadrangle: North Dakota Geological Survey 24K Map Series No. LgXD - I3.
- Anderson, F.J. and Murphy, E.C., 2023, Areas of Landslides Sperati Point Quadrangle, ND Quadrangle: North Dakota Geological Survey 24K Map Series No. SprP - I3.

- Anderson, F.J. and Murphy, E.C., 2023, Areas of Landslides Richardton Quadrangle, ND Quadrangle: North Dakota Geological Survey 24K Map Series No. Rchd - I3.
- Anderson, F.J. and Murphy, E.C., 2023, Areas of Landslides Taylor Quadrangle, ND Quadrangle: North Dakota Geological Survey 24K Map Series No. Tylr - I3.
- Anderson, F.J. and Murphy, E.C., 2023, Areas of Landslides Wolf Coulee Quadrangle, ND Quadrangle: North Dakota Geological Survey 24K Map Series No. Wlfc - I3.
- Maike, C.A., 2023, Areas of Landslides York Quadrangle, ND Quadrangle: North Dakota Geological Survey 24K Map Series No. York - I3.
- Maike, C.A., 2023, Areas of Landslides Warwick Quadrangle, ND Quadrangle: North Dakota Geological Survey 24K Map Series No. Wrwk - I3.
- Maike, C.A., 2023, Areas of Landslides Wolford Quadrangle, ND Quadrangle: North Dakota Geological Survey 24K Map Series No. Wlfd - I3.
- Maike, C.A., 2023, Areas of Landslides Wellsburg Quadrangle, ND Quadrangle: North Dakota Geological Survey 24K Map Series No. Wlbg - I3.
- Maike, C.A., 2023, Areas of Landslides White Butte NW Quadrangle, ND Quadrangle: North Dakota Geological Survey 24K Map Series No. WhtB NW - I3.
- Maike, C.A., 2023, Areas of Landslides Wabek Quadrangle, ND Quadrangle: North Dakota Geological Survey 24K Map Series No. Wbek - I3.
- Maike, C.A., 2023, Areas of Landslides Tokio SW Quadrangle, ND Quadrangle: North Dakota Geological Survey 24K Map Series No. Toki SW - I3.
- Maike, C.A., 2023, Areas of Landslides Tokio Quadrangle, ND Quadrangle: North Dakota Geological Survey 24K Map Series No. Toki - I3.
- Maike, C.A., 2023, Areas of Landslides Tolna Quadrangle, ND Quadrangle: North Dakota Geological Survey 24K Map Series No. Tlna - I3.
- Maike, C.A., 2023, Areas of Landslides Tilden Quadrangle, ND Quadrangle: North Dakota Geological Survey 24K Map Series No. Tldn - I3.
- Maike, C.A., 2023, Areas of Landslides Stony Butte Quadrangle, ND Quadrangle: North Dakota Geological Survey 24K Map Series No. StnB - I3.
- Maike, C.A., 2023, Areas of Landslides South Heart Quadrangle, ND Quadrangle: North Dakota Geological Survey 24K Map Series No. SthH - I3.
- Maike, C.A., 2023, Areas of Landslides Silva Quadrangle, ND Quadrangle: North Dakota Geological Survey 24K Map Series No. Silva - I3.
- Maike, C.A., 2023, Areas of Landslides Sheyenne Quadrangle, ND Quadrangle: North Dakota Geological Survey 24K Map Series No. Shyn - I3.
- Maike, C.A., 2023, Areas of Landslides Sherbrooke Quadrangle, ND Quadrangle: North Dakota Geological Survey 24K Map Series No. Shrb - I3.
- Maike, C.A., 2023, Areas of Landslides Selz NW Quadrangle, ND Quadrangle: North Dakota Geological Survey 24K Map Series No. Selz NW - I3.
- Maike, C.A., 2023, Areas of Landslides Selz NE Quadrangle, ND Quadrangle: North Dakota Geological Survey 24K Map Series No. Selz NE - I3.
- Maike, C.A., 2023, Areas of Landslides Scheffield Quadrangle, ND Quadrangle: North Dakota Geological Survey 24K Map Series No. Sfld - I3.
- Maike, C.A., 2023, Areas of Landslides Ryder Quadrangle, ND Quadrangle: North Dakota Geological Survey 24K Map Series No. Rydr - I3.
- Maike, C.A., 2023, Areas of Landslides Rush Lake Quadrangle, ND Quadrangle: North Dakota Geological Survey 24K Map Series No. RshL - I3.
- Maike, C.A., 2023, Areas of Landslides Rugby NE Quadrangle, ND Quadrangle: North Dakota Geological Survey 24K Map Series No. Rgby NE - I3.
- Maike, C.A., 2023, Areas of Landslides Rugby Quadrangle, ND Quadrangle: North Dakota Geological Survey 24K Map Series No. Rgby - I3.
- Maike, C.A., 2023, Areas of Landslides Rosegen Quadrangle, ND Quadrangle: North Dakota Geological Survey 24K Map Series No. Rsgl - I3.
- Maike, C.A., 2023, Areas of Landslides Riverdale North Quadrangle, ND Quadrangle: North Dakota Geological Survey 24K Map Series No. Rvdl N - I3.







York, B.C. and Maike, C.A., 2023, Areas of Landslides Holmes Quadrangle, ND Quadrangle: North Dakota Geological Survey 24K Map Series No. Hlms - I3.

York, B.C. and Maike, C.A., 2023, Areas of Landslides Hatton Quadrangle, ND Quadrangle: North Dakota Geological Survey 24K Map Series No. Httn - I3.

York, B.C. and Maike, C.A., 2023, Areas of Landslides Grand Forks SW Quadrangle, ND Quadrangle: North Dakota Geological Survey 24K Map Series No. GrfK SW - I3.

York, B.C. and Maike, C.A., 2023, Areas of Landslides Grafton Quadrangle, ND Quadrangle: North Dakota Geological Survey 24K Map Series No. Grft - I3.

York, B.C. and Maike, C.A., 2023, Areas of Landslides Golden Lake Quadrangle, ND Quadrangle: North Dakota Geological Survey 24K Map Series No. GldL - I3.

York, B.C. and Maike, C.A., 2023, Areas of Landslides Gilby Quadrangle, ND Quadrangle: North Dakota Geological Survey 24K Map Series No. Gily - I3.

York, B.C. and Maike, C.A., 2023, Areas of Landslides Forest River Quadrangle, ND Quadrangle: North Dakota Geological Survey 24K Map Series No. FrsR - I3.

York, B.C. and Maike, C.A., 2023, Areas of Landslides Fordville SW Quadrangle, ND Quadrangle: North Dakota Geological Survey 24K Map Series No. Frdv SW - I3.

York, B.C. and Maike, C.A., 2023, Areas of Landslides Fordville SE Quadrangle, ND Quadrangle: North Dakota Geological Survey 24K Map Series No. Frdv SE - I3.

York, B.C. and Maike, C.A., 2023, Areas of Landslides Fordville Quadrangle, ND Quadrangle: North Dakota Geological Survey 24K Map Series No. Frdv - I3.

York, B.C. and Maike, C.A., 2023, Areas of Landslides Finley NE Quadrangle, ND Quadrangle: North Dakota Geological Survey 24K Map Series No. Fnly NE - I3.

York, B.C. and Maike, C.A., 2023, Areas of Landslides Finley Quadrangle, ND Quadrangle: North Dakota Geological Survey 24K Map Series No. Fnly - I3.

York, B.C. and Maike, C.A., 2023, Areas of Landslides Emerado SW Quadrangle, ND Quadrangle: North Dakota Geological Survey 24K Map Series No. Emrd SW - I3.

York, B.C. and Maike, C.A., 2023, Areas of Landslides Emerado SE Quadrangle, ND Quadrangle: North Dakota Geological Survey 24K Map Series No. Emrd SE - I3.

York, B.C. and Maike, C.A., 2023, Areas of Landslides Emerado Quadrangle, ND Quadrangle: North Dakota Geological Survey 24K Map Series No. Emrd - I3.

York, B.C. and Maike, C.A., 2023, Areas of Landslides Dahlen Quadrangle, ND Quadrangle: North Dakota Geological Survey 24K Map Series No. Dhln - I3.

York, B.C. and Maike, C.A., 2023, Areas of Landslides Buxton SW Quadrangle, ND Quadrangle: North Dakota Geological Survey 24K Map Series No. Bxtn SW - I3.

York, B.C. and Maike, C.A., 2023, Areas of Landslides Buxton NW Quadrangle, ND Quadrangle: North Dakota Geological Survey 24K Map Series No. Bxtn NW - I3.

York, B.C. and Maike, C.A., 2023, Areas of Landslides Buxton Quadrangle, ND Quadrangle: North Dakota Geological Survey 24K Map Series No. Bxtn - I3.

York, B.C. and Maike, C.A., 2023, Areas of Landslides Arvilla Quadrangle, ND Quadrangle: North Dakota Geological Survey 24K Map Series No. Arva - I3.

York, B.C. and Maike, C.A., 2023, Areas of Landslides Ardoch Quadrangle, ND Quadrangle: North Dakota Geological Survey 24K Map Series No. ArdH - I3.

York, B.C. and Maike, C.A., 2023, Areas of Landslides Aneta Quadrangle, ND Quadrangle: North Dakota Geological Survey 24K Map Series No. Anta - I3.

York, B.C. and Moxness, L.D., 2023, Areas of Landslides Wahpeton (MN) Quadrangle, ND Quadrangle: North Dakota Geological Survey 24K Map Series No. Wpntn - I3.

York, B.C. and Moxness, L.D., 2023, Areas of Landslides Stirum Quadrangle, ND Quadrangle: North Dakota Geological Survey 24K Map Series No. Strm - I3.

York, B.C. and Moxness, L.D., 2023, Areas of Landslides Sonora Quadrangle, ND Quadrangle: North Dakota Geological Survey 24K Map Series No. Snra - I3.

York, B.C. and Moxness, L.D., 2023, Areas of Landslides Mooreton West Quadrangle, ND Quadrangle: North Dakota Geological Survey 24K Map Series No. Mort W - I3.

York, B.C. and Moxness, L.D., 2023, Areas of Landslides Mooreton NW Quadrangle, ND Quadrangle: North Dakota Geological Survey 24K Map Series No. Mort NW - I3.

York, B.C. and Moxness, L.D., 2023, Areas of Landslides Mooreton East Quadrangle, ND Quadrangle: North Dakota Geological Survey 24K Map Series No. Mort E - I3.

York, B.C. and Moxness, L.D., 2023, Areas of Landslides Mantador Quadrangle, ND Quadrangle: North Dakota Geological Survey 24K Map Series No. Mntd - I3.

York, B.C. and Moxness, L.D., 2023, Areas of Landslides Lisbon SW Quadrangle, ND Quadrangle: North Dakota Geological Survey 24K Map Series No. Lsbn SW - I3.

York, B.C. and Moxness, L.D., 2023, Areas of Landslides Lisbon SE Quadrangle, ND Quadrangle: North Dakota Geological Survey 24K Map Series No. Lsbn SE - I3.

York, B.C. and Moxness, L.D., 2023, Areas of Landslides La Mars Quadrangle, ND Quadrangle: North Dakota Geological Survey 24K Map Series No. LMrs - I3.

York, B.C. and Moxness, L.D., 2023, Areas of Landslides Hoving Quadrangle, ND Quadrangle: North Dakota Geological Survey 24K Map Series No. Hvnng - I3.

York, B.C. and Moxness, L.D., 2023, Areas of Landslides Hankinson SE Quadrangle, ND Quadrangle: North Dakota Geological Survey 24K Map Series No. Hnkn SE - I3.

York, B.C. and Moxness, L.D., 2023, Areas of Landslides Hankinson Quadrangle, ND Quadrangle: North Dakota Geological Survey 24K Map Series No. Hnkn - I3.

York, B.C. and Moxness, L.D., 2023, Areas of Landslides Gwinner Quadrangle, ND Quadrangle: North Dakota Geological Survey 24K Map Series No. Gwnr - I3.

York, B.C. and Moxness, L.D., 2023, Areas of Landslides Great Bend Quadrangle, ND Quadrangle: North Dakota Geological Survey 24K Map Series No. GrtB - I3.

York, B.C. and Moxness, L.D., 2023, Areas of Landslides Galchutt Quadrangle, ND Quadrangle: North Dakota Geological Survey 24K Map Series No. Glct - I3.

York, B.C. and Moxness, L.D., 2023, Areas of Landslides Fairmount NW Quadrangle, ND Quadrangle: North Dakota Geological Survey 24K Map Series No. Frmt NW - I3.

York, B.C. and Moxness, L.D., 2023, Areas of Landslides Englevale Quadrangle, ND Quadrangle: North Dakota Geological Survey 24K Map Series No. Engv - I3.

York, B.C. and Moxness, L.D., 2023, Areas of Landslides Elliot SW Quadrangle, ND Quadrangle: North Dakota Geological Survey 24K Map Series No. Elot SW - I3.

York, B.C. and Moxness, L.D., 2023, Areas of Landslides Elliot SE Quadrangle, ND Quadrangle: North Dakota Geological Survey 24K Map Series No. Elot SE - I3.

York, B.C. and Moxness, L.D., 2023, Areas of Landslides New Effington NW Quadrangle, ND Quadrangle: North Dakota Geological Survey 24K Map Series No. NwEf NW - I3.

York, B.C. and Moxness, L.D., 2023, Areas of Landslides New Effington NE Quadrangle, ND Quadrangle: North Dakota Geological Survey 24K Map Series No. NwEf NE - I3.

York, B.C. and Moxness, L.D., 2023, Areas of Landslides Dwight Quadrangle, ND Quadrangle: North Dakota Geological Survey 24K Map Series No. Dwgt - I3.

York, B.C. and Moxness, L.D., 2023, Areas of Landslides Crete Quadrangle, ND Quadrangle: North Dakota Geological Survey 24K Map Series No. Crte - I3.

York, B.C. and Moxness, L.D., 2023, Areas of Landslides Cayuga NW Quadrangle, ND Quadrangle: North Dakota Geological Survey 24K Map Series No. Cyga NW - I3.

**SURFACE GEOLOGY 24K MAPS**

Anderson, F.J., Maike, C.A., and York, B.C., 2023, Surface Geology of the Norman Quadrangle, North Dakota: North Dakota Geological Survey 24K Map Series No. Nrmn - sg.

York, B.C., 2023, Surface Geology of the Braddock NW Quadrangle, North Dakota: North Dakota Geological Survey 24K Map Series No. Brdk NW - sg.

**OUTSIDE PUBLICATIONS**

Boyd, C.A., Drumheller, S.K., Householder, M., Saini-Eidukat, B., Nestler, J., and Ullmann, P., 2023. Geochemical examination of dinosaurian “mummies” from the Hell Creek Formation reveals a pathway for dermal tissue fossilization. *Journal of Vertebrate Paleontology*, Program and Abstracts. 2023:33.

Drumheller, S.K., Boyd, C.A., Mayhall, M., Stalker, E., and Householder, M., 2023. The curse of the mummy's hand: digit consolidation with multi-digit nail participation reveal a novel form of syndactyly in the hand of a mummified *Edmontosaurus*. *Journal of Vertebrate Paleontology*, Program and Abstracts. 2023:63.

Householder, M. and Boyd, C.A., 2023. The impact of adhesives, consolidants, and solvents on geochemical data: an example using x-ray fluorescence. *Journal of Vertebrate Paleontology*, Program and Abstracts. 2023:41.

Kruger, N.W., Moxness, L.D., and Murphy, E.C., 2023. Vertical Variability of Rare Earth Element Concentrations Within Enriched Lignites Beneath the Rhame Bed, Slope Formation (Paleocene), Southwestern North Dakota: Geological Society of America Abstracts with Programs, Vol. 55, No. 6.

Maddox, H.M., Boyd, C.A., and Drumheller, S.K., 2023. A new dromaeosaurid from the Hell Creek Formation (Maastrichtian) of North Dakota with possible ties to the clade *Unenlagiinia*. *Journal of Vertebrate Paleontology*, Program and Abstracts. 2023:56.

Maike, C.A., 2023. 32-21 Landslide Mapping in North Dakota: A Complete 1:24,000-Scale Dataset and Future Mapping Endeavors, Geological Society of America Abstracts with Programs, Vol. 55, No. 6.

Moxness, L.D., Murphy, E.C., and Kruger, N.W., 2023. Significant enrichment of rare earth elements and other critical minerals beneath Paleocene and Eocene weathering profiles, Williston Basin, North Dakota. Geological Society of America Abstracts with Programs, Vol. 55, No. 6.

Salcido, C.J., Wilson, P.J., Tweet, J., Mccann, B., Boyd, C.A., and Santucci, V., 2023. A paleontological resource inventory of Theodore Roosevelt National Park reveals potential for future vertebrate paleontological research and management. *Journal of Vertebrate Paleontology*, Program and Abstracts. 2023:36.

Wang, X., Emry, R.J., Boyd, C.A., Person, J.J., White, S.C., and Tedford, R.H., 2023. An early ursoid, *Eoarctos vorax*, from Fitterer Ranch, North Dakota (early Oligocene) and early divergence of North American basal arctoids (Carnivora, Caniformia). *Journal of Vertebrate Paleontology*, Program and Abstracts. 2023:31.

