PROGRAM

7th International Symposium on Gully Erosion

Purdue University

West Lafayette, Indiana, USA

May 23-27, 2016

7th International Symposium on Gully Erosion

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AgroEnviron 2016 and the 7th International Symposium on Gully Erosion are being co-hosted by Purdue University and the USDA-ARS National Soil Erosion Research Laboratory. The symposia are being held concurrently with full cross-over registration privileges.

7th International Symposium on Gully Erosion

May 23-27, 2016

Purdue University, West Lafayette, IN, USA

Monday, May 23, 2016 **8:30-5:30 pm**

Registration **7:30-9:30 am** **Stewart Center 2nd Floor**

Pre-conference training workshops – Stewart Center – Rooms 202-218

1) WEPP: Water Erosion Prediction Project model
2) WEPS: Wind Erosion Prediction System model
3) AGNPS: Annualized Agricultural Non-Point Source pollution model
4) RUSLE2: Revised Universal Soil Loss Equation version 2
5) Technologies for soil erosion process research (Soil Erosion Lab)

Monday, May 23, 2016 **6:30-8:30 pm**

Welcome reception – Purdue Memorial Union (*with cash bar*)

Tuesday, May 24, 2016

Registration **7:30-9:30 am** **Stewart Center 2nd Floor**

Opening Remarks **8:30-9:30 am** **Stewart Center – Room 218**

Plenary Session 1: Gully-erosion measurement, monitoring and assessment

Keynote Speaker: Tammo Steenhuis, Professor, Cornell University

Theme: *Gully-erosion and community conservation in the Ethiopian Highlands*

Technical Presentations **9:30-10:30 am**

Technical Session 1a: Process		
1018	Trends in a century of gully erosion research	C. Castillo
1010	Approaches to land-levelling of erosional badlands: Exemplary cases in South Morocco and Central India	I. Marzolff
1007	Effects of rainfall regime and its character indices on soil loss at loessial hillslope with ephemeral gully	F. Zheng
1014	Trend of gully head retreat rate within Vyatsko-Kamskoe interfluve area since the middle of 20th century	V. Golosov
1016	A Comparison of the Effectiveness of Drainage by Pipe Drains and Ditches	M. Romkens

Coffee Break **10:30-10:45 am**

Technical Presentations **10:45-11:45 am**

Technical Session 2a: Methods		
1000	Impact of physical soil characteristics on rill formation - first results of laboratory experiments	F. Hieke

1003	Spatial variation of soil erodibility and critical shear stress of rill erosion of Hengduan Mountains Region, China	Z. Su
1028	Monitoring gully erosion processes with high temporal resolution photography	M. Nichols
1009	Effects of initial step height on the headcut erosion of bank gullies: a case study using a 3D photo-reconstruction method in the Dry-hot valley region of Southwest China	D. Xiong
1011	Dynamics of land-levelling of erosional badlands in Chambal Valley (Madhya Pradesh, India)	I. Marzolff

Poster Session **11:45 am -12:30 pm**

Lunch (*on your own*) **12:30-1:30 pm**

Tuesday, May 24, 2016 **1:30-2:30 pm**

Plenary Session 2: Advances in gully erosion prediction and assessment

Keynote Speaker: Norm Widman, National Agronomist, NRCS

Theme: *Gully erosion – A practitioner's perspective*

Technical Presentations **2:30-3:30 pm**

Technical Session 3a: Modeling		
1002	Modeling erosion of hillside gullies	B. Yu
1008	Relative prediction of ephemeral gully erosion using empirical, EGEM, and WEPP models around Mubi area of Adamawa State, Northeast Nigeria	J. Tekwa
1030	Soil factors controlling gully erosion: an experimental approach	J. Casali
1024	Application of RUSLE-3D to predict soil loss from a watershed in Western Deccan, India	V. Joshi
1027	Watershed-scale simulation and visualization technology of ephemeral gully emergence and evolution	H. Momm

Coffee Break **3:30-3:45 pm**

Technical Presentations **3:45-4:45 pm**

Technical Session 4a: Assessment		
1001	Subsurface flow: Often overlooked processes of gully erosion	G. Wilson
1005	Active stage gully morphological characteristics in the Loess Hilly-gully Region based on 3D laser scanning technique	X. Xu
1025	Piping as hidden gully erosion – geomorphological, pedological and geophysical approaches in mid-altitude mountains under a temperate climate	A. Bernatek-Jakiel
1006	A laboratory study on rill network development and morphological characteristics	C. Qin
1017	Mapping and spatial-temporal assessment of gully density in Sredenee Povolzie, Russia	V. Golosov

Panel Discussion **4:45-5:30 pm**

Wednesday, May 25, 2016 7:30 am -3:30 pm

Tour buses load at *7:15 am* on the west side of Stewart Center

Conservation innovation tour: As farming practices change, new environmental issues emerge. In this tour, attendees will see how researchers and farmers tackle emerging water quality concerns with potential remediation practices and technologies. We have arranged through the Indiana State NRCS office a stop at a family farming operation near Indianapolis where a number of conservation practices have been implemented, and monitoring of the effects of these practices is conducted by the USGS and Indiana University – Purdue University - Indianapolis. Finally, a social interest stop at the Indianapolis Motor Speedway is also planned, before returning to Purdue University. The tour will involve some amount of walking along and through agricultural fields, so appropriate shoes or boots are needed. If rain is forecast, be sure to bring along a water repellant coat and/or an umbrella. *A box lunch will be provided.*

NSERL Open House 4:00-6:00 pm

This USDA-ARS facility is the home of many significant research endeavors focused on the fundamental processes of soil erosion and rill and gully development and evolution. Conference participants will be given a tour of this internationally-recognized laboratory and a demonstration of recent and on-going research endeavors using specially-designed experimental facilities and equipment. *Light refreshments will be served.*

Thursday, May 26, 2016 8:30-9:30 am

Stewart Center – Room 218

Opening Remarks

Plenary Session 3: Landscape evolution, assessment and geospatial technology

Keynote Speaker: Rick Cruse, Professor, Iowa State University

Theme: *Daily Erosion Project (DEP): Estimating statewide soil erosion and water runoff in near real time*

Technical Presentations 9:30-10:30 am

Technical Session 1b: Process		
1026	Disaggregation of soil erosion processes	H. Momm
1031	Bed roughness and flow hydraulics interaction in small eroded channels	J. Casali
1035	Assessing the contribution of hillslope and gully erosion to total sediment loads on a rapidly developed urban watershed using the AnnAGNPS model	R. Bingner
1036	Improvement of jet erosion test methodology	S. Ghaneeizad
1041	Drainage network extension in northeast Australia: Sediment yields, drivers and implications for control	S. Wilkinson

Coffee Break 10:30-10:45 am

Technical Presentations 10:45-11:45 am

Technical Session 2b: Methods		
1019	Efficient assessment of gully erosion from accurate 2D measurements combining simple tools and the free interface CrosSF3M	C. Castillo
1012	Land reclamation through levelling in Chambal Valley (Madhya Pradesh, India) – A geomorphometric approach to badland classification and evaluation of reclamation patterns	I. Marzolff
1042	Rapid acquisition of gully topography using a mobile, handheld laser scanner	A. Hawdon
1043	Cohesive soil erosion process, assessment and prediction	S. Ghaneeizad
1046	Upland soil erosion assessment using ground-based structure from motion – multi view stereo (SFM-MVS)	J. Quinton

Poster Session **11:45 am -12:30 pm**

Lunch (*on your own*) **12:30-1:30 pm**

Thursday, May 24, 2016 **1:30-2:30 pm**

Plenary Session 4: Gully-erosion prediction technology and assessment

Keynote Speaker: Irene Marzolff, Senior Lecturer, Goethe University

Theme: *Advances in image-based measuring and monitoring of gully erosion*

Technical Presentations **2:30-3:30 pm**

Technical Session 3b: Modeling		
1029	Modeling of ephemeral gully erosion with a physically-based soil hydrology model	V. Karimov
1038	Evaluation of the Compound Topographic Index (CTI) for predicting ephemeral gully erosion in Navarre	J. Casali
1039	Development of watershed ephemeral gully erosion technology within AnnAGNPS to assess the impacts from agricultural management decisions	R. Bingner
1044	Estimating ephemeral gully erosion in no-till cropped fields	S. Dabney
1045	Ephemeral gully erosion estimator for tilled and no-till fields	D. Vieira

Coffee Break **3:30-3:45 pm**

Technical Presentations **3:45-4:45 pm**

Technical Session 4b: Assessment		
1013	A Multiscale Approach to Assess Gully Erosion Features in KwaZulu-Natal, South Africa	M. Maerker
1033	Effects of topographic factors on development of gully head in Chinese hilly Loess Region	Y. Zhang
1047	Gully erosion susceptibility assessment with using stochastic modeling (Case study: in the North of Iran)	R. Zakerinejad
1048	Development of gully complexes on unstable slopes in the Mangaehu catchment, New Zealand	T. Parkner
1040	Gully erosion in Slovakia from the long-term scale view	P. Papco

Panel Discussion **4:45-5:30 pm**

Closing Ceremony and Banquet – Purdue Memorial Union 6:30-9:00 pm

Keynote Speaker: **Dr. Otto C. Doering III, Professor, Agricultural Economics Department, Purdue University, West Lafayette, Indiana, USA**

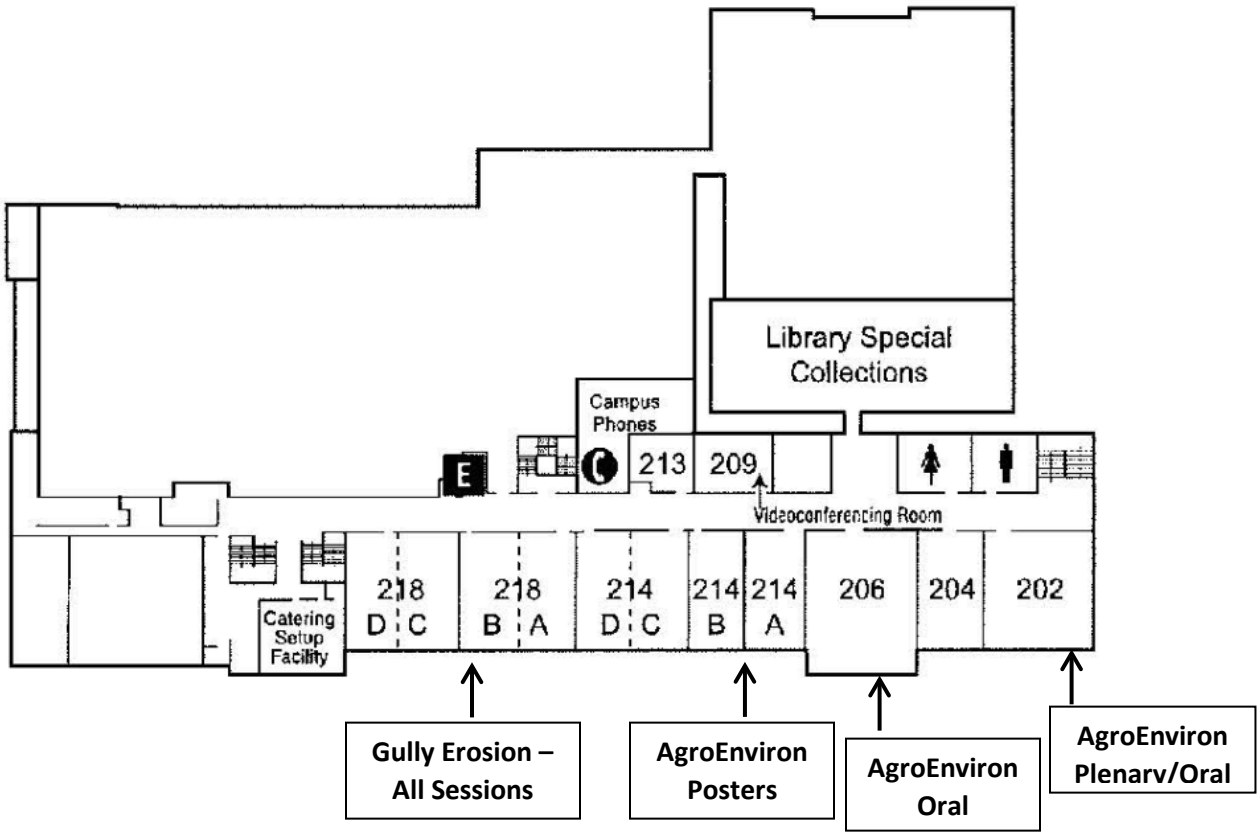
Theme: **"Is Conservation Economic & Does It Matter?"**

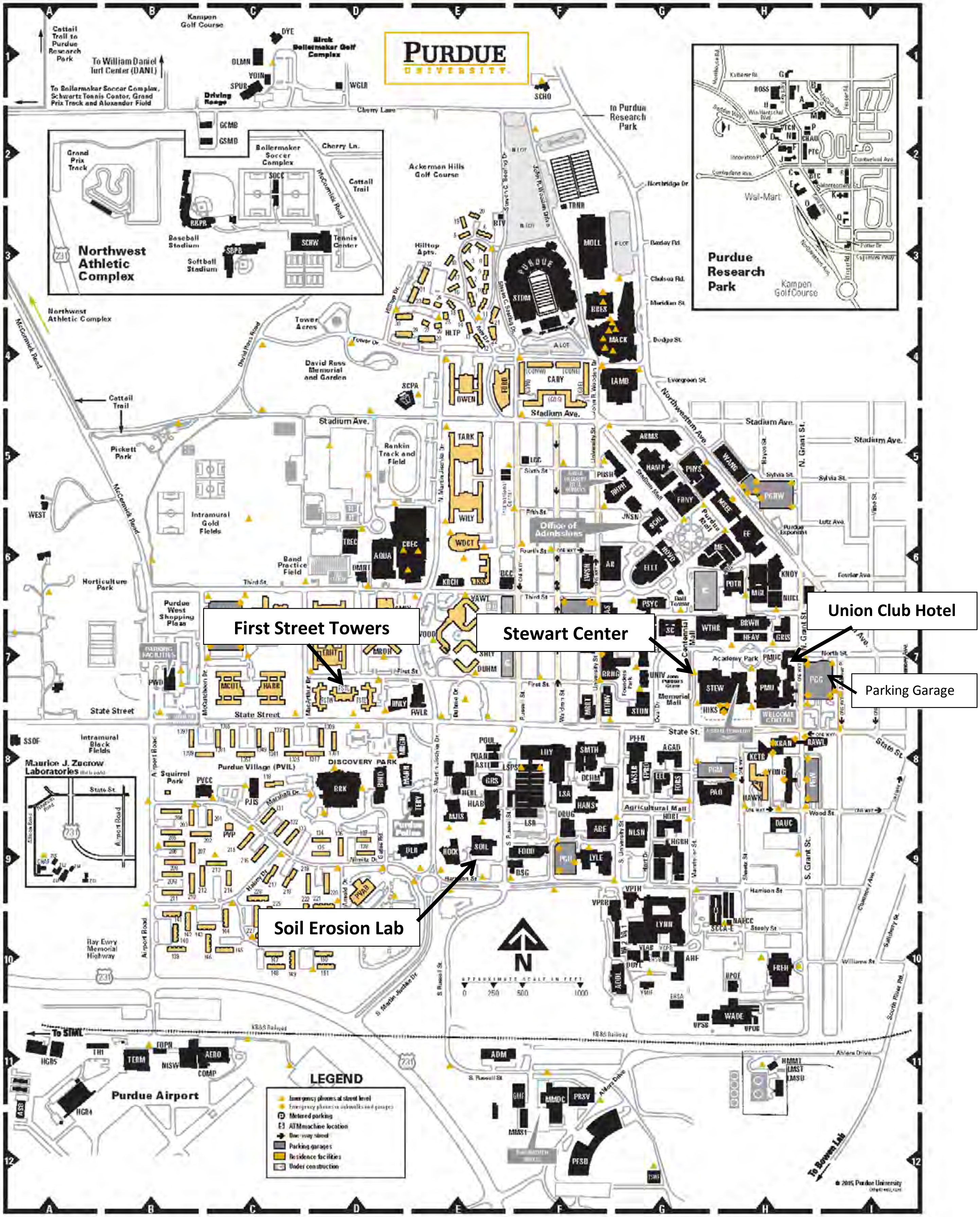
Friday, May 27, 2016

- No activities planned –

Participants remaining in the Indiana area may wish to visit some other local cultural or historical sites. For more information on nearby sites to visit, contact the symposium organizers.

Map of Stewart Center – 2nd Floor where most symposium sessions will occur.





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LEGEND
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DISCOVERY PARK
Purdue Village (PVIL)
Ackerman Hills Golf Course
Intramural Gold Fields
Horticulture Park
Pickett Park
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