# Exploring Approaches to Managing Landslide Risks

## -Workshop-

## August 29, 2019

### University of Pittsburgh

### University Club, Ballroom B

### 123 University Place

**Need:** With the proliferation of landslides impacting transportation systems in western Pennsylvania, PennDOT Districts 11 and 12, the Central Office, FHWA and other members of the IRISE consortium identified the need for a forum to discuss recent/ongoing activities. The design of this workshop stresses current work to identify, anticipate, and remediate landslides. It creates an opportunity to share experiences and discuss best practice approaches. In the end, a discussion of future needs will help to prioritize activities and focus on the best use of available technology and resources to mitigate this critical regional problem.

Joe Szczur, PennDOT District 12 Executive Director, recently provided general comments about the need to “Explore Approaches to Managing Landslide Risk.”

*“There are several groups doing studies regarding landslides in Southwestern Pennsylvania. It would be beneficial to review what data and techniques are in place to identify potential landslide locations, as well as rock fall zones, particularly along river basins, that will impact transportation facilities in order to develop a best practice catalogue of cost-effective techniques. The sources and magnitude of funding should also be addressed.”*

**Aim:**  Develop consensus on needed landslide research and development activities that will help state and local transportation systems direct their limited resources to the highest risk problem areas.

**Objectives**: 1) Respond to IRISE Stakeholder concerns; 2) Provide a venue for landslide practitioners to learn more about current and future landslide detection and remediation methods and techniques; 3) Highlight new research activities and capabilities; 4) Investigate methods to manage landslide risk; and 5) Explore sources for funding critical efforts.

**Participants:** Representatives of the Impactful Infrastructure Science and Engineering (IRISE) consortium and practitioners dealing with the impacts of landslides within the Tri State Area.

**Registration:** <https://pitt.co1.qualtrics.com/jfe/form/SV_0BTJOtaqZn2FUnH>

 **IRISE:** IRISE was established in the Civil and Environmental Engineering Department at the University of Pittsburgh to develop solutions to transportation infrastructure durability and resiliency problems. Its current members are: Allegheny County, Golden Triangle Construction, Michael Baker International, the Pennsylvania Department of Transportation and the Pennsylvania Turnpike.

**Agenda:**

8:30 – 9:00 Coffee and Pastries

9:00 – 9:15 Welcoming Remarks: Julie Vandenbossche, U. of Pittsburgh

Workshop Impetus: Anthony Iannacchione, U. of Pittsburgh

**9:15 – 10:00 Session 1: Historical Perspective & Identification**

1. Four Famous Historic Landslides of the Pittsburgh Area: James V. Hamel, Hamel Geotechnical Consultants
2. PennDOT Extreme Weather Vulnerability Study: Doug Zimmerman, PennDOT Bureau of Planning and Research
3. Landslide Susceptibility GPS Model for the SPC Region: Ryan Gordon, Southwest Pennsylvania Commission
4. Allegheny County Landslide Portal: Steve Shanley, Allegheny County

10:00 – 10:30 Open Discussion

**10:30 – 10:45 Break**

**10:45 – 11:30 Session 2: Prediction, Remediation & Prioritization**

1. Toward Landslide Forecasting from Images and Mechanics: Amit Acharya, Carnegie Mellon University
2. Landslide Impacts to Infrastructure: State of Practice, Brian Heinzl, Gannett Fleming
3. Rating and Prioritizing Geohazards in District 11: Jonathan Moses, PennDOT District 11
4. Rating and Prioritizing Geohazards in District 12: William Beaumariage, PennDOT District 12

11:30 – 12:00 Open Discussion

**Noon – 1:00 Lunch**

**1:00 – 1:40 Session 3: Managing Risk**

1. Using Risk Based Analysis to Manage Landslide Problems: James Martin, Dean Swanson School of Engineering, U. of Pittsburgh
2. Visioning a Statewide Geotechnical Asset Management Program (GAMP) at PennDOT: Dennis Neff, P.E., PennDOT
3. System-Level Approaches for Landslide Risk Management and Assessing Economic Impact: Vikas Khanna, U. of Pittsburgh

1:40-2:00 Open Discussion

**2:00 – 3:00 Future Needs Panel Discussion**

1. Ken Heirendt, Pennsylvania Turnpike
2. James Martin, Dean Swanson School of Engineering, U. of Pittsburgh
3. Cheryl Moon-Sirianni, PennDOT District 11
4. Eric Setzler, City of Pittsburgh
5. Steve Shanley, Allegheny County
6. Joe Szczur, PennDOT District 12