Program Guide for the
2008 ANNUAL MEETING OF THE
PENNSYLVANIA GEOGRAPHICAL SOCIETY

OCTOBER 31 – NOVEMBER 1, 2008
CLARION, PENNSYLVANIA

DRAKE WELL MUSEUM, TITUSVILLE, PA

Dear PGS Attendee,

Welcome to Clarion, Pennsylvania! We are grateful that many of you took the time to make the drive to attend the conference. This year's meeting has a diverse range of topics from historical geography and regional geography to meteorology and GIS. There are also several maps entered in this year's Student Map Contest. Please stop by the Armstrong Room and vote for your favorite. This year we are pleased to be hosting the PASSHE GIS Consortium on Friday afternoon. The Friday evening banquet and awards ceremony features guest speaker Dr. Burrell Montz, Professor and Department Chair, Binghamton University and 2008 PGS Distinguished Geographer Award Winner with a talk titled "Hazard Warning and Response: Where Natural and Social Science Meet".

The local arrangement committee hopes that this year's conference will be both educational and enjoyable. If there is anything that we forgot, or if you have any questions about PGS, Clarion University or the area, please ask us for assistance. We look forward to an exciting meeting! Thanks again for attending.

2008 PGS Meeting Arrangements Committee and Clarion University

PENNSYLVANIA GEOGRAPHICAL SOCIETY
ANNUAL MEETING
OCTOBER 31 and NOVEMBER 1, 2008
CLARION, PENNSYLVANIA

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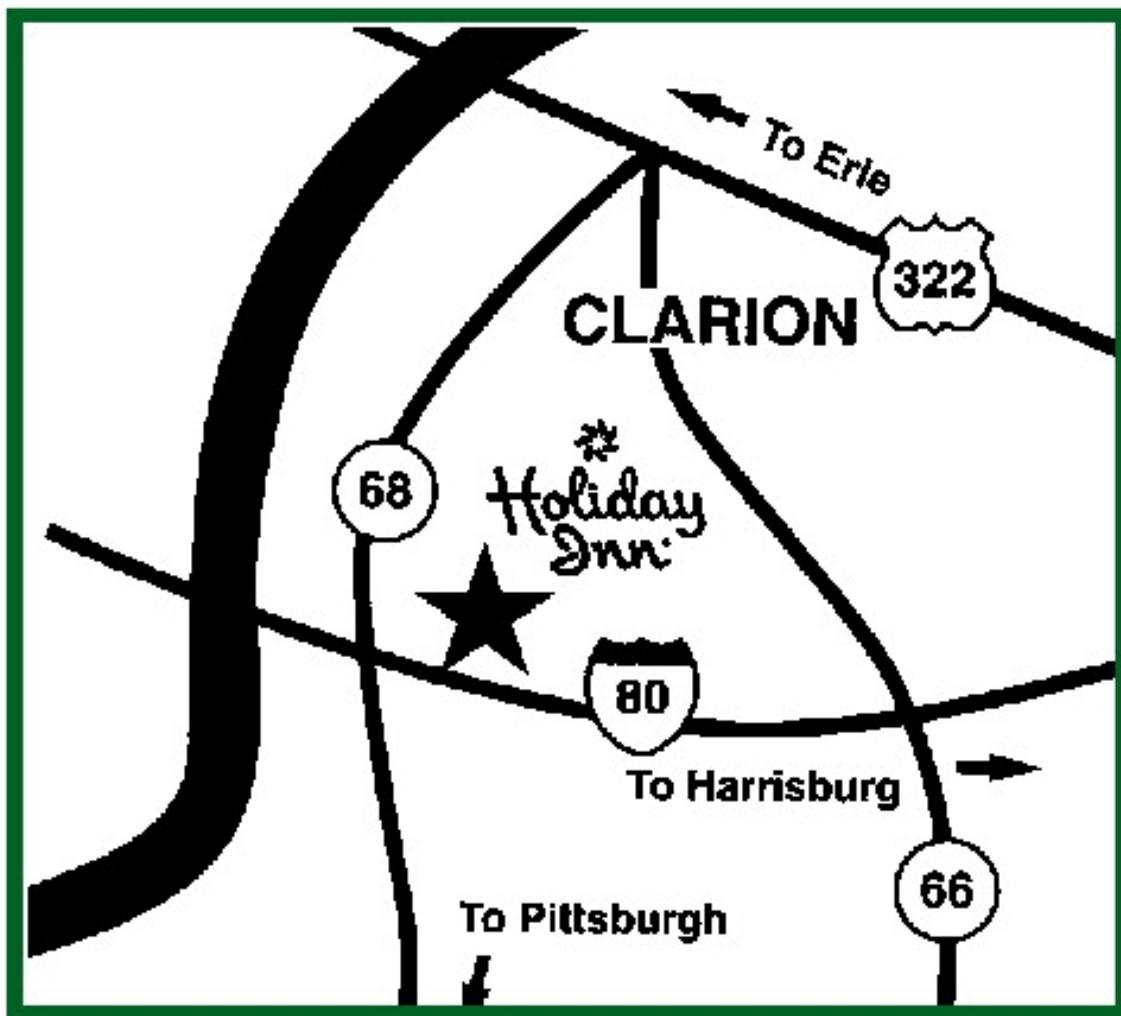Mary Graham – Past President

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Floor Plan

TROPICAL COURTYARD

| KITCHEN | THE FAIRWAY CASUAL DINING | Mulligan's Lounge | TO ROOMS | Cook Forest |
| | | | | Allegheny Forest |

BALLROOM
- Armstrong
- Jefferson
- Clarion

Exit

Exit

M | W

LOBBY

DESK

OFFICE

Monroe Room | Golden Eagle Board Room

FOYER

ENTRANCE

Area Map

To Erie

CLARION

322

68

Holiday Inn

★

80

To Harrisburg

66

To Pittsburgh

2008 PENNSYLVANIA GEOGRAPHICAL SOCIETY ANNUAL MEETING

SCHEDULE OF EVENTS

Thursday, October 30

5:00-8:00 pm	Conference registration - Holiday Inn Lobby
7:00-10:00 pm	PGS Executive Board Meeting - Allegheny Forest Room, Holiday Inn

Friday, October 31

8:00 am - 5:00 pm	Conference registration - Holiday Inn Lobby		
	Clarion Room	**Jefferson Room**	**Armstrong Room**
9:00-9:40 am	**Weather and Climate I** <u>Chair</u>: Brent Zaprowski **9:00** - Brian Hutton Jr.* - Sunspots and Tropical Cyclones: A Pilot Study **9:20 -** Kyle Olmstead* - NAM, GFS and NGM Maximum and Minimum Temperature Comparisons for the Great Lakes and Ohio Valley Region using Model Output Statistics from 2003-2007 **9:40 -** Adam B. Cinderich* - A Synoptic Reanalysis of the Tornado Outbreak of 22 May 2008 in the Central Plains **9:40-9:50** Questions		**Student Map Contest and Posters** **Frank Yelenic - Book Exhibit - John Wiley & Sons**
9:50-10:15 am			**Coffee break**
10:15-11:25 am	**Weather and Climate II** <u>Chair</u>: Ola Johansson **10:15** - Katie L. Mercadante* - The Effect of Precipitation on Super Tuesday 2008 Voter Turnout **10:35** - Darren Parnell - Growing Season Variability across Pennsylvania, 1930 – 2005 *** Student paper contest participant** **10:35-10:45** Questions	**Regional Geography I** <u>Chair</u>: Larry Kleitches **10:15 -** Larry Kleitches - A Look at Consolidation in the United States and Canada and the Ramifications for Cambria County, Pennsylvania **10:35 -** Chuck Williams - Industrial ebb and flow and the decline and resurgence of Pennsylvania's Clarion River **10:55 -** Willis M. Conover - Lackawanna County Place-Names: Patterns of Naming **11:15-11:25** Questions	**Student Map Contest and Posters** **Frank Yelenic - Book Exhibit - John Wiley & Sons**
11:30 - 12:45 pm	**PGS Luncheon - Tropical Courtyard**		
12:00 - 12:15 pm	**John Katana - Annual Teacher Awards - Tropical Courtyard**		
12:15 - 12:45 pm	**PGS Annual Business Meeting - Tropical Courtyard**		

Friday, October 31			
	Clarion Room	**Jefferson Room**	**Armstrong Room**
1:00 - 2:30 pm	**Education in Geography** Chair: Joan M. Welch **1:00 -** Chad Kauffman - Teaching Undergraduate Regional U.S. Geography for First-timers: Lessons Learned **1:20 -** Welch - Hands-on Student Learning: Developing a Tree Database on Campus **1:40** - Brent Zaprowski - Using Google Earth in Introductory Earth Science Courses **2:00** - Carol Gillespe -The Secret to Successfully Teaching Human Geography On-Line	**PASSHE GIS Consortium** Chair: Thomas R. Mueller **1:00** - Robert N. Martin - Using GIS to Map Global Trade Patterns **1:20** - Thomas R. Mueller and Jamie Mitchem - Social Vulnerability and HAZUS in Southwestern Pennsylvania **1:40** - Robert Whyte, Chad Kauffman, Tom Mueller, Sam Zehel, David Kallis - Digital Wetlands of Western Pennsylvania **2:00** - Chuck Geiger - Planning and Executing a Campus GIS	**Student Map Contest and Posters** **Frank Yelenic - Book Exhibit - John Wiley & Sons**
			Coffee break
2:15 - 2:30 pm	**2:20-2:30** Questions	**2:20-2:30** Questions	
2:30 - 3:40 pm	**Panel discussion: Careers in Geography** Chair: William Kory The presentation and discussion will focus on the current status of the field of geography and the opportunities for employment for students trained in the discipline. Many of our graduates work for private businesses; local, state and federal government; and some are self employed. We will draw on their experiences in the job market and hope to have some students discuss their personal histories. Everybody attending the session is encouraged to participate and share their views and thoughts on the subject.	**GIS** Chair: Thomas R. Mueller **2:30 -** Tim Dolney - Identifying populations at risk to the presence of Abandoned Mine Lands (AMLs): a GIS-based approach **2:50** - Anan Yang - Using GIS in a Public Airport Funding Project: A Case Study from an Internship Experience at PennDOT **3:10** - Stephen Roberts - Using Google SketchUp and ArcGIS to produce 3D maps **3:30-3:40** Questions	**Frank Yelenic - Book Exhibit - John Wiley & Sons**
3:40 - 4:40 pm	**40th anniversary Penn State Coffee Hour**	**PASSHE GIS Meeting**	**Map contest and student paper awards**
5:00-6:00 pm	**Pre-Banquet Reception - Tropical Courtyard (Cash Bar)**		
6:00 - 9:00 pm	**PGS Banquet - Tropical Courtyard**		
	Guest Speaker - Dr. Burrell Montz, Professor and Department Chair, Binghamton University and 2008 PGS Distinguished Geographer Award Winner "Hazard Warning and Response: Where Natural and Social Science Meet"		

Saturday, November 1st			
8:00 - 9:30 am	Conference registration - Lobby Holiday Inn		
	Clarion Room	**Jefferson Room**	**Armstrong Room**
9:00 - 10:10 am	**Regional Geography II** Chair: Kay Williams **9:00** - Joseph Zume - Across the Middle Belt Plains of North-central Nigeria **9:20 -** Michael Applegarth - Landscapes and Geography of Western Arizona **9:40** - John Confer - Using "Visitor Vectors" to Estimate Park Visitor Flows and Spatial Use Patterns **10:00-10:10** Questions		
10:15 - 11:25 am	**Historical Geography** Chair: Mary Graham **10:15** - Clarissa Confer - The Historical Geography of Westward Expansion **10:35** -Mary Graham and Richard Stone - Federal Civil War Battlefield Preservation in the Western Theater: Ft. Donelson, Shiloh, and Vicksburg **10:55** - Donald W. Buckwalter - Transportation History of Pittsburgh: Topography and Other Complications **11:15-11:25** Questions		

****ANNOUNCING – THE 2009 PGS ANNUAL MEETING****
WEST CHESTER UNIVERSITY, WEST CHESTER, PA
(Date TBD)

West Chester University is in the Brandywine Valley, the location of many world renowned attractions made famous by the legacy of the Du'Pont family. This includes Longwood Gardens, the Hagley Museum/Estate and the Winterthur Museum/Estate. There is also the re-opened Nemours Mansion/Gardens, another Du'Pont estate. The Brandywine Battlefield (the largest engagement of the Revolutionary War) is close to WCU. The town of West Chester offers many excellent restaurants and great night life. Chester County was one of the original 3 counties founded by William Penn and the area is full of historic interest. It is also known watershed protection and resource conservation and is home to the Brandywine Conservancy, the Brandywine Valley Association, the Stroud Freshwater Research Center and the White Clay Creek Preserve.

Please join us for what is shaping up to be an outstanding meeting!
PGS executive committee and West Chester University

ABSTRCTS – 2008 PENNSYLVANIA GEOGRAPHICAL SOCIETY ANNUAL MEETING

Landscapes and Geography of Western Arizona
Michael Applegarth

The west central region of Arizona provides a view of a transition from urban to rural and even wilderness settings in the desert southwest. From the urbanization of the Phoenix area to near the Colorado River, this paper will illustrate the cultural and physical geography of the west central portion of the state. We will begin in the Phoenix area and journey west through the Sonoran desert to examine this lesser traveled part of Arizona.

Transportation History of Pittsburgh: Topography and Other Complications
Donald W Buckwalter

This study uses historical sources to analyze transportation topology in metropolitan Pittsburgh, Pennsylvania. Pittsburgh was a walking city prior to 1859. The horse-drawn streetcar and commuter rail era (1859-1890) created a specialized CBD and elevated East Liberty to strategic significance. The electric streetcar era (1890-1925) made horses obsolete, cars larger, fares lower, and commuting distances much longer. The automobile era (1925-1965) followed familiar corridors along river valleys or into eastern suburbs but also opened previously undeveloped areas of the southern and northern hills. Commercial subcenters developed during the expressway and airport era (1965 to 2007) to meet the land use needs of a modern city.

Contemporary Pittsburgh lags behind other metropolitan areas in crucial infrastructure. Pittsburgh has an unusual number of topographical barriers, an unevenly effective mass transit system, and early but disjointed development of controlled access highways. Past transportation policies have been poorly coordinated, and academics could address this problem with relevant theoretical research.

A Synoptic Reanalysis of the Tornado Outbreak of 22 May 2008 in the Central Plains
Adam B. Cinderich

A synoptic reanalysis was performed to examine the synoptic conditions that were present which provided a favorable environment for severe weather on 22 May 2008. The outbreak occurred in northeastern Colorado, western Kansas and western Nebraska. Upper level analysis charts of the mandatory levels and thermodynamic diagrams were analyzed to uncover which of the various layers of the atmosphere contributed significantly and/or supported the best dynamic condition favorable for severe weather. Surface analyses portray favorable conditions within the planetary boundary layer for severe weather.

Near real-time RADAR images using BARON Mobile ThreatNet via a live XM Worx satellite feed were captured by the authors and utilized herein to better incorporate the mesoscale features of active weather relative to the larger scale Synoptic environment. Moreover, these images allow for the reader to witness the progression of these tornadic supercells during the respective time frame.

The Historical Geography of Westward Expansion
Clarissa Confer

The changing concepts of geography had a tremendous impact on the history of the United States. Much of the sense of American culture was built on the idea of frontier or open space to the west of the line of settlement. That frontier line moved continually throughout the nation's first 300 years. Rarely did Americans understand what lay beyond the line. The geography of place helped to shape the expanding nation. As Americans moved west they found unfamiliar geography where they were in fact expecting familiarity. New geographic regions such as the Plains, the Rockies, and the Pacific Coast forced adjustments and adaptations. Both initial expeditions and later settlements had to

redefine aspects of American culture to fit within the new geographic realities. We can explore the evidence left by expeditions such as Lewis and Clark as well as early settlers who moved west on the Oregon, Mormon, and Gold Rush Trails to learn how Americans raised East of the Mississippi encountered and adapted to the distinctly different geography of the trans-Mississippi West.

Using "Visitor Vectors" to Estimate Park Visitor Flows and Spatial Use Patterns
John Confer

The field of "recreation geography", the study of the spatial properties and distributions of recreation, in some respects is a science still in its infancy. Mitchell's (1969) earlier observation that the field lacks systematic methodologies, generalizations and basic theories is still to some extent true today. There have been few geographic studies of the spatial aspects of recreation. This is especially true for visitor movements within a particular destination which for the most part, are not well understood. The purpose of this paper is to examine the spatial patterns of visitor use and movement within an urban study site, as well as movement into and out of the area. Using a geographic analysis based on the "winds of influence" mapping techniques developed by Tobler, we were able to construct "Visitor Vector" maps showing the changing forces at work in shaping visitor movement. With these maps managers can assign rangers to the zones receiving the highest visitation. Additionally, general visitor movement trends could be used to schedule interpretive displays and ranger programs at the "best" time and place.

Lackawanna County Place-Names: Patterns of Naming
Willis M. Conover

What are the origins of the toponyms, or place-names, we give to our communities and physical features? This paper presents examples of the categories of names and describes the pattern of naming found in one Pennsylvania County.

Identifying populations at risk to the presence of Abandoned Mine Lands (AMLs): a GIS-based approach
Tim Dolney

Prior to 1940, coal mining in the state of Pennsylvania was unregulated. Mine operators would extract all available coal from a mine site, move to the next, and fail to return the land to its pre-mining condition. The state's landscape is now scarred with abandoned mine lands (AMLs) that pose significant environmental and safety concerns. Many are located near residential areas, schools, and hospitals; places frequented by the population on a daily basis.
This research describes the use of GIS in assessing the safety hazards AMLs pose to the population. A combination of land use, census, and elevation data is used to assess their severity. A priority rating (P1-P3) is then assigned to each AML depending on its severity. GIS-based methodologies will assist the Pennsylvania Department of Environmental Protection in prioritizing their AML inventory and secure funding to eliminate high priority sites.

The Dark Side of Pennsylvania's Tourism Industry
Sara R. Fortnum

The tourism industry in Pennsylvania is the state's second leading source of revenue. As 'dark tourism' grew in our culture, Pennsylvania wasted no time finding its own profitable niche. According to Stone (2006), deaths disasters and atrocities in touristic form are becoming an increasingly pervasive feature within the contemporary tourism landscape, and as such, are ever more providing potential spiritual journeys for the tourist who wishes to gaze upon real or recreated death. Attractions range from quaint bed and breakfasts to the Gettysburg National Military Park. One could argue that such monuments as the Flight 93 Memorial could also be seen as an aspect of

'dark tourism'. There need not be an actual ghost or even an actual death, there need only be the perception of such phenomenon in order to publicize and draw in tourists. My poster will discuss the implications of such tourism as well as spatially relate the growth of 'dark tourism' in Pennsylvania.

Planning & Executing a Campus GIS
Chuck Geiger

At Millersville University the convergence of several events and decisions led to an executive level commitment to support the creation of a comprehensive GIS of the campus. While substantial progress has been made, it has not been a smooth process.

The Secret to Successfully Teaching Human Geography On-Line
Carol Ann Gillespie

Online courses are fast becoming the "wave of the future" in higher education. How can we successfully overcome the obstacles that are rife in this form of pedagogy? How can geography be best taught and learned in this impersonal arena? A pilot study in AP Human Geography reveals some interesting insights that may help you, too.

Federal Civil War Battlefield Preservation in the Western Theater:
Ft. Donelson, Shiloh, and Vicksburg
Mary Graham and Richard Stone

Under the leadership of General Ulysses S. Grant, the Union army won victories at Ft. Donelson, Shiloh, and Vicksburg during the first two years of the Civil War while the Confederates were winning battles in the Eastern Theater of war in Virginia. These three federally preserved battlefields evince bias in their battlefield preservation and battle interpretation via the emphasis given to the "Southern Lost Cause." This paper examines that interpretative bias and discusses what has been neglected and even omitted in the battlefields' preservation and battle interpretation because only part of the battle story is recounted. For example, the Union defenders of Shiloh's Hornet's Nest are just as heroic as the attacking Confederates.

Sunspots and Tropical Cyclones: A Pilot Study
Brian Hutton Jr.

Sunspots have been shown to have some correlation to weather phenomena on a global scale, but the impact on hurricanes has yet to be completed revealed. Several teleconnection indices (i.e., PNA, ENSO, NAO) have shown a correlation with hurricane frequency and intensity. It is hoped that a new correlation will be found between sunspot activity and hurricane frequency and/or intensity. This study will first analyze previous literature that examines teleconnections and sunspots to highlight trends in broad scope. From these trends, this study will specifically identify sunspot activity related to teleconnection indices. It is hoped that a strong correlation will be found. From these correlations, a linkage to Tropical Cyclones can be found. It is hoped that from these findings, an application to hurricane forecasting can be derived.

Teaching Undergraduate Regional U.S. Geography for First-timers: Lessons Learned
Chad Kauffman

In the Spring term of 2008, the author was charged with teaching a "Geography of the United States" course for the first time. While the author was trained as Physical Geographer, specializing in Meteorology/Climatology, much of the required curricula involves Economic & Cultural Geography. This presented a unique challenge (and presumably to other highly specialized

Geographers). Higher Education has placed a premium on highly specialized teachers/researchers, which then presents a challenge when one is asked to 'step outside' their area of specialization. Unless one is specifically trained in the region of interest, any regional Geography course could pose a difficulty in relaying course materials. This paper will describe specific elements of the course that were found to be effective for instruction. Specifically, pedagogical techniques, presentation materials and lecture formats are discussed. Those techniques that were found to be most/least effective will be the focus of discussion. Ultimately, the course could be deemed a success, but there were a series of omissions whereby significant regions of the U.S. were omitted from the curricula due to constraints on timing.

A Look at Consolidation in the United States and Canada and the Ramifications for Cambria County, Pennsylvania
Larry Kleitches

Consolidation of government bodies emerged as a leading post World War II answer for reducing the operating expenses of municipal government and luring new commerce in Canada and the United States.

 Cambria County, Pennsylvania has lost nearly one-third of its residents since 1940 and has seen its elderly population become more than one-third of the current county population. However, there are 48 municipalities plus a county government operating in the county, only one less than when times were considerably better. Unification of local governments has been put forth since the 1960s in Cambria County in light of shrinking populations, business, and tax dollars. Despite the admitted problems and a need for action, just one consolidation in the county has been approved by voters throughout the time period.

The amalgamation process most often utilized in Canada is a top-down course of action emanating from the federal or provincial government, often with minimal local input. Consolidation in most states in the U.S. must be approved by all the involved municipalities in order for a merger to happen, resulting in a long and frequently expensive process. Does this distinction have an impact on the success or failure of a consolidation's approval?

This presentation is one part of a larger project weighing possible solutions for Cambria County involving local unification. 1950s Toronto, 1990s Ontario and Nova Scotia, 1958-1962 Nashville/Davidson County, and localities in Cambria County are among those examined for the form and function of consolidation.

The Effect of Precipitation on Super Tuesday 2008 Voter Turnout
Katie L. Mercadante

On 5 February 2008, "Super Tuesday," fifteen states held primary elections for both the Republican and Democratic parties. This research uses these election results and party-based voter turnout percentages to assess the sociological impacts of precipitation and air mass on turnout. This research began as an effort to verify other studies, particularly that of Gomez, Hansford and Krause (2007), suggesting that certain political parties benefit from particular weather events, and demonstrate date-specific results in terms of precipitation effects. A Spatial Synoptic Classification System (SSC) is used to further quantify the impacts of the atmosphere on voter turnout. The results are presented with respect to climatological "normal" air mass type, based on a dataset encompassing more than thirty years. A trend for turnout for 5 February 2008 is offered along with potential causes for outliers and error within these turnout trends.

Social Vulnerability and HAZUS in Southwestern Pennsylvania
Thomas R. Mueller And Jamie Mitchem

This study combines spatial analysis using geospatial technologies with a social vulnerability index to estimate and model overall vulnerability in southwestern Pennsylvania. A social vulnerability index was calculated at the Census tract level for the region based on indicators identified in existing social vulnerability research. This information was combined with analysis from a powerful geospatial technology software packages, HAZUS. 100-year flood plains were extracted from model results using HAZUS. These results were overlaid with the social vulnerability index computed for the region using GIS technology to analyze place vulnerability in southwestern Pennsylvania.

Using GIS to Map Global Trade Patterns
Robert N Martin

To make students more aware of global trading patterns using maps, I have developed a series of maps that are used by students in the World Regional Geography and Economic Geography course I teach. This paper discusses the number of steps that were necessary to create a global trade geodatabase. These steps included the selection of an appropriate map projection; collecting and preparing trade data; and development of maps that the students could access through ArcReader and Adobe Reader.

NAM, GFS and NGM Maximum and Minimum Temperature Comparisons for the Great Lakes and Ohio Valley Region using Model Output Statistics from 2003-2007
Kyle Olmstead

Mesoscale factors are an important issue when forecasting for specific locations in the Great Lakes and Ohio Valley. Model Output Statistics (MOS) forecasts were comparatively analyzed using the differences between NAM, GFS and NGM collected from 2003-2007. It was expected that NAM would have a greater performance due to its greater resolution in resolving mesoscale features. Maximum and minimum temperatures for each forecast day were utilized. Each model output was verified to the actual temperature for each forecast day. Differences in actual temperatures relative to forecast, for each model, were calculated. Maximum and minimum temperature differences for each forecast day were segregated in to different temporal intervals to uncover any trends. These data also represent the amount of inaccuracy a model provides and whether a model tends to under or over estimate the forecasted temperatures.
Overall, NGM tabulated a higher accuracy annually. Higher resolution models were expected to perform better, although the results reveal that NGM has a higher accuracy of forecasting maximum and minimum temperatures for the Great Lakes and Ohio Valley.

Growing Season Variability across Pennsylvania, 1930 – 2005
Darren Parnell

This study investigates growing season characteristics across Pennsylvania for the period 1930 – 2005. Daily minimum temperature data were collected from the U.S. Historical Climatology Network to examine the variability and trends in last spring frost dates, first fall frost dates, and growing season length. The timing of the frosts are consistent across the study area, with the standard deviations of frost dates ranging from nine to thirteen days. Last spring frost dates range, on average, from mid April to late May, while first fall frost dates range, on average, from late September to late October. Differences in elevation and latitude were shown to influence the timing and spatial patterns of the frost date characteristics. These findings have important implications for agricultural activities. They can assist farmers in making optimal planting decisions and also offer a basis for calculating the risk of frost damage from planting early in the season.

Using Google SketchUp and ArcGIS to produce 3D maps
Stephen Roberts
This presentation will demonstrate how to import and export data between ArcGIS and Google SketchUp in order to produce quality 3D maps. It will exhibit the simplicity of the process along with helpful tips and tricks to counter the problems associated with it.

The Prevalence of Persistent Poverty in Rural Pennsylvania
Amy E. Salsgiver
The rate of persistent poverty is a problem throughout the United States however; populations in non-metropolitan areas are suffering from higher rates than those in metropolitan areas. Due to their rural residency they are further isolated from programs originated to assist people in poverty such as food banks or soup kitchens. Further, people in these areas are less likely to have sustainable employment or jobs that offer high pay rates and benefits. Pennsylvania conforms to the nationwide epidemic of rural poverty in that 58% of the municipalities suffering from persistent poverty are rural. My poster will map the affected areas as well as illustrate demographics and influencing factors.

Hands-on Student Learning: Developing a Tree Database on Campus
Joan M. Welch, Gary Coutu, Joy Fritschle
West Chester University recently added a sustainability goal to our strategic Plan for Excellence.   A collaborative effort by faculty and staff secured a small grant to fund faculty and student time to develop and create a GIS database of trees on campus.   Analysis of the database will clearly show the full value of our trees for pollution reduction, carbon collection & storage, storm water management, and heating and cooling cost reduction. The database will provide a tool for long-term management of our tree resource and for authentic classroom learning. Students participate in field experiences using the latest GPS/GIS/data collection technology as part of their educational experience. They will also explore different urban forest assessment software (CITYgreen and ITrees) and evaluate the benefits of each. Theory from textbooks is translated into practice, with results (a sustainable and healthy tree resource) that are concrete and benefit the university. This model could be successful at other universities and schools.

Digital Wetlands of Western Pennsylvania
Robert Whyte, Chad Kauffman, Tom Mueller, Sam Zehel, David Kallis
Wetlands are a sparse but important feature of a complex southwest Pennsylvania topography. The region's historic coal industry, agriculture and more recent urban expansion and the resulting ecological effects from these activities make information on natural systems such as wetlands and associated drainage systems increasingly important.
The challenge is to provide better and applied information on the status of the resource and benefits derived from its protection in the face of increasing developmental pressure and past land uses. This study helps to better define the region's wetlands specifically seeking to provide a description of the resource and patterns and trends.
Hydrologic modification to an existing wetland may be sufficient to alter the wetland type such that area rainfall and drainage patterns may negatively impact the wetland. Similarly, changes in landscape setting may bring about hydrologic changes significantly impacting a wetlands ability to temporarily store or alleviate flood waters. Seeking to better define and understand the effects of historical land uses, urbanization and a changing landscape setting, the objectives for this research are to determine current wetland status in Southwestern Pennsylvania including: assess wetland loss, gain, and change in quality and type over time in selected urban and rural watersheds. It was found that the region's wetlands are more numerous than documented but also that changes to the landscape and wetland hydrologic modifications have altered the type and function of many of the

area wetlands. Moreover, a unique interactive digital database and web-mapping service within a geographic information system for public utilization of mapping data for wetland status, function, and associated resource vulnerability assessment was created.

Industrial ebb and flow and the decline and resurgence of Pennsylvania's Clarion River
Chuck Williams

In 1909, Carnegie Museum biologist A.E. Ortmann proclaimed Pennsylvania's Clarion River as "one of the worst streams in the state" for industrial pollution and found the river largely devoid of life. Much of the pollution at the time originated from the river's upper reaches. Abundant water and close access to forest resources fueled the rise of a heavy industry base along the upper Clarion River by the late 1800s, which at its height included eight tanneries, eleven wood chemical plants, and a large paper mill. The decline of the Clarion River was tied to the wealth of industrial resources in its watershed - in large part a "tragedy of the commons". In this presentation I gauge the relative impacts of these different industries on the water quality and biota of the Clarion River and show how the ebb and flow of industries set the stage for the eventual recovery of the river.

Using GIS in a Public Airport Funding Project: A Case Study from an Internship Experience at PennDOT
Anan Yang

This presentation will document the steps involved in the Pennsylvania Department of Transportation's Public Airport Funding Project (PAFP). GIS Division's role in the PAFP is to upgrade the maps for Bureau of Aviation. The GIS steps involved were data manipulation, map creation, map adjustment, and map presentation. Data manipulation involved data classification and entry. Map creation involved creative map design. Map adjustment involved amendments for graphic excellence. Map presentation involved exporting maps while retaining proper resolution and size. In conclusion there is a discussion about the lessons learned when trying to apply proper cartographic principles to an approval committee of various backgrounds.

Using Google Earth in Introductory Earth Science Courses
Brent J Zaprowski

Google Earth is a powerful tool for teaching earth science topics, particularly courses which involve landforms. Using bookmark files, students can be sent to practically any location around the world to study or measure the nature of the earth's surface. Preliminary surveys suggest that Google-based labs help to engage the students in the topic and raise their level of inquiry about the Earth.

Across the Middle Belt Plains of North-central Nigeria
Joseph Zume

The "Middle Belt" is one of four geopolitical regions of Nigeria. Located in the north-central part of Nigeria, the Middle Belt is home to a variety of people and cultures, functionally bound by its acceptance and practice of Christianity. This paper provides visual clues into the diverse cultures as well as some of the sociopolitical and socioeconomic inhomogenieties within the region.

STUDENT MAP CONTEST SUBMISSIONS

An Interactive Web-Based Tool for Spatiotemporal Exploration of the California Herbaria Dataset
Tom Auer and Craig McCabe

This map tool is designed to allow easy query and display of the spatial history of a large plant sample collection, with data being provided by the Consortium of California Herbaria. The

underlying database, housed on GeoVISTA servers at the Penn State University Department of Geography, contains over 377,000 unique, spatially referenced samples collected in California between 1860 and 2007. With smart-search text queries, the user can progressively filter their selection by: family, genus, species, observer, and date, stopping at any step along the way to add the results to the map. Once the map has been drawn, clicking remove will clear the map, but will leave the current selection. Clicking reset will clear the map and all selections. Due to the large number of samples in the database, query results are aggregated spatially by Jepson sub-ecoregion (left-click for name) before the aggregate values are displayed as graduated circles on the sub-ecoregion centroids. Map results can be further focused temporally using the two time sliders.

Progression of top ten populated cities over time
Glynn Collis

In my research, I found that in 1800, the top ten most populous cities were all in a cluster in northeast United States, with the exception of Charleston South Carolina. Over time, however, with the help of advanced transportation and migration, cities began to move across the U.S. I found that the dominant cities were either port cities and grew from immmigration and advanced industry, or they were along strategic waterways like the Mississippi and Great Lakes. After looking at the progression of the cities, you can see that the dominant cities have moved from these typical locations to boadering Mexico. 7 of the top ten cities, and 3 of the top 5, now boarder Mexico. Also, as you move through time, some of these cities have been incorporated into larger cities, such as the towns surroudning Philadelphia.

Traditional Pottery of North America
Sara R. Fortnum

This map/poster will showcase the traditional pottery of North American native peoples within the highlighted cultural regions.

Comparing Per Capita Income and SAT Scores in Allegheny County School Districts
Dominic Marchionna

This map compares the SAT standardized test scores and the per capita income of the school districts in Allegheny County, Pennsylvania. Although there is a strong correlation between these two factors, with better SAT scoring schools having higher per capita incomes, there are some exceptions. Schools with approximately the same per capita income for their respective districts can, in some cases, have very different SAT scores; thus, this map indicates which schools are performing better than others adjusted for income.

Mapping Abandoned Mine Lands in the Kiski-Conemaugh Water Basin
Anthony Scaletta

The map depicts Abandoned Mine Lands (AML) located throughout the Kiski-Conemaugh Water Basin. It was developed in conjunction with the Pennsylvania Environmental Council's (PEC) need for a current map that illustrates the AML's proximity to the streams that it pollutes. AML is associated with Abandoned Mine Drainage (AMD), a major polluter of the waterways of the basin, destroying marine habitats and ecosystems. This map is to be used in PEC's applicable presentations as an aid in educating the public on the severity of AML in the basin. The PEC also intends to use this map to assist in deciding which AML needs to be addressed first, based on its size and its location relative to the major streams and tributaries.

Campus Map

CLARION UNIVERSITY
SINCE 1867
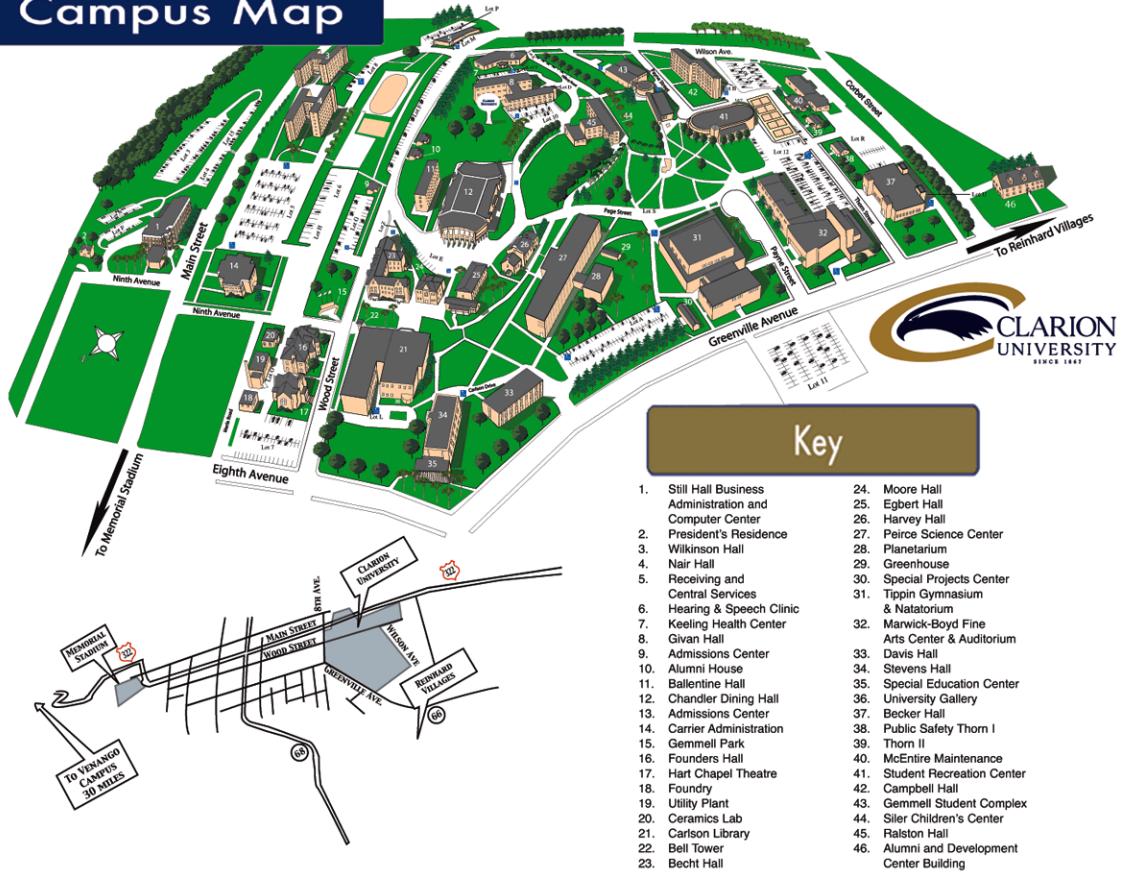
Key

1. Still Hall Business Administration and Computer Center
2. President's Residence
3. Wilkinson Hall
4. Nair Hall
5. Receiving and Central Services
6. Hearing & Speech Clinic
7. Keeling Health Center
8. Givan Hall
9. Admissions Center
10. Alumni House
11. Ballentine Hall
12. Chandler Dining Center
13. Admissions Center
14. Carrier Administration
15. Gemmell Park
16. Founders Hall
17. Hart Chapel Theatre
18. Foundry
19. Utility Plant
20. Ceramics Lab
21. Carlson Library
22. Bell Tower
23. Becht Hall
24. Moore Hall
25. Egbert Hall
26. Harvey Hall
27. Peirce Science Center
28. Planetarium
29. Greenhouse
30. Special Projects Center
31. Tippin Gymnasium & Natatorium
32. Marwick-Boyd Fine Arts Center & Auditorium
33. Davis Hall
34. Stevens Hall
35. Special Education Center
36. University Gallery
37. Becker Hall
38. Public Safety Thorn I
39. Thorn II
40. McEntire Maintenance
41. Student Recreation Center
42. Campbell Hall
43. Gemmell Student Complex
44. Siler Children's Center
45. Ralston Hall
46. Alumni and Development Center Building

Evaluation form for the
PENNSYLVANIA GEOGRAPHICAL SOCIETY (PGS) ANNUAL MEETING
October 31 – November 1, 2008, Clarion, PA

Your input is most important for future annual meetings and other PGS programs. Please complete this form and return it to the PGS Registration table before you leave the meeting or mail it to:
Brent Zaprowski, Department of Geography and Geosciences, 1101 Camden Ave, Salisbury University, Salisbury, MD 21801

1. How would you rate this meeting?	Poor		Neutral		Excellent
	1	2	3	4	5
a. Overall	( )	( )	( )	( )	( )
b. Site/Location	( )	( )	( )	( )	( )
c. Program	( )	( )	( )	( )	( )
d. Hotel Rooms	( )	( )	( )	( )	( )
e. Meeting Rooms	( )	( )	( )	( )	( )

2. Presentations:	Poor		Neutral		Excellent
	1	2	3	4	5
a. Friday AM	( )	( )	( )	( )	( )
b. Friday PM	( )	( )	( )	( )	( )
c. Saturday AM	( )	( )	( )	( )	( )
d. Map Contest	( )	( )	( )	( )	( )

3. PGS Luncheon	( )	( )	( )	( )	( )

4. PGS Annual Banquet	( )	( )	( )	( )	( )
Banquet Speaker	( )	( )	( )	( )	( )

5. My expectations of the meeting were:	Unmet		Neutral		Met
	( )	( )	( )	( )	( )

Why?

6. What would make the Annual Meeting more valuable to you?