

ASHRAE TC 1.12
Moisture Management in Buildings
Full Committee Agenda

2025 ASHRAE Summer Meeting, Phoenix

Main Committee Meeting: Saturday 6/21/2025, 1:00 PM - 3:00 PM EDT

Phoenix Convention Center North Building, 222A (Level 2)

[Hybrid Same Zoom link](#)

1. Call to order 1:06 pm MST **Carl Grimes**

2. Review Scope TC 1.12 is concerned with the interaction between the weather, the building envelope, its systems and its occupants which either lead to moisture accumulation or which prevent it.

3. ASHRAE Code of Ethics Commitment **Carl Grimes**
"In this and all other ASHRAE meetings, we will act with honesty, fairness, courtesy, competence, integrity and respect for others, and we shall avoid all real or perceived conflicts of interests." See full ASHRAE Code of Ethics: <https://www.ashrae.org/about-ashrae/ashrae-code-of-ethics>

4. Introductions **All**
a. Determination of a quorum David Baird
VOTING MEMBERS FOR THIS MEETING (Need (6) or ½+1 for a Quorum)

Carl Grimes	07/01/2025	Deborah Callaway	06/30/2025
Erika Bonfanti	06/30/2024	Danko Davidovic	06/30/2026
Dave Finley	06/30/2024	Paul Haas	06/30/2024
Wahid Maref	06/30/2024	Ed Light	06/30/2025
Don Snell	06/30/2027	Mikael H Salonvaara	06/30/2026

Quorum not reached.

5. Agenda additions **All**
a. Position paper to engage ASHRAE more in moisture management

6. Chair's Report **Carl Grimes**

- a.** Chair's Goals and Announcements
- b.** Length and good engaged discussion this morning on moisture in buildings is important and becoming more important
- c.** Climate change is adding to this need
- d.** Dynamic system of interactions impact buildings and moisture
- e.** Looking at several documents within this committee which will be covered later in agenda
- f.** Encouraged by having newer members involved and engage as committee continues moving forward
- g.** SGPC 10 Interactions of Achieving Acceptable Indoor Environment

7. Approval of minutes from Hybrid Orlando Meeting **Carl Grimes**
a. Will need to be addressed via letter ballot since did not establish quorum

8. Membership/Roster

David Baird

Starting July 1st: 2025 (All voting members and/or subcommittee chairs)

Name	Role	Voting
Erika Bonfanti	Chair	Yes
Wahid Maref	Vice Chair	Yes
David Baird	Secretary	No
Masih Alavy	Research Chair	Yes
Craig Marden	Standards Chair	Yes
Danko Davidovic	Handbook Chair	Yes
Dave Finley	Program Chair	Yes
Neil Freidberg	Webmaster	Yes

Name	Role	Voting
Alchilles Karagiozis	Member	Yes
Carl Grimes	Member	No
Paul Haas	Member	Yes
Mikael H Salonvaara	Member	Yes

Future Membership discussion:

- Stephen Dooda interested in voting member come next year
- Neil willing to wait on voting members

9. Liaisons

a. TAC Section Head

- This will be last time section head Jason ...
- New one starts July 1st
- ASHRAE has published the new strategic plan (2025 to 2028)
 - Position ASHRAE in advanced solutions and address climate change
 - Increase accessibility of ASHRAE content
 - Initiative are ...
 - Organizational agility as a tactic
- Chair's breakfast and training workshop on Sunday meeting
- Training on roster and activity form significance
- Updates on government affairs
- Training for handbook chair on Sunday
- Training for research chair on Monday
- Roster update feedback to make easier
- Subscribe to government affairs update if interested
- Center for Building Excellence and Decarbonization has been busy
 - Position document must get approved before being released

10. Subcommittee reports

a. Programs

Dave Finley

Programs will be giving updates on seminars of interest and discussing tracks for future conferences, as well as looking for proposed seminars and topics for those tracks

- We did submit a program for building retrofit and effects on moisture management which was not approved.
- Seminar 57 which is co-sponsored by TC 1.12 at this conference. TC 4.4 main committee
- Las Vegas tracks are:
 - Fundamentals and Applications
 - HVAC & R Systems and Equipment
 - Refrigeration & Refrigerants
 - Research Summit
 - Energy Storage and Grid Resiliency
 - Pathways to Building Decarbonization
 - Artificial Intelligence
 - Indoor Environmental Quality for Healthy Buildings
 - Future Proofing the Built Environment
- Several sessions available for the next meeting in Vegas being considered.
 - Going to resubmit proposed for Orlando on Future Proofing Built Environment
 - Don Snell will be leading the charge for the submission

- ii. Suggest getting co-sponsorship to increase odds of submission
 - 1. Section head suggested 2.10 and/or 1.4 as seems relevant
- iii. Will need to letter ballot since no quorum
- b. Track 8: Indoor Environment for Healthy building potential
 - i. SGPC 10 willing to help participant or speak on this topic
 - ii. Need someone to take charge on this.
 - iii. SGPC 10 has planned and TC 1.12 willing co-sponsor but will be handled via letter ballot since need title and enough voting members
- c. August 1st is the deadline for majority of different types of programs
- d. TAC does not have the list of tracks for Austin but will be finalized on Tuesday
- e. Strong representation looking at minimum standards
 - i. Peter Luttik and Ed Light to coordinate on this topic and coordinate with Dave Finley

b. Research

Wahid Maref

Research will be updating on the TC 1.12 vote on RP 1844 and other updates on the project, as well as any progress on the identified topics from previous meetings.

- 1. Not present so will defer at this time.

c. Handbook

Danko

Newly assigned, and will be updating us on the approaching deadline for revisions.

- 1. 2 handbook chapters (Applications Chapter 64) and Fundamentals (Chapter 37)
- 2. Plan to start task group meeting between now and winter meeting
 - a. Applications (Chapter 64) will be published in 2027 so have until mid-2026 for revision with Danko taking lead
 - b. Fundamentals (Chapter 37) already published so will wait with Iffa Emishaw taking lead

d. Standards

Don

Standards will be updating on the current and pending standards activities.

- 1. Stanley Lee in meetings this morning and provided update on ISO 22185 standard
 - a. Due mid-July
- 2. GPC 46P - Design and Construction Practices for Controlling Humidity in Residential Buildings
 - a. Initiated but not enough interest/volunteers
 - b. Don trying to resurrect and move forward with it
- 3. Don will roll off after this meeting as Standard sub-committee chair

e. Web site

Neil

Neil is the incoming Webmaster, requesting information for content.

- 1. Neil is incoming and does not have access currently
- 2. Has not been updated since 2022 but will address

11. Old Business

- a. Andre and Erika Bonfanti to review (for eventual vote) an RTAR on construction moisture.
 - i. Decided that this was not best as a RTAR and better off as a paper topic.

- ii. Will compile current information and propose put together a new guide instead
- b. The original committee of the MTG publication on Damp Buildings, Human Health, and HVAC Design is in the process of reviewing and updating the document according to the definitions and descriptions of moisture as approved by Guideline10-2023 Addendum a.
 - i. Process has started and received some comments
 - ii. Will meet again after Phoenix meeting to review comments
 - iii. Does not expect taking very long based on received comments
 - iv. Should have something for the committee to review by Vegas or before.
- c. The PD Managing Moisture and Mold has pending actions:
 - i. Update the 62.1 reference to 62.1-2022.
 - Has not happened at this time
 - ii. Seeking a work group to update the document according to the definitions and descriptions of moisture as approved by Guideline10-2023 Addendum a.
 - No work currently assigned.
 - Carl will chair and go back to original committee to get suggestions and accomplish update
- d. Update on the submission of the moisture definitions to TC 1.6 for inclusion in the official ASHRAE glossary.
 - i. Attachment A and B.
 - ii. Compilation of terms using in Addendum A for Guideline 10
 - TC 1.6 Terminology tasked with harmonizing within ASHRAE which is challenging
 - Art is trying to compile all of the definitions across ASHRAE to then rationalize.
 - Looking for a Subject Matter Expert for guidance to iron out official definition
 - Is there a representative from TC 1.12 willing to participate? Lue Harrimon would be the best person
 - There is already a website having definitions currently but to be the source using correct terms
 - TC 1.6 will be asking for additional subject matter experts to partner with
 - Use cognizant technical committees to provide definition guiding TC 1.6
 - Recommendations is for the subject matter expert and not Technical committees instead
 - Carl to take charge and see if Lewis Harriman willing to serve as a Subject Matter Expert

12. New Business

- a. Position paper scope discussion on engagement with others on moisture
 - How does moisture impact other factors (health, VOC, virus/bacteria/fungal...)?
 - How do we control moisture properly (controls, HVAC equipment, building construction, ...)?
 - What setpoints should be maintained from moisture standpoint (i.e. rH, dewpoint)?
 - How do we share this to influence ASHRAE considerations on moisture (i.e. programs)?
 - How do extreme conditions impact since increasing?
- ii. Peter Luttik, Ed Light, and David Baird volunteered
 - Expand bullet points and put some more
 - David Baird to call meeting with group to discuss further
 - Coordinate with Erika as incoming chair

13. Adjourn

Dave Finley motioned, Danko second, adjourned at 2:14 pm MST

Attachment A

Email instructions from Art H for submitting definitions for inclusion in ASHRAE Glossary.

The focus of this effort is the harmonization of humidity terms using GDL10-2023a as a focal point of good definitions. At this point, TC 1.6 is seeking your thoughts as a subject matter expert of the terms GDL 10 uses.

By you, we mean you should represent the consensus of "ASHRAE's humidity experts" and this group, thru you, can advise TC 1.6 on recommended changes to Terms Online.

I have attached 2 files. A word list of the GDL10-2023 Addendum A and an updated custom 1.67 working file.

By custom, I mean it contains a new Col E which denotes terms that equal or are close to the 10-2023 Addendum word file terms. I tried to use excel advanced filtering many different ways to cull the list and it does not work. (The adjective may be behind the noun, there are over 10000 unique terms in the working file and the excel function stops at 10,000, excel filtering one by one is very tedious - a simple slip of the check boxes deletes them all.)

So bottom line. filter this working file by col E and I think you will find the terms of interest.

Next, look at the term source and the pubcode.

Code 2 is an ASHRAE peer reviewed definitions or TC 1.6 created ones.

Code 3 is ASHRAE non-peer reviewed.

Code 8 and 8a are external definitions.

Code 9 is any are history ones.

Code 1 is a TERMS ONLINE definition. It is the published harmonized ASHRAE definition. What 1.6 is interested in is any changes, additions or deletions to the pubcode 1 terms.

Example: There are a few terms in GDL 10 that are unique. You could safely recommend them for pub code 1 status.

If there are multiple definitions and a pubcode 1 definition, could the pubcode 1 be improved? TC 1.6 could use this input.

Note: ASHRAE's Glossaries do not include "notes". I had to delete them. I can send you G. Kerr's "How to create a good definition" if you would like it. It is a good document and TC 1.6/ASHRAE uses it.

Looking forward to your input. If TC 1.6 can get your input in early June we can discuss it at the Phoenix June Meeting. If not, it can be done after the June meeting.

Art Hallstrom, P.E. FASHRAE

Attachment B

tc_6 working file internal v25.05.17.xlsx Partial list for information only

Terms Online	y	absolute humidity	In a mixture of water vapor and dry air, the ratio of the mass of water vapor to the volume occupied by the mixture.
S041.6 2021	y	absolute humidity	in a mixture of water vapor and dry air, the ratio of the mass of water vapor to the total volume of the sample.
ASHRAE Blue Book 1991	y	absolute humidity	In a mixture of water vapor and dry air, the ratio of the mass of water vapor to the volume occupied by the mixture.
TC16	y	absolute humidity	mass of water vapor present per unit mass of dry air.
TC16	y	absolute humidity	see water vapor density
G10-2023_A	y	absolute humidity	the weight of water vapor contained in a unit volume of air, expressed as milligrams of water vapor per cubic centimeter of air.
NISTIR 5329 1994	y	absolute humidity	ratio of the mass of water to the total mass of a moist air sample.
S041.6 2014	y	absolute humidity	in a mixture of water vapor and dry air, the mass of water vapor in a specific volume of the mixture.
Terms Online	y	condensation	change of state of a vapor into a liquid by extracting heat from the vapor.
ASHRAE Blue Book 1991	y	condensation	change of state of a vapor into a liquid by extracting heat from the vapor.
S145.1 2024	y	condensation	change of state of a vapor into a liquid by extracting heat from the vapor.
TC16	y	condensation	change of state of a vapor into a liquid by extracting heat from the vapor.
G10-2023_A	y	condensation	the conversion of water vapor in the air to liquid water on a surface that is at or below the dew-point temperature of the surrounding air.
NAFA 2021	y	Condensation	Liquid or droplets that form when a gas or vapor is cooled below its dew point.
Terms Online	y	condensation point	temperature at which a vapor liquefies if the latent heat is removed at standard or stated pressure. See also [[dew point]]; [[saturation temperature]]; [[boiling point]].
TC16	y	condensation point	temperature at which a vapor liquefies if the latent heat is removed at standard or stated pressure. See also [[dew point]]; [[saturation temperature]]; [[boiling point]].
S062.2_2022	y	contaminant	a constituent of air that may reduce acceptability of that air.
G28_2021	y	contaminant	an airborne constituent that may reduce acceptability of the air.
G28_2021	y	contaminant	an airborne constituent that may reduce acceptability of the air.
G33_2021	y	contaminant	an airborne gas, particle, or liquid droplet of interest that is represented within an analysis tool.
S062.1 2022	y	contaminant	an unwanted airborne constituent with the potential to reduce acceptability of the air.
S014_2023	y	contaminant	any physical, chemical, biological, or radiological substance or matter in water.
S514_2023	y	contaminant	any physical, chemical, biological, or radiological substance or matter in water.
G10-2023_A	y	contaminant	see pollutant.
S161 2023	y	contaminant	an airborne constituent that may reduce acceptability of the air.
S189.1 2023	y	contaminant	see ANSI/ASHRAE Standard 62.1.
ASHRAE Handbook E33 2013	y	Contaminant	An unwanted airborne constituent that may increase the health risks and reduce acceptability of the air.
TC16	y	contaminant	substance (solid, liquid or gas) that negatively affects the intended use of a gas
IECC_2021	y	contaminant	see ANSI/ASHRAE Standard 62.1.
NAFA 2021	y	Contaminant	An unwanted airborne constituent that may reduce acceptability of the air.
S062.2 2016	y	contaminant	a constant of proportionality relating the rate of convective heat transfer at a surface to the temperature difference across the air film on that surface.
G24_2008	y	contaminant	a constituent of air that may reduce acceptability of that air.
G24_2015	y	contaminant	a constituent of air that may reduce acceptability of that air.
S062.2 2019	y	contaminant	a constituent of air that may reduce acceptability of that air.
G28_2016	y	contaminant	an airborne constituent that may reduce acceptability of the air.
S161 2007	y	contaminant	an airborne constituent that may reduce acceptability of the air.
S161 2013	y	contaminant	an airborne constituent that may reduce acceptability of the air.
S161 2018	y	contaminant	an airborne constituent that may reduce acceptability of the air.

G33_2013 (RA 2016)	y	contaminant	an airborne gas, particle, or liquid droplet of interest that is represented within an analysis tool.
G33_2013 (RA 2016)	y	contaminant	an airborne gas, particle, or liquid droplet of interest that is represented within an analysis tool.
S062.1 2010	y	contaminant	an unwanted airborne constituent that may reduce acceptability of the air.
S062.1 2016	y	contaminant	an unwanted airborne constituent with the potential to reduce acceptability of the air.
S062.1 2019	y	contaminant	an unwanted airborne constituent with the potential to reduce acceptability of the air.
S189.1 2014	y	contaminant	see ANSI/ASHRAE Standard 62.1.
S189.1 2017	y	contaminant	see ANSI/ASHRAE Standard 62.1.
ISO 29464 (FDIS 2023)	y	contaminant	substance (solid, liquid or gas) that negatively affects the intended use of a gas
S217 2020		contaminant (pollutant)	an unwanted airborne constituent with the potential to reduce the quality of air. A substance introduced into the tunnel environment that has deleterious effects.
NISTIR 5329 1994 Terms Online	y	Dewpoint temperature dew-point temperature	the temperature at which moist air becomes saturated (100% relative humidity) with water vapor when cooled at constant pressure.
S023_2022	y	<i>dew-point temperature</i>	temperature of moist air saturated at pressure p , with the same humidity ratio W as that of the given sample of moist air. It is defined as the solution $t_d(p, W)$ of the equation: $W_s(p, t_d) = W$
	y		a vapor-liquid equilibrium point for a pure liquid or for a multicomponent mixture of miscible, pure components, in the absence of noncondensables, where the temperature of the mixture at a defined pressure is the maximum temperature required for a liquid drop to form in the vapor.