

**ASHRAE TC 5.11 Humidifying Equipment
Main Meeting Committee Agenda
2025 ASHRAE Annual Conference Hybrid Meeting
Tuesday 2/11/2025, 3:30 PM - 5:30 PM EST
Hilton Orlando, Spring Lake (Lobby Level) & Virtual**

[Webex Meeting](#)

Meeting ID: 2495 150 9735

Passcode: ipZswNF8W25

1. Call to order

David Baird

a.

2. Review Scope

David Baird

Technical Committee 5.11 is concerned with equipment for raising the humidity of air in residential, and commercial, and industrial spaces; its application and control; effect of humidity on structures, content, processes, materials, and occupants; and testing and standards defining environmental and physiological requirements.

3. ASHRAE Value Statement

David Baird

"In ASHRAE meetings, we will act with honesty, fairness, courtesy, competence, inclusiveness and respect for others, which exemplify our core values of excellence, commitment, integrity, collaboration, volunteerism and diversity, and shall avoid all real or perceived conflicts of interest. Our culture is one of inclusiveness, acknowledging the inherent value and dignity of each individual. We celebrate diverse and inclusive communities, understanding that doing so fuels better, more creative and more thoughtful ideas, solutions and strategies for the Society and the communities our Society serves. We respect and welcome all."

4. ASHRAE Code of Ethics Commitment

David Baird

"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>

5. Introductions

All

a. Determination of a quorum Duncan Curd

VOTING MEMBERS FOR THIS MEETING (Need (4) or ½+1 for a Quorum)

TC 5.11 Voting Members	Non-Voting Subcommittee Chairs
David Baird	Matthew Nowak
Mitchell Geis	Nicholas Lea
Raul Simonetti	Duncan Curd
Annette Dwyer	Harold Dubensky
Mike Dovich	
Cheng-Min Yang	

6. Modifications to Agenda

All

a.

7. Chair's Report

David Baird

a.

8. Liaison reports (as they arrive)

Liaisons

- a. Section 5 Head
- b. Research Chair
- c. Standards Chair

Esteban Baccini
Douglas Scott
William Walter

9. Approval of minutes from June 25, 2024, Hybrid Summer Meeting

David Baird

a.

10. Membership/Roster

Duncan Curd

As of July 1, 2024: Voting members and/or subcommittee chairs.

Name	Role	Voting
David Baird	Chair Standards Chair	Yes
Mitchell Geis	Vice Chair Handbook Chair	Yes
Duncan Curd	Secretary	No
Harold Dubensky	Research Chair	No
Nicholas Lea	Program Chair	No
Matthew Nowak	Webmaster	No
Raul Simonetti	-	Yes
Annette Dwyer	-	Yes
Michael Dovich	-	Yes
Cheng-Min Yang	-	Yes

- a. ASHRAE requires a TC Balance - See update FG MOP on basecamp.
- b. Term limits:
 - a. Chair = 2 years with a 1-year extension through the approval of the Section Head.
 - b. Vice Chair = 2 years.
 - c. The Chair's term is not limited by the policy limiting normal Member and Member Non-Quorum reappointments to four (4) consecutive terms.
- c. Chair and Vice Chair MUST BE ASHRAE members!
- d. The Chair should have served at least one one-year term as Vice Chair or Secretary.
- e. Corresponding Members can serve in all TC management positions except Chair.
- f. Provisional Corresponding Members are dropped or changed to a Corresponding Member after 2 years.
 - a. The TC chair will email you to see if you want to be a Corresponding Member.

11. Subcommittee reports

a. Programs Subcommittee

Nicholas Lea

i. Program for Orlando

1 Seminar 55: Getting the Most Out of Humidification and Evaporative Cooling Systems – **February 12, 9:45 – 10:45 am Hilton Orlando, LL, Orange C**

- a A Good Compromise for IAQ, Energy Saving, and Maintenance (with Focus on Humidifiers) – Raul Simonetti
- b Leveraging Adiabatic Technologies for Decarbonization and Humidity Control – Nick Lea
- c Optimizing Isothermal (Steam) Humidifier Performance to reduce Maintenance and Energy Usage – Duncan Curd

ii. Program ideas for upcoming conferences

b. Research Subcommittee

Harold Dubensky

i. RAC liaison for section 5 is Doug Scott

ii. Remember to invite Doug (doug@douglascscott.com) to your PMS meetings and send RTAR and WS to Doug for his review before submitting them to the RAC.

Status of submitted RTARs.

iii. Title: Establishing a minimum relative humidity to achieve occupant health and productivity benefits

- 1. TC 5.7 voted to co-sponsor RTAR.
- 2. TC 1.4 declined to co-sponsor as did not see how could contribute.
- 3. Next submission deadline in August

1 **ACTION: Follow up with 4.3 about co-sponsorship – Harold - Complete**

- a. Response from TC 4.3 about co-sponsorship
- b. Email from Meghan McNulty on 1/15/24.
 - i We think it will be difficult to accomplish the desired outcomes with testing in only a single building.
 - ii We think doing as much sensing as is proposed is likely to be more expensive than the proposed budget.
 - iii We thought that this was an important topic, but it might be better to do controlled experiments or samples in many buildings, and to substantially increase the budget. Also, if only humidity and temperature data, perhaps you could get a lot of this data from trended BAS points and thus expand your sample size dramatically, with commensurate improvement in confidence of any relationship that was discovered. We would be happy to review another version for co-sponsorship.

2 ACTION: schedule a working group/meeting to discuss and review RTAR – establishing minimum humidity to achieve occupant health and productivity benefits. – Harold

7/18/2024: Working Group Meeting

- Refocus study from office environment to retirement / senior living facility
 - Facilities that will be willing to participate
- Go more broad vs deep environment testing
- Multiple buildings
 - Offices environment vs School environment

- Appointments based business - customers may come if sick
- Test Different floors / spaces
- Researcher at a university
- Use modern buildings with BAS system
- Large # of buildings ~25
 - Sickness trends
- Retirement / senior living facility
- Setup air monitoring device over ~ 18 months
- Use Absenteeism as an indicator of productivity?
 - Remote work may be an issue
- Sick day policy - # of days used – work from home /remote work
- What is the difference in similar environments
- Indicators of being sick
- Southern Climates
 - Natural environment
 - Southern US facilities
 - Natural humidity
- Northern climates
 - Active system
- Majority of ASHRAE research projects \$150K-\$175K
- Posted RATAR updates on Basecamp from working group meeting on 7/18/24.
 - <https://3.basecamp.com/3106353/buckets/4402683/uploads/1945969142>

7/31/2024: Working Group Meeting

- Reviewed RATAR changes that resulted from 7/18/24 meeting.
- Agreed to send it to TC 4.3 to see if they will vote to approve RATAR with changes.
- Emailed RATAR to TC 4.3 on 7/31/24
- 9/16/2024: New Chairman Isaac Simpson agreed to added it to the agenda for their interim meeting.
- 1/7/2025: Have not heard back. Followed up email regarding the status of the TC 4.3 vote.

iv Title: Understanding the appropriate application of humidity and temperature control strategies across climate zones on infectious aerosol transmission.

- 1 Essentially on hold for now and waiting on TC 9.6 to resume.
- 2 **ACTION: Follow up with TC 9.6 – Harold – Complete**
- 3 Response from TC 4.3 about co-sponsorship
 - a. Email from Ken Mead on 1/16/24.
 - b. July 2021: Team has met and is seeking input from an Infection Preventionist. The scope appears to be too broad.
 - c. May 2022: Team has not met since June 2021. New volunteers requested.
 - d. September 2022: SSPC170 Working Group taking over development of RTAR.
 - e. May 2023: Humidity working group will make recommendation.

- No update as still on hold
- v David Hahm on co-sponsorship with TC 9.5: Thermal Comfort Regarding Station Platforms
 - 1 TC 5.9 is also interested in this topic regarding station platforms (metro). TC 5.9 discussed co-sponsorship initially but after discussion with the larger TC, there is an interest to be more involved. Possibility of TC 5.9 participation in the work plan development to see if we could pursue this topic together.
 - 2 **ACTION: Followed up- Harold - Complete**
 - a No response yet. - on hold no current action

Discussion of New RTAR(s)

- vi Title: Maximum Humidity Levels in Buildings, Peter Luttik from TC 8.10
 1. Request from Peter Luttik with TC 8.10 Chair for TC 5.11 could support the work by TC 1.12 to determine maximum humidity levels during heating and humidification using compressor based liquid Desiccant systems. The enclosed paper describes the system and cooling performance in heating the system automatically humidifies. There are basically two levels. One set of is conditions temp and rh where the heat pumps can safely operate without condensation during very cold periods or dew point above 55F during cool and humid conditions. The second level is where there are risks but where the risks can be mitigated by monitoring cold spots in the building and reducing supply temp and humidity to control building dew point.
 2. TC 8.10 would be interested in jointly writing the RTAR so that we can make full use of your committee's expertise on the subject.
 3. We also like cosponsor ship with TC 1.12, TC 8.10 and SPG 10.
- vii Title: Building humidification limits for liquid desiccant heat pumps.
 4. Heat pump that takes humidity from outside and moves it to the inside.
 5. Peter Luttik chair 8.11: Dehumidification equipment, Liquid desiccant 50% relative humidity air at selected equipment
 6. What is max dew point to not over RH% the air, Control issue.
 7. TC 1.12 is leading RTAR
 8. TC 5.11 has a general interest in cosponsoring this research but waiting until RTAR more defined
- viii Title: Energy savings of DOAS systems with full dehumidification and demand control.
 1. TC 8.10 is working on an RTAR related to using humidity levels to control DOAS systems. 8.10 is primarily concerned with dehumidification, but I believe that we will want to be involved here since it is a topic of great interest to us as well. There are likely some efficiency gains available when buildings can get free humidification on rainy days, etc.
 2. Committee decided to not co-sponsor this based on lack of alignment with TC 5.11
- ix Title: Health values of min humidity control
 1. Determine benefits of minimum humidity targets for health. Humidity benefits include not only constraining survival of biological infective agents while outside the human body, but also by improving the immune system effectiveness in controlling infections from viruses and other biological
 - a. Voted to co-sponsor at Summer 2024 meeting
- x The next submission date for RTARs, PTARs and WSs is March 15, 2024.

- xi The standing RAC submission dates for new and revised RTARs and WSs are as follows each year:

1. March 15 – RAC Spring meeting consideration in April.
2. May 15 – RAC Annual meeting consideration in June.
3. August 15 – RAC Fall meeting consideration in Sept. or Oct.
4. December 15 – RAC Winter meeting consideration in January.
5. MMAD, more simply.

- c. Handbook Subcommittee

Mitchell Geis

- i

- d. Standards Subcommittee

David Baird

- i Standard 164.1 – Method of Test for Residential Central-system Humidifiers

- 1 Public review period ended December 30th with no comments
- 2 Ready to be submitted for publication with voting by members

- ii Standard 164.2 – Method of Test for Residential Self-contained Humidifiers

- 1 Working group to revise standard yet to meet

- e. Website Report

Matt Nowak

- i

- f. AHRI Humidifier Education Working Group

Nick Lea

- i

12. Old Business

- a. Review Of actions from previous meeting minutes

- i

- b. TC 5.11 coordinated comments regarding ASHRAE Standard 241P, Control of Infectious Aerosols, advisory public review (APR).

- i

- c. CSA Hospital standard changes.

- i

- d. ASHRAE Position Document: Infectious Aerosols

- i

- e. ASHRAE Std 170 – Ventilation for Healthcare

- i

- f. TC 5.7 Meeting

- i

- g. CSA 317.2 is up for public review, will align more closely with ASHRAE 170.

- i

13. New Business

14. Adjournment