

# LIGHTNING DATA CENTER MINUTES

December 11, 2015

ST. ANTHONY HOSPITAL WEST, LAKEWOOD, CO

MERRY CHRISTMAS & HAPPY NEW YEAR TO ALL!

1. Meeting began at 11:50 AM and adjourned at 1:05 PM. Members Present: Clark, Johnson, Elder, Wachtel, Langford, Yarnell, Patrick, Wells, Nibbe, Glancy, Gift, and Cui-Gift. We were also graced with the presence of Katie Atkinson, Grant Manager with the St. Anthony Hospital Foundation. Clark moderated.
2. Steve Clark advised our efforts to secure grant money for the purchase of lightning data continues. An important step in that direction occurred with Katie's attendance. She wanted to get a sense of what the group is about. Steve will be discussing grant funding with her in the next few days.
3. Ken Langford showed us what is thought to be one of the first high-speed lightning videos ever made. The video was recorded in South Dakota by Tom Warner. Link: <https://www.youtube.com/watch?v=JVXy-ZqqZ-g>
4. Howard Wachtel commented on last month's meeting, first by e-mail and again verbally at the meeting. The subject was lightning safety for indoor pools. Howard expressed concerns about the decision to evacuate indoor pools during stormy weather. In his opinion, the risk of lightning hurting someone in an indoor pool is a low probability lightning injury scenario. Howard thinks the risk of injury would be far greater with people going outside to their cars following such an evacuation. Howard was also concerned about the legal exposure of the parks and recreation people who attended last month's meeting. Howard thinks since they attended, they effectively have received "legal and constructive notice" of a potential hazard, which forces them to take some kind of action. Had these people not attended the meeting, Howard thinks they would have been in a better legal position from an "ignorance is bliss" standpoint.

Ken Langford agreed with some of Howard's concerns, especially on the question of what to do with the people, once they have evacuated the pool. He thinks they should be given something to do while out of the pool, instead of just waiting.

Dr. Martin Uman commented via e-mail there would be legal aspects if someone were to be struck at an indoor pool. In a subsequent e-mail to Ken, Dr. Uman said: "In my view, the swimmers should get out of the water and stay away from any metal objects attached to the pool. Many indoor pools are probably very safe, but some are not, so how do you make a general rule? For example, pools have lights whose electrical connections likely go outside where they can pick up significant voltages. Ditto any other metal that goes outside from the indoor pool." NOTE: Permission was granted by Dr. Uman to print the e-mail as given. Thank you, Dr. Uman.

5. Mel Patrick said he had been bicycling along a bike path, when he came upon an open area where approximately 100 people were doing some kind of training. A storm was approaching from the west and he wondered whether he should advise the people of the danger of lightning. He did not say anything to anyone. To this day, he wonders if he should have acted, and if he did, what should he have said? Ken mentioned the 30/30 rule as a basic starting point. Steve said the 30/30 rule may not be sufficient, given the larger group size and the time it takes to seek proper shelter and those things should ideally be determined before the group activity takes place.

We discussed how far one has to be from a lightning strike to be injured. Bob Glancy recalled an event where injury was reported several miles away from the strike along an underground water pipe. Howard noted injury due to the magnetic effects of lightning are most likely within a few meters of the strike. Ken showed an image of the dendritic damage pattern in grass from a lightning strike to a tree. In addition, the National Weather Service's Jetstream Online School for Weather notes ground currents from lightning can be lethal up to 100 feet away.

6. Bob Glancy gave a lightning talk at a local grade school. Following his talk, he was made aware of a lightning strike survivor who is a world-famous mountain climber. He was struck 12 years ago at the same park where the woman featured in the October and November 2014 minutes was struck. Bob told him about the LDC. Ken said if he comes to speak at a meeting, he would like to have the woman attend the same meeting.
7. Al Nibbe recalled speaking with a park ranger at Glacier National Park many years ago and asking about lightning safety. The park ranger said they did not have a lightning safety policy due to the infrequency of lightning. Al wondered why is lightning infrequent there. Steve commented the relative lack of low-level moisture was a contributing factor and Bob added the atmospheric profile (vertical profile) was not as conducive to thunderstorm formation.
8. Phil briefly mentioned a fighter pilot had been struck by lightning while walking into a hangar on an air base. Apparently, he was unaware he had been hit, until other personnel noticed he was flush in the face. He has bouts of anxiety and sleep disturbance, among other ailments. He has also determined he is unfit to fly.
9. Questions, comments, notification of errors, and critiques of these minutes are welcome. Please forward those to Steve Clark at: [sclarktoto@gmail.com](mailto:sclarktoto@gmail.com). Please keep your communications professional and respectful. Communications will be forwarded to the appropriate author(s) of the minutes and addressed accordingly.

10. LDC Disclaimer: These minutes do not represent official positions of the LDC or its members. They simply reflect the comments made at the meeting. Furthermore, the LDC does not implicitly or explicitly recommend or endorse any product or service. Any product or service presented in these minutes is done so for purposes of discussion and analysis. The merit (or lack thereof) is open for the consideration and review by the entire membership.
11. Next meeting: Friday, January 8, 2016 at 11:45 AM at St. Anthony Hospital West. Conference Room TBA.

Respectfully Submitted,  
Steven E. Clark, Consulting Meteorologist

## Lightning Links

**This is a monthly listing of periodicals, websites, and videos about lightning and allied areas from a variety of sources. A headline or description is listed, followed by the link. Please note that some of the links are perishable, which means you'll need to go to the source for the information.**

2012. Lerner, R. *In the Grow*. Perdue Extension, April 2012  
[https://hort.purdue.edu/ext/ITG\\_apr13.html](https://hort.purdue.edu/ext/ITG_apr13.html)

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National Weather Service Jetstream Online School for Weather: Lightning – Frequently Asked Questions. [http://www.srh.noaa.gov/jetstream/lightning/lightning\\_faq.htm](http://www.srh.noaa.gov/jetstream/lightning/lightning_faq.htm)

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ZT Research Lightning Investigation & Analysis. <http://www.ztresearch.com/>