



Bruce Melton, P.E.

Vitae 2010

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Education

Bachelor of Science, Civil Engineering Technology, Texas A&M University, 1983

Professional Registration

Professional Engineer, State of Texas #87097

Experience

Owner: Writing to Save the Planet – January 2004 to present

Owner: Casa Grande Photography – December 2002 to present

Owner: Melton Engineering and Homebuilders – August 2002 to present

Owner: Melton Engineering Services Austin (MESA Engineering) – February 2001 to present

Civil Engineer (P.E.), Environmental Specialist, Project Manager, Loomis Austin, Inc., October 1997 – February 2001

Senior Staff Engineer, Bury and Pittman, April 1996 - October 1997

Environmental Coordinator, Lower Colorado River Authority, March 1990 to April 1996

Staff Engineer, Jones and Neuse, Inc., March 1986 August 1987

Staff Engineer, Haynie, Kallman and Gray, Inc., October 1984 - March 1986

Grants

EPA Section 319: Storm Water Research (1992: implemented - \$750,000)

Texas Water Development Board: Storm Water Research (1992: awarded and implemented \$200,000)

Career Summary

I am a professional engineer, environmental researcher and outreach specialist. When I was doing stormwater research at the Lower Colorado River Authority in the early 1990s, I became aware of the disconnection between climate science and public knowledge of climate change. What I was hearing coming from the media was, counter intuitively, not as extreme as what I was reading in the academic literature. About the turn of the century the disconnection became so great that I felt compelled to start writing about the subject. Several years went by and the knowledge growth of climate science was leaping so far ahead of the public that I decided I needed to supplement my writing with filmmaking. Traditional outreach was falling far behind. This is when I started training for the ice sheet and my trip to Greenland.

Now I have the images of the climate crisis that is happening today. I have my experiences with the scientists in the Arctic. I have seen the look of fear in their eyes and heard them talking fast about what they cannot write in their papers because they have no proof. In science, more proof is

needed to publish a discovery than is needed to convict a murderer because; a murderer can be convicted on circumstantial evidence. Hard facts are required as proof in academic literature. Circumstantial evidence only implies proof “beyond a reasonable doubt”.

My outreach efforts to date include four films, 170 pages of a book, 30 essays and a 30,000-word breaking climate news journal. My work deals directly with the academic science and scientific institutions. I review new academic discoveries, talk to the scientists and “interpret” the scientific findings into easily understood language. Mainstream journalism only confounds the issues because by far, the journalists do not understand the science. My engineering career, my experience with environmental research for the EPA and my training as a technology outreach specialist with the Lower Colorado River Authority and my environmental consulting work over the last 25 years have all given me the skills to lead where few can follow – into the mire of the climate science conundrum.

Accomplishments

Climate Change Author and Public Speaker: Writing is in progress for the books 1) *Earth at Risk – Abrupt Climate Change*, 2) *Climate Diary: A Year in the Climate Crisis*. Writing completed to date includes five chapters, 30 essays and a 30,000 word “Breaking Climate News Journal”. Speaking and presentations include eight television and radio interviews and numerous other public speaking events and film screenings. Publications include numerous articles in the local paper, local magazines and the newsletter for the Central Texas Chapter of the Sierra Club. Links are given below.

Climate Change Film Maker: The Bob Bullock Texas History Museum has committed to showing one or more of my films for a period of a year or more starting in early 2010. They include the short film *What Have We Done?* about the great pine beetle pandemic in the North American Rockies that has killed 52 million acres of trees in a little over a decade and a full-length film, *The Ice and the Sea*, is about the current abrupt climate change in Greenland and rapidly increasing sea level rise. I have recently updated *What Have We Done?* to a two-hour full-length documentary after a 19-day 5,000 mile filming trip to the Rockies. Final edits will be complete by late March.

Community and Environmental Advocacy: Community activism has been a passion for the last five years. I have assumed a significant leadership role in several community and environmental advocacy groups supporting water quality, the environment and community issues. My experience includes substantial political lobbying and coordination with other community, state and national environmental groups. I have prepared about \$120,000 worth of reports, presentations, and supporting engineering and environmental materials - 97% done in a volunteer capacity. Organizations include: Fix290 Coalition, Save Oak Hill Alliance, Save our Springs Alliance, Save Barton Creek Association and Sierra Club - Central Texas Chapter.

International Environmental Work: In 2009 I was involved in advocacy work related to a river gravel mine on the frontier in Costa Rica. My work included the analysis of a Spanish environmental impact statement and the production a report and a short film about the issue.

Transportation and the Environment: Transportation issues are key, not only to climate change, but to creation of a sustainable society. I have analyzed numerous issues related to four major transportation projects in the Austin and San Antonio area totaling over \$1.4 billion in proposed spending. My work has included analyses and related tasks for surface and aquifer water quality,

transportation systems design, traffic growth modeling, urban planning and growth demographics, critical riparian ecosystems, social and noise impacts, national Environmental Protection Agency Environmental Impact Statements, US Fish and Wildlife endangered species biological assessments, US Army Corp of Engineers waterway permits, Texas Commission on Environmental Quality Water Pollution Abatement Plans, numerous public presentation, State Senator sponsored public policy dispute resolution and climate change outreach for urban sprawl management and public transportation.

Professional Engineering (Civil Engineer and Environmental Specialist): My general career has included positions for Project Manager, Environmental Specialist, Staff Engineer and Interim Program Manager and has included duties related to: critical environmental issues, water quality, stormwater runoff pollution, land development, hydrology, hydraulics, (open channel and pipes), flooding issues, concrete, structural, infrastructure, entitlements and public presentations. I have been the president of Melton Engineering Services Austin since 2001.

Research in Storm water Quality Treatment: I was the Project Manager and Principal Investigator for a \$1 million EPA Stormwater Quality Grant. My other major research tasks included statistical analysis of 150 years of climate records for five Central Texas counties.

Advanced Environmental Solutions for Stormwater Quality Treatment: I prototyped and implemented water quality control technologies for underground peat/sand filters, dual-chambered sedimentation, water quality wet ponds and rainwater harvesting.

Endangered Species and Karst Geology: I have significant experience consulting for land development projects with impacts to the following endangered species: golden-cheeked warbler, black-capped vireo, Houston toad and several cave invertebrates.

Four Star Green Builder: I built three, Four-Star Green Builder homes simultaneously. These homes were rated with the prestigious Austin Green Builder Program in the top 0.5% of all homes. The prototypes were modular custom homes. Tasks included prototype design, technology coordination, construction, marketing, management and sales.

Climate Change – The Band:

I have written and composed over twenty original climate change songs and played some of these songs live on eight television and radio shows. The Band's biggest gig to date was a 30-minute television performance on the Austin Music Showcase that aired during the international music festival, South by South West, in Austin in 2009.

Publications

1. *In-stream gravel mining impacts and environmental degradation feedback associated with gravel mining on the Rio Tigre of the OSA Peninsula, Costa Rica, and the proposed ADI Jimenez Gravel Mining Concession: An environmental impact summary and hydrographic analysis of the ADI Jimenez Gravel Mining Proposal Environmental Impact Statement*, Prepared or several local environmental advocacy groups on the Osa Peninsula of Costa Rica, July 2009.
2. *Safeguarding the Gateway to Austin's Economic Future: An analysis of the social, engineering and environmental issues concerning the construction of State Highway 45 Southwest*, Prepared for the Save Barton Creek Association, June 2009.

3. *Decrease of Traffic Growth in the Austin Metropolitan Region Immediately After the Turn of the 21st Century and Implications for Transportation Planning in South and Southwest Austin*, prepared for the Save Barton Creek Association, May 2009.
4. *Wildflower Commons Planned Use Development: Traffic Generation Report*, prepared for the Save Our Springs Coalition, February 10, 2009.
5. *Fix290 Noise Report: Analysis of Future Highway Noise in Oak Hill for the TxDOT Hwy 290/71 Interchange Project*, Prepared for Fix290.org, July 4, 2007.
6. *Fix290 Report: Analysis of the Issues Concerning the TxDOT Highway 209/71 Interchange Project*, Prepared for Fix290.org, September 2006.

Professional Societies

American Geophysical Union
American Association for the Advancement of Science
Union of Concerned Scientists

Personal Interests

I am interested in the "Big Picture". My personal interest since the late 1980s have been increasingly geared towards the total understanding of any given issue whether it be the environmental impacts of a proposed toll road, or an essay on the impacts of increased carbon dioxide concentrations in the oceans and the corresponding relationship with ocean acidity and primary production or, the total understanding of filmmaking or music theory, lyrics, recording and production. I am an avid organic gardener and native plant collector. I am an outdoor adventurer who enjoys four wheel drive trails above tree line in the Rockies, backpacking next to the ice sheet in Greenland and fly casting with my own homemade flies and fly rods from an uninhabited barrier island on the Central Texas Coast out of a homemade wooden flats boat.

Links

Melton Engineering Services Website (my work can be found here; films, writing, engineering and music):

<http://www.meltonengineering.com/>

Films are on the front page of my Website:

<http://www.meltonengineering.com/>

Climate Essays are here:

[http://www.meltonengineering.com/Climate Essays.htm](http://www.meltonengineering.com/Climate%20Essays.htm)

My *Breaking News Journal* is here:

[http://www.meltonengineering.com/Breaking News.htm](http://www.meltonengineering.com/Breaking%20News.htm)

My book, *Earth at Risk: Abrupt Climate Change Happening Now* is here:

[http://www.meltonengineering.com/earth at risk/Pages/Earth at risk first page.htm](http://www.meltonengineering.com/earth%20at%20risk/Pages/Earth%20at%20risk%20first%20page.htm)

The Band's music is here:

[http://www.meltonengineering.com/Climate Change the Band/Climate Change the band.htm](http://www.meltonengineering.com/Climate%20Change%20the%20Band/Climate%20Change%20the%20band.htm)