

## Vita - Nancy Joan Selover - 7/2011

**State Climatologist** 2007 - Present

**Assistant State Climatologist** 1999-2007

### Work Address:

State Climate Office  
Arizona State University  
Tempe, AZ 85287-1508

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### Education:

Ph.D. Geography (Emphasis Meteorology/Climatology) Dec 2005  
Arizona State University

M.A. Geography (Emphasis Meteorology/Climatology) Dec 1995  
Arizona State University

B.S. Geography (Emphasis Meteorology/Climatology) May 1993  
Arizona State University

B.A. Technical Theater Aug 1973  
University of California at Los Angeles

### Service:

2008-Present **NOAA Climate Database Modernization Program (CDMP)** – Co-Sponsor Digitization of Navajo Nation weather station data – funded by CDMP.

2010-Present **WERA 1012** Managing and Utilizing Precipitation Observations from Volunteer Networks. COOP and CoCoRaHS Collaboration Committee. (NIMSS/WAAESD)

2005-Present **Arizona Drought Task Force** – Co-chair of Technical Monitoring Committee 2008-Present. Calculate monthly drought status for the 15 Arizona watersheds.

1999-Present **Arizona Flood Warning System** – Multi-Agency Task Force. Member. State Climate Office is designated to archive the flood warning data when funding becomes available.

2009-10 **Hazard Mitigation Plan Task Force.** Identify climate related natural hazards and potential mitigation opportunities and document past occurrence and future probability of occurrence. Also contributed to prior update in 2007 and original plan in 2002.

2009-Present **CoCoRaHS (Community Collaborative Rain Hail and Snow)** network, State Coordinator for Arizona. A nationwide, NSF supported citizen precipitation observer network that promotes climate education and engagement.

2009-2012 **American Meteorology Society Applied Climatology Committee** member. Planning and coordination for national conferences, committee awards, and drafting AMS on applied climatology topics.

### Funded Research Projects:

2008-2009 **Sensitivity Analysis of Arizona State Drought Status Determination.** Principal Investigator (PI) with Dr. Michael Crimmins, UA Agricultural Extension, funded through the Arizona Water Institute.

2007 **Assessment of the Navajo Nation Hydroclimate Network.** PI: Dr. Gregg Garfin, Climate Assessment for the Southwest (CLIMAS), funded through the Arizona Water Institute.

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- 2007 **Drought Indicator and Trigger Tool for Community Water Systems.** PI: Dr. Michael Crimmins, Department of Soil, Water, and Environmental Science & Arizona Cooperative Extension, The University of Arizona, funded through the Arizona Water Institute.
- 2006-2007 **Advanced Monitoring Initiative - EPA-Ozone.** PI: Dr. D. Rick van Schoik, San Diego State University, and Southwest Consortium for Environmental Research and Policy (SCERP). Determine how remote sensing can be used to determine surface ozone concentration in the border areas of San Diego-Tijuana, Mexicali-Imperial valley, and El Paso-C.D. Juarez.
- 2004-2006 **CuPIDO – Cumulus Photogrammetric, In Situ and Doppler Observations.** PI: Dr. Joseph Zehnder, ASU Geography. Project to examine onset and development of deep convection associated with the North American Monsoon over the Catalina Mountain sky islands of southern Arizona.
- 2005 **Salt River Project Run-off Model.** With Dr. Andrew W. Ellis, Office of Climatology, ASU Geography. Develop run-off prediction models for the Salt, Verde, and Tonto Basins using SNOTEL SWE and precipitation data. Separate models for 1<sup>st</sup> and 15<sup>th</sup> of month during RO season.
- 2003-2004 **City of Phoenix Water Services Department – ASU GPS Data Collection Pilot Study.** PI: Dr. Elizabeth Burns, ASU Geography. Project Manager supervising graduate students in GPS data collection and GIS processing of water department infrastructure.
- 2001-2002 **Crop Water Use in Central Arizona.** Co-Investigator with Dr. Michael Hanrahan, Senior Research Specialist, ADWR. Project funded by Arizona Department of Water Resources to estimate actual crop water use for cotton, wheat and barley in central Arizona.
- 1999-2001 **Evaporation and Climate Effects of Tempe Town Lake.** PI. Partner project with City of Tempe Water Management Division, ASU Environmental Fluid Dynamics Program, and McKemy Middle School. Grant from University for the Next Century, ASU President's Office.
- 1999 **Temperature and Wind Speed Probabilities in the Metropolitan Phoenix Area.** PI. Grant from Salt River Project Electric System Planning and Engineering Department. May through September 1999.
- 1991-1999 **Arizona Thunderstorm Intercept Project (AZTC).** Assistant Director since 1992. A summer research project with the National Weather Service Phoenix Forecast office and the local media to gather meteorological data ahead of approaching thunderstorms in the Phoenix Metropolitan area. One credit summer course at ASU (GPH 498).
- 1998 Summer **Solar energy study in Grand Canyon along the Colorado River.** PI: Dr. Larry Stevens
- 1995-1997 **Energy Balance studies in the Grand Canyon along the Colorado River.** PI: Melvin G. Marcus
- 1995-1996 **NCAR COMET Partners Project.** Influence of Local Circulation Patterns on Convective Precipitation and Thunderstorm Development: Phoenix, AZ, Co-Investigators: Nancy J. Selover & Dr. Randall Cerveney, Arizona State University and Douglas Green, National Weather Service Forecast Office Phoenix.

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- 1995 **Western Region Climate Center, Desert Research Institute**, Development of Long-Range Statistical Forecast Guidance for Arizona Monsoon Precipitation. Co-Investigators: Robert C. Balling, Jr., Anthony J. Brazel, Nancy J. Selover & Randall S. Cerveny.
- 1993-1994 **SouthWest Area Monsoon Project (SWAMP)**, ground truthing for WSR-88D Doppler radar in Phoenix. Joint project of National Severe Storms Laboratory, National Weather Service Phoenix Forecast Office, Salt River Project, Arizona State University, and University of Arizona.
- 1992-1993 **NSF Undergraduate Grant** for Solar Radiation Project under direction of Dr. Randall S. Cerveny
- 1992 **Urban Land Use Effects on Temperature in Phoenix**. Project coordinators: Drs. Anthony J. Brazel and Ray Lougeay

### Teaching:

- 2009 Fall ASU GPH 413/598 Meteorological Instrumentation and Measurement
- 2008 March Climate Change Workshop - Arizona Science Center – Educator Workshop Series
- 2007 June Weather workshop – Arizona Science Center – Educator Workshop Series
- 2001 Spring ASU GPH 412/598 Physical Climatology
- 1998 Spring ASU GPH 215 Intro to Meteorology II Lab
- 1997 Fall ASU GPH 214 Intro to Meteorology I Lab
- 1997 Spring ASU GPH 213 Intro to Meteorology II
- 1996 Fall ASU GPH 214 Intro to Meteorology I Lab
- 1996 Spring ASU GPH 215 Intro to Meteorology II Lab
- 1995 Fall ASU GPH 111 Physical Geography Lab
- 1994 Spring ASU GPH 111 Physical Geography Lab
- 1993 Fall ASU GPH 214 Intro to Meteorology I Lab
- 1993 Summer ASU GPH 591 Storm Chasing

### Professional Publications and Presentations:

- Selover, N. J. 2010. Monitoring Drought in Arizona. (Presentation-Panel Discussion) **American Association of State Climatologists**, South Lake Tahoe, CA Jul 12-15, 2010.
- Selover, N. J. 2010. Climate Services at the Local Scale. (Paper) **American Meteorological Society 18<sup>th</sup> Conference on Applied Climatology**, Atlanta, GA Jan 17-22, 2010.
- Selover, N.J. 2009. Importance of Surface Networks for Climate Monitoring in the Southwest. (Paper) **Association of American Geographers**, Las Vegas, NV Apr 22-27, 2009.
- Stahlhut, J. W., Heydt, G. T., & N. J. Selover. 2008. A preliminary assessment of the impact of ambient temperature on distribution transformer loss of life. **IEEE Transactions on Power Delivery** **24(4)**:2000-2007.
- Selover, N. J. 2007. Spatial distribution of precipitation on the Navajo Nation and gauge density. **9<sup>th</sup> Biennial Conference of Research on the Colorado Plateau**. Flagstaff, AZ Oct-Nov 2007.
- Zehnder, J.A., Zhang, L., Hansford, D., Radzan, A., Selover, N., & C. M. Brown 2006. Using digital cloud photogrammetry to characterize the onset and transition from shallow to deep convection over orography. **Monthly Weather Review**, **134**: 2527-2546.
- Brazel, A.J. and N.J. Selover. 2006. Diurnal Regimes of Evaporation at Tempe Town Lake, Arizona. **Association of Pacific Coast Geographers**. Eugene, Oregon. September, 2006.

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- Brazel, A.J., Fernando, H.J.S., Hunt, J.C.R., Selover, N., Hedquist, B.C., & E. Pardyjak 2005. Evening transition observations in Phoenix, Arizona. **Journal of Applied Meteorology**, **44(1)**: 99-112.
- Selover, N.J., Dorn, D., Dorn, R.I., Brazel, A.J. 2003. Community partnership grant generates pre-service teacher and middle school student motivations for authentic science and mathematics. **School Science and Mathematics**. **103(1)**: 1-11.
- Baker, L.A., A.J. Brazel, N. Selover, C. Martin, N. McIntyre, F.R. Steiner, A. Nelson, L. Musacchio. 2002. Urbanization and warming of Phoenix (Arizona, USA): Impacts, feedbacks and mitigation. **Urban Ecosystems** **6:3**: 188-203.
- Nasrallah, H.A., Balling Jr., R.C., Selover, N.J. & R.S. Vose. 2001. Development of a seasonal forecast model for Kuwait winter precipitation. **Journal of Arid Environments**. **48**: 233-242.
- Selover, N.J. 2000. Spatial variability in climate across the Phoenix, AZ metropolitan area at various time scales. **Proceedings of the Third Symposium on Urban Climatology**. American Meteorological Society: Boston.
- Selover, N.J. 2000. Local climate effects of a large urban lake on Tempe, AZ. **Proceedings of the Third Symposium on Urban Climatology**. American Meteorological Society: Boston.
- Brazel, A., Selover, N., Vose, R., & G. Heisler. 2000. The Tale of Two Climates - Baltimore and Phoenix Urban LTERs. **Climate Research** **15(2)**:123-135.
- Selover, N. J. 2000. Contributor to: Dictionary of Physical Geography. Eds Thomas, D.S.G. & A. Goudie. Blackwell Publishers: Oxford. P.610
- Stanitski-Martin, D., Marcus, M.G., Brazel, A.J., Cerveny, R.S., & N.J. Selover. 1999. "Canyon Climate". **Forum**. **45(3)**:1-8.
- Cerveny, R.S., J.A. Shaffer, & N.J. Selover. 1994. "Orbital Influences on Climate". **1995 McGraw-Hill Yearbook of Science and Technology**.

### Professional Consulting:

<b>Review Board</b> 2009-2010	Arizona Statewide Probable Maximum Precipitation Study funded by ADWR – Michael Johnson
<b>Meteorological Consultant</b> 2010-2011	Jones, Skelton & Hochuli – William Holm
<b>Meteorological Consultant</b> 2010-2011	Harper Christian Dichter Sluga, PC – Laura Schiesl
<b>Meteorological Consultant</b> 2010-2011	Jones, Skelton & Hochuli – Twisted Tree Farms
<b>Expert Witness</b> 2010	Harper Christian Dichter Sluga, PC – Alison Christian
<b>Expert Witness</b> 2010	Sacks Tierney P.A. – Sharon Shively
<b>Expert Witness</b> 2009	Jones, Skelton & Hochuli – Russell Yurk
<b>Meteorological Consultant</b> 2006-2008	Garrey, Woner, Hoffmaster & Peshek, PC – Kaci Bowman
<b>Meteorological Consultant</b> 2007-2008	Dale Haralson, P.C. – William Rucker, Investigator
<b>Expert Witness</b> 2005-2006	Udall, Shumway & Lyons – Mike Wright
<b>Expert Witness</b> 2003-04	Jennings Strouss – Garrett Olexa
<b>Meteorological Consultant</b> 2003	Cunningham & Cunningham – Matt Cunningham
<b>Meteorological Consultant</b> 2002	Jennings Strouss – Garrett Olexa
<b>Meteorological Consultant</b> 2001	Arizona Attorney General's Office
<b>Meteorological Consultant</b> 2001	Mesa Police Department
<b>Expert Witness</b> 2000	U. S. Attorney's Office - Francisco Sanchez, Jr.
<b>Expert Witness</b> 1999	William J. Downey, P.C. - Dane Wood

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<b>Expert Witness</b> 1999	Santin, Poli, Ball, & Sims Attorneys - Scott Reynolds
<b>Expert Witness</b> 1998-99	Burke, Panzarella & Rich Attorneys - Robert Novascone
<b>Meteorological Consultant</b> 1998	Jones, Skelton & Hochuli - Jay Rosenthal
<b>Meteorological Consultant</b> 1997-05	Capitol Weather Consultants Inc., Baltimore - Sol Hirsch
<b>Meteorological Consultant</b> 1997-98	Scottsdale Center for the Arts - Richard Alling

### Educational Outreach:

**State Coordinator – CoCoRaHS** – Citizen Precipitation Observer Network 2009 – Present  
**SRP Global Climate Change Academy** for K-12 teachers– June 16 & 23, 2011, Pera Club, Tempe, AZ  
**CoCoRaHS Precipitation Measurement Training** –2011 Gilbert, Prescott, AZ  
**CoCoRaHS Precipitation Measurement Training** –2010 Glendale, Peoria, Mesa, Flagstaff AZ  
**American Meteorological Society (AMS) WeatherFest** Seattle, WA, Jan 2010 – CoCoRaHS volunteer  
**Mitchell Elementary School**, Phoenix, AZ – Feb 2010 – Climate and severe weather.  
**Guerrero School** – Mesa, AZ – Mar 2010 – Weather and climate in Arizona  
**ASU Ecosystems Engineering Seminar** – Mar 2010 – Arizona Climate and Energy  
**ASU Physical Geography GPH 212** – Mar 2010 – Solar Radiation and Measurement practices  
**AMS Northern Arizona Chapter** – Oct 2010 – Urban Heat Islands in Arizona  
**Northern Arizona University** – Oct 2010 – Training on precipitation measurement  
**AMS Southern AZ Chapter** – Nov 2010 – Arizona Climatology and State Climate Office  
**University of Arizona** - Nov 2010 – Training on precipitation measurement  
**GeoConference 2010** – AZ Geographic Alliance – Keynote speaker Oct 2010, Mesa, AZ  
**American Meteorological Society WeatherFest** Atlanta, GA, Jan 2009 – CoCoRaHS volunteer  
**Community Conversation on Climate and Water** – May 2009 - NOAA Climate Program Office, Association of Science-Technology Centers, workshop to provide Arizona climate and water information to the public, and encourage community conversations.  
**Kyrene del Pueblo School**, Tempe Sep 2009 - Training on precipitation measurement  
**Mesa Community College** – Sep 2009 - Training on precipitation measurement  
**University of Arizona** - Nov 2009 – Training on precipitation measurement  
**Northern Arizona University** – Oct 2009 – Training on precipitation measurement  
**Focus the Nation** – 2009, 2008 Glendale Community College – Urban Heat Island – Climate Change  
**First Lego League** – Dec 2009 Judge for Research Projects – Regional and Statewide competitions  
**First Lego League** – Mar 2009 – Coaching State Champion team “Climate Cops” for their national competition of the climate research project.  
**American Meteorological Society WeatherFest** Phoenix, AZ, Jan 2008 – CoCoRaHS volunteer  
**First Lego League** – 2008 – Climate Connections Research Topic, 6 teams in central Arizona  
**Mitchell Elementary School** Phoenix 2008 – Rainfall-runoff presentation to 2<sup>nd</sup> – 4<sup>th</sup> grades  
**Scottsdale Elementary School Science Fairs** 2002-2004.  
**Guest Speaker** – Phoenix and Tempe Elementary Schools, Tempe and Sun Lakes Kiwanis. 2001-2003.  
**SEE ASU** 1999 – 2003 – Geography/Meteorology booth volunteer  
**Smithsonian Astrophysical Observatory** June 2001 – Summer Science Saturdays, Arizona Monsoon Presentation.  
**Arizona Geographic Alliance K-12 Summer Workshop** June 2001 - Tempe Town Lake Presentation  
**Arizona Geographic Alliance GeoDay Trip** June 2000 - Tempe Town Lake Presentation  
**Arizona Geographic Alliance GeoDay Trip** May 1998 - Mountain Climatology Discussion Leader  
**Educational Management Group** 1997 - TV Class instructor on various meteorology topics.

### Operational Climate Products:

<http://azclimate.asu.edu/> State Climate website:  
Monthly Arizona Climate Summary web publication; overview and statistics on the previous month’s weather put into a climate context.  
Monthly Temperature and Precipitation Summary for Drought status update  
Weekly forecast updates.

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Daily Phoenix Sky Harbor Precipitation table  
Daily Tempe Pan Evaporation Table

### **Student Mentoring:**

Matthew Salerno – 2010 – ASU - Undergraduate – Climate products supervisor – expected Grad 05/13  
Jonny Malloy – 2010 – ASU – Member PhD Dissertation Committee – expected Grad 05/2012  
Matthew Pace – 2010 – ASU – Member PhD Dissertation Committee – expected Grad 12/2011  
Kimberly DeBiasse – 2009-2011 – ASU - Member PhD Dissertation Committee ASU – Graduated 05/11  
Heather Smith – 2009 – Service Learning transfer student from Mesa Community College  
Jamie White - 2009 – ASU – Member of Master’s Thesis Committee – Graduated Aug 2009  
Ashley Weaver - 2008, 2007 – St. Mary’s High School, community service volunteer.

### **Professional Organizations:**

2006-Present	Association of Pacific Coast Geographers
1999-Present	American Association of State Climatologists
1994-Present	American Meteorological Society – Applied Climate Committee (2009-2012)
1993-Present	Association of American Geographers
1993-Present	Arizona-Nevada Academy of Science
1991-Present	Central Arizona Chapter - American Meteorological Society; Co-President 2009-2011, 1994-95, Secretary 1993-94.