



Shaping Tomorrow's
Built Environment Today

Northern Nevada Chapter 126
April 2012 Newsletter

President Message:
Chris Little

Hello everyone!

Next month looks to be a pretty good month, both the gun shoot and the job walk! I'm looking forward to seeing all of you at both.

For the gun shoot we have had some checks coming in from station sponsors, I would like to thank the following companies from whom we have already received checks.

Cook Mechanical and Air Systems
Etchemendy Engineering Inc.
Norman S. Wright
Maltese Environmental Services
WN Mechanical

Several more have committed to supporting the shoot. Please get your checks in to us as soon as possible as we need much of the money to set up the event. As for the job walk, this year we will be back at UNR, please see Bryan Tilton's update for details on time, place, and also dinner details.

Thank you!
-Chris Little

President Elect / Programs Chair:
Bryan Tilton

April 2012 Meeting ~ April 19th, 2012
JOB WALK @ UNR LLC Building

Walk is to commence at 5:30 p.m.
See the map below for parking instructions and Job Walk entrance



After the Job Walk is completed will we have dinner at 6:45 p.m.
Dinner will be located at:

Bertha Miranda's
336 Mill Street
Reno, NV 89502
(775) 786-9697

Speaker (Tour Guide):

Greg Maestas– Ainsworth Associates Mechanical Engineering

The new 5 story, 320 bed Living Learning Community (LLC) will be a multi-use building utilizing multiple system types, ranging from residential split and VRF systems, to air handlers with VAV boxes and 4 pipe fan coils, along with tempered outside air units and refrigerated energy recovery coils across the exhaust and outside air streams. The LLC will be the first on campus to have both a classroom component and dormitory all in one building and is in line to achieve LEED silver certification.

I look forward to seeing you all at the Job Walk and Berthas for dinner!

Research & Promotions Chair:
Sandor Duran

ASHRAE Members-

As we continue our 2011/2012 campaign and need your help to do our Chapters part to help further research in our industry. We have a Chapter goal of \$5,000 to be donated for the 2011-2012 Research Promotions Campaign. I'd like to thank those that have contributed in the past, but we will need everyone's help to reach our goal for this year. Please start thinking about what you can do as an individual to help our chapter do its part to support the research projects that help keep our industry moving forward by improving the technology that shapes the systems that we are all involved with.

Please at a minimum take some time request that your company support our chapter with a donation to the ASHRAE RP Campaign!

To make a contribution online please visit the following website:

<https://xp20.ashrae.org/secure/researchpromotion/rp.html>

Please send any donations or checks to my office for collection and processing, or bring the checks to a meeting and give it to me there! You will receive receipt that can be used for tax-deduction purposes.

ASHRAE
C/O CR Engineering
5434 Longley Lane
Reno NV 89511
Sandor Duran
RP Chair, ASHRAE N. Nevada

Memberships Promotions Chair:
Chun Lee

As we have two more meetings left in what is shaping up to be another good year for the Northern Nevada Chapter of ASHRAE, I would like to applaud the great work of our "elected" officials for all of their hard work they have put in this year. More importantly I would like to thank their employers for allowing them the time to dedicate to ASHRAE.

Due to a lot of volatility and movement in our industry this year, our membership numbers are down. But there is some encouraging news; we have had a few new members join us this year, and quite a few inquiries. So as a reminder, please don't forget to renew your ASHRAE membership, I can't even begin to stress the importance of each and every membership to ASHRAE.

So to keep the tradition alive of putting down some of my favorite quotes, I'll leave you this one from the great Shawn Carter which so eloquently describes the mood of our industry for the past few years:

"Feel it coming in the air
hear the screams from everywhere
I'm addicted to the thrill
It's a dangerous love affair
Can't be scared when it goes down
Got a problem tell me now
Only thing that's on my mind
Is who's going run this town tonight"

Sustainability Chair:
Mark Hauenstein

ASHRAE has redesigned their governmental affairs web site to make it more user-friendly.
Find out more at: <http://www.ashrae.org/government-affairs/>

The Northern Nevada Chapter of LEED is holding a luncheon on March 1st at 11:30. **Address is: Gui Denby Building (LEED Gold) in the Learning Center, 855 S. Center St. Reno, NV 89501** \$10 members, and \$25 non-members.
<http://usgbcnv.org/>

Shoot Chair:
Matt Brennan

So far we have 12 teams signed up for the Sporting Clay Shoot coming up on April 21st. The following are the teams that have signed up:

- CAL HYDRO
- BEER BIRDS
- COOK MECHANICAL AIR SYSTEMS (CMAS)
- DMG NORTH
- ETCHEMENDY ENGINEERING (EEI)
- J. W. McCLENAHAN
- MALTIESE ENVIROMENTAL
- NORMAN S WRIGHT
- RAGLEN SYSTEM BALANCE
- SIGLERS
- TIN CUPS
- VICTAULIC

We have the following Station Sponsors committed to the shoot this year:

- APPLIED MECHANICAL
- ASPEN ENGINEERING
- BELIMO
- CAL HYDRO
- CMAS
- DMG NORTH
- EBTRON
- EEI
- JOHNSON CONTROLS
- J & J MECHANICAL
- MALTIESE ENVIROMENTAL
- NORMAN S WRIGHT
- RAGLEN SYSTEM BALANCE
- SCOTT SPRINGFIELD
- SIGLERS
- SMITH MECHANICAL
- WN MECHANICAL SYSTEMS

We need more teams as well as Station Sponsors. If you would like to advertise your company name at the event and have a great time, please see the flyer and sign up today!

Thank you,
Matt Brennan

Chapter Secretary Chair:
Jason Bender / No update this month.

Treasurer Chair:
Brian Bassi / No update this month.

“Checking account balance is \$4,842.14 and the savings account balance is \$12,521.06.”

Newsletter Editor:
Sal Cervantes / No update this month.

CRC & Student Activities Chair:
Candice George / No update this month.

Mission

To advance the arts and sciences of heating, ventilating, air conditioning and refrigeration, to serve humanity and promote a sustainable world.

Vision:

ASHRAE will be the global leader, the foremost source of technical and educational information, and The primary provider of opportunity for professional growth in the arts and sciences of heating, ventilating, air conditioning and refrigerating.

For Release:

March 19, 2012

Contact: Jodi Scott
Public Relations
678-539-1140
jscott@ashrae.org

Free ASHRAE Webcast Highlights Dedicated Outdoor Air Systems: Registration Opens March 19

ATLANTA – While conventional HVAC systems mix fresh outdoor air with the return air in one unit, dedicated outdoor air systems use standard equipment to condition fresh air separately before it enters the building. This break from tradition is quickly becoming a proven tool for utilizing energy more efficiently, and can provide a cost savings to the consumer.

Registration for ASHRAE's upcoming webcast, "Dedicated Outdoor Air Systems – A Path to Balancing Energy and IEQ," opens today, March 19. The webcast focuses on the departure from conventional HVAC systems and takes place April 19, 2012, from 1– 4 p.m. EDT.

"Based on growing popularity the chosen topic for the 2012 webcast is Dedicated Outdoor Air Systems (DOAS)," Andy Cochrane, chair of the ASHRAE committee overseeing the Webcast, said. "This webcast will describe the role of DOAS in the overall HVAC system, and discuss various DOAS equipment configurations and applications. From understanding DOAS system characteristics, to avoiding pitfalls and challenges unique to DOAS applications, the webcast is a must see for discerning owners and designers alike."

The webcast presenters are Tim McGinn, P.E., principal, DIALOG; Stanley Mumma, Ph.D., P.E., Professor Emeritus of Architectural Engineering, Pennsylvania State University; and John Murphy, applications engineer, Trane.

Three Professional Development Hours (PhD's) or three AIA Learning Units (LU's) are available.

The live program will be archived online until May 3, 2012, for viewers who are unable to participate on April 19. Registration is required to view the archived program. A DVD of the webcast will also be available for purchase.

To register, or for more information, visit www.ashrae.org/doaswebcast or call 678-539-1200 or email ashrae-webcast@ashrae.org.

ASHRAE, founded in 1894, is a building technology society with more than 50,000 members worldwide. The Society and its members focus on building systems, energy efficiency, indoor air quality, refrigeration and sustainability within the industry. Through research, standards writing, publishing and continuing education, ASHRAE shapes tomorrow's built environment today.

For Release:
March 22, 2012

Contact: Jodi Scott
Public Relations
678-539-1140
jscott@ashrae.org

Operation and Maintenance Guideline from ASHRAE Now Available

ATLANTA – A newly published guideline from ASHRAE gives facility managers and building operating staff a strong foundation on which to improve performance of all buildings.

ASHRAE Guideline 32-2012, Sustainable, High Performance Operation and Maintenance, provides guidance on optimizing operation and maintenance of buildings to achieve the lowest economic and environmental life cycle cost without sacrificing safety or functionality.

“The guideline will assist those who operate and maintain buildings to achieve high performance: safe, productive indoor environments; low economic life cycle cost; low energy, water and resource use; and low impacts on the environment,” Michael Bobker, chair of the Guideline 32 committee. “The guideline applies to all buildings, not just new ones. We believe that all buildings can move toward sustainable high performance in their operations and maintenance.”

The guideline applies to the ongoing operational practices for buildings and systems with respect to energy efficiency, occupant comfort, indoor air quality, health and safety. These systems include the building envelope, HVAC&R, plumbing, complementary energy systems, and utilities and electrical systems.

“Modern air conditioning systems protect the health, comfort and productivity of building occupants,” ASHRAE Presidential Member Bill Harrison, whose presidential theme focused on the need for operation and maintenance, said. “Unfortunately, they consume a lot of energy while providing these benefits. When these systems are not operated properly, the energy they use can increase by 50 percent or more. ASHRAE Guideline 32 helps building owners and managers evaluate and eliminate the wasted energy caused by poor operating procedures. The elimination of non-value producing energy helps protect our environment while saving the building owner money. Guideline 32 provides a no regrets path to improving energy efficiency in our buildings.”

The guideline contains recommendations for three levels of building oversight: senior managers, facility managers and technicians. Checklists for tracking that appropriate steps are being taken to move toward high-performance operation and maintenance are included for each.

Among the items on the checklist are:

- Technicians
 - o Develop an HVAC system maintenance program using ANSI/ASHRAE/ACCA Standard 180, Standard Practice for Inspection and Maintenance of Commercial Building HVAC Systems
 - o Maintain access and code required clearances to all HVAC and electrical equipment
- Facility managers
 - o Develop and implement protocols for good facility/system documentation
 - o Establish performance baselines and targets. Institute a system for regular reporting and evaluation.
- Senior managers
 - o Assess buildings, workforce, practices, management tools and systems
 - o Measure and report on building performance as part of regular business analytics

The cost of ASHRAE Guideline 32, Sustainable, High-Performance Operations and Maintenance, is \$69 (\$59, ASHRAE members). To order, contact ASHRAE Customer Contact Center at 1-800-527-4723 (United States and Canada) or 404-636-8400 (worldwide), fax 404-321-5478, or visit www.ashrae.org/bookstore

ASHRAE, founded in 1894, is a building technology society with more than 50,000 members worldwide. The Society and its members focus on building systems, energy efficiency, indoor air quality, refrigeration and sustainability within the industry. Through research, standards writing, publishing and continuing education, ASHRAE shapes tomorrow's built environment today.

For Release:
March 27, 2012

Contact: Jodi Scott
Public Relations
678-539-1140
jscott@ashrae.org

Public Input Sought on Alternative to ASHRAE Standard 62.1 Ventilation Rate Procedure Proposed

ATLANTA – A proposed change to the ventilation rate procedure in ASHRAE's indoor air quality standard is open for review after changes were made based on public input last year.

ANSI/ASHRAE Standard 62.1-2010, Ventilation for Acceptable Indoor Air Quality, sets minimum ventilation rates and other requirements for commercial and institutional buildings.

The ventilation rate procedure provides a prescriptive method for determining minimum ventilation requirements. It accounts for pollutant sources from both the building and its occupants, and allows the designer to account for the efficiency of different ventilation systems when delivering outdoor air to the breathing zone.

Proposed addendum f was first released for public comment in September 2011 after some users of Standard 62.1 indicated the ventilation rate procedure was "too complicated," according to Standard 62.1 chair Roger Hedrick. He said the 62.1 committee agreed that application of the multiple-zone recirculating system equations described in Section 6.2.5 and Appendix A can be complex.

"When designing multiple zone recirculating ventilation systems, Table 6-3 provides a default value of Ventilation Efficiency (E_v) based on the largest value of the zone primary (Z_p) outdoor air fraction, for all the zones served by the system," he said. "However, if Max (Z_p) exceeds 0.55, then Appendix A must be used to design the system outdoor airflow. Addendum f attempts to simplify the design process by providing a simplified default approach for cases with Max (Z_p) greater than 0.55."

The earlier review draft set the default value of the zone primary outdoor air fraction based on a default minimum zone primary airflow set as 30 percent of the zone design primary airflow.

"The public review comments pointed out that this formulation did not work mathematically under certain conditions," Hedrick said. "This new public review version instead simply allows E_v to be set to 0.6, unless a higher value is provided by Table 6-3 or by using Appendix A. Use of a relatively low value of E_v will result in higher outdoor airflow rates, but using the default will simplify the system design process."

Also open for review is addendum i, which would add limits for low humidity. Recent studies have shown that excessively low humidity may result in unacceptable indoor air quality. The Standard 62.1 committee is interested in the appropriateness of the relative humidity limit and the climate zones where the requirement applies. The addendum is open for an advisory public review, meaning comments received allow for constructive input and need not be resolved or formally acted on by the project committee.

In addition to addenda f and i, three additional addenda are open for public review from March 23 until April 22. For more information, visit www.ashrae.org/publicreviews. They are:

- Addendum h –Table 6-1, includes ventilation rates for "Sports arena (play area)" and "Gym, stadium (play area)." Both space types have ventilation rates based on floor area only, the per person rate is zero. Users of the standard have expressed interest in applying demand controlled ventilation to these space types, which is effectively prohibited by the lack of a per person component to the ventilation rate. This proposed addendum replaces both of these space types with "Gym, Sports Arena (play area)", with $R_p = 20$ cfm/person and $R_a = 0.06$ cfm/ft² and assigns this new space type with an air class of 2 rather than class 1 from the first publication public review version.

- Addendum k adds an exception to the recirculation limits on Class 4 exhaust airstreams from laboratory hoods which would allow use of heat wheel energy recovery in some cases. The exception defines several criteria which the airstream must meet before such heat recovery can be used, and the heat recovery system must limit recirculation airflow to less than 0.5 percent of the outdoor air intake flow.
- Addendum l adds a refrigerated warehouse space type to Table 6-1, providing revised ventilation rates for these spaces. These rates include a “People Outdoor Air Rate, Rp” which will require ventilation during periods of expected occupancy, but do not include an “Area Outdoor Air Rate, Ra” which will allow the ventilation rate to be zero for refrigerated warehouses with no occupants.

In addition, addendum j is open for public review from March 23 until May 7. The proposed addendum would add requirements to the Indoor Air Quality Procedure (IAQP) for determining minimum ventilation rates which require consideration of the combined effects of multiple contaminants of concern on individual organ systems. This “additive” effect is already implicit in the Ventilation Rate Procedure. This proposed change is intended to improve the IAQP by requiring consideration of these additive effects that are well established in the literature for many organ systems, according to Hedrick.

ASHRAE, founded in 1894, is a building technology society with more than 50,000 members worldwide. The Society and its members focus on building systems, energy efficiency, indoor air quality, refrigeration and sustainability within the industry. Through research, standards writing, publishing and continuing education, ASHRAE shapes tomorrow’s built environment today.

For Release:
March 28, 2012

Contact: Jodi Scott
Public Relations
678-539-1140
jscott@ashrae.org

Standard 189.1 Deemed Compliance Option for IgCC; ICC Announces Availability of New Green Code

ATLANTA – The building industry now has greater flexibility in the design of high performance buildings through a change impacting application of the green building standard from ASHRAE, the U.S. Green Building Council (USGBC) and the Illuminating Engineering Society (IES) included in the International Green Construction Code (IgCC).

ANSI/ASHRAE/USGBC/IES Standard 189.1-2011, Standard for the Design of High-Performance, Green Buildings Except Low-Rise Residential Buildings, provides a green building foundation for those who strive to design, build and operate high performance buildings. It covers key topic areas of site sustainability, water-use efficiency, energy efficiency, indoor environmental quality and the building’s impact on the atmosphere, materials and resources.

Standard 189.1 now serves as a compliance option with the newly published IgCC, developed by the International Code Council (ICC) and endorsed by cooperating sponsors ASTM International and the American Institute of Architects. The change allows permit applicants – rather than the authorities having jurisdiction – the option to use Standard 189.1 as the path of compliance. In earlier versions of the IgCC, Standard 189.1 was deemed a “jurisdictional compliance option,” meaning code jurisdictions had to choose between the provisions of Standard 189.1 and the IgCC in determining which compliance path to take.

“ASHRAE is pleased to see this change take place, allowing building designers, owners and contractors to choose to design to Standard 189.1, instead of the choice being made solely by the jurisdiction setting the code,” Ron Jarnagin, ASHRAE president, said. “With today’s release of the 2012 IgCC, jurisdictions now have a viable green code at their disposal. Standard 189.1 stands on equal footing within the IgCC to provide a more complete set of options for governments and project teams alike.”

“IES also fully supports the change that removes the restriction,” Rita Harrold, director of technology, said. “The resulting freedom of choice will benefit all segments of the construction industry involved in developing design criteria for high performance buildings.”

The 2012 IgCC serves as a new model code for constructing and remodeling residential and commercial structures and is expected to increase sustainability, cost savings and job growth while providing direction for safe and sustainable building design and construction, according to the International Code Council.

“The IgCC adds to the strong foundation of guidance to move the industry forward in regards to high performance buildings,” Jarnagin said. “The document brings together the code expertise of ICC with technical expertise of ASHRAE to create a comprehensive green building code to improve overall performance of buildings, including reduction of energy consumption.”

“Today, the Code Council and its cooperating sponsors announce a new green construction code that will make a contribution toward healthier, lower impact and more sustainable building practices,” Richard P. Weiland, CEO of the ICC, said. “The International Green Construction Code published today was developed during the last three years with input from code and construction industry professionals, environmental organizations, policy makers and the public. Our community was diligent in developing a code that is not only adoptable, usable and enforceable, but also flexible and adaptable. We expect this new model code, like the family of other ICC Codes, to be adopted across the country and used globally.”

Early versions of the IgCC released during the development of the code already have been put into use by states and jurisdictions demonstrating the need and demand for safe and sustainable construction.

The IgCC was developed at public hearings with input from experts in code development and enforcement, architecture, engineering, building science, environmental advocacy, government, business, academia and the public.

The IgCC is the first model code to include sustainability measures for an entire construction project and its site – from design, through construction, certificate of occupancy and beyond. It establishes minimum green requirements for buildings and complements voluntary rating systems. The IgCC offers flexibility to jurisdictions which adopt the code by establishing several levels of compliance, starting with the core provisions of the code, and then offering “jurisdictional requirement” options that can be customized to fit the needs of a local community. A jurisdiction can also require higher performance through the use of “project electives” provisions.

The code acts as an overlay to the existing set of International Codes, including provisions of the International Energy Conservation Code and ICC-700, the National Green Building Standard, and incorporates ASHRAE Standard 189.1 as an alternate path to compliance. The IgCC provides model code language that establishes a baseline for new and existing buildings related to energy conservation, water efficiency, site impacts, building waste, material resource efficiency and other sustainability measures. The IgCC will be updated alongside the other model codes developed through the Code Council’s open, transparent and consensus-based code development process.

ASHRAE, founded in 1894, is a building technology society with more than 50,000 members worldwide. The Society and its members focus on building systems, energy efficiency, indoor air quality, refrigeration and sustainability within the industry. Through research, standards writing, publishing and continuing education, ASHRAE shapes tomorrow’s built environment today.

For Release:
March 29, 2012

Contact: Jodi Scott
Public Relations
678-539-1140
jscott@ashrae.org

Proposed Changes Related to Combustion Safety, Infiltration to ASHRAE Residential IAQ Standard

ATLANTA – Public comment is being sought on proposed changes to ASHRAE’s residential indoor air quality standard regarding combustion safety in existing homes and default infiltration in new construction.

ANSI/ASHRAE Standard 62.2-2010, Ventilation and Acceptable Indoor Air Quality in Low-Rise Residential Buildings, is the only nationally recognized indoor air quality standard developed solely for residences. It defines the roles of and minimum requirements for mechanical and natural ventilation systems and the building envelope intended to provide acceptable indoor air quality in low-rise residential buildings.

Five proposed addenda to Standard 62.2-2010 currently are open for public review. For more information, visit www.ashrae.org/publicreviews.

Proposed addendum p applies primarily to existing homes. The standard as written addresses combustion safety mainly in a prescriptive manner, with the assumptions that went into determining the requirements based on typical construction for new homes. Given the characteristics in older homes, especially leakage levels, following these requirements precisely often could have resulted in requiring replacement of equipment that in practice works fine.

“As such, addendum p is a big deal for the existing home market because it provides a performance path for combustion safety, thereby making the standard much easier to adopt in its entirety in that sector,” Paul Francisco, vice chair of the Standard 62.2 committee, said. “The proposed change in the language prevents the standard from being perceived as requiring full updating to code in order to comply, including possible replacement of all combustion appliances.”

Also open for public comment is addendum r, which has a larger impact on new construction. Historically, Standard 62.2 has allowed all homes to have a default infiltration credit that can be taken without any knowledge about how leaky the house really is, according to Francisco. Especially as houses have gotten tighter, the assumed infiltration may be substantially higher than actually exists in many homes, according to Francisco.

“This addendum removes the default credit, and allows infiltration to be credited only if infiltration is measured,” he said. “This has the effect in new construction of requiring sufficient mechanical ventilation to provide the entire intended air exchange, thereby ensuring that the intended overall rates are achieved, or that a test is done to measure infiltration. Without that test, the installed mechanical ventilation will increase. With the test there will be little change in installed mechanical ventilation rates.”

Addenda p and r are open for public review from March 23 until May 7.

Three additional addenda are open for public review from March 23 until April 22. For more information, visit www.ashrae.org/publicreviews. They are:

- Addendum a would remove Method A of ASTM E1554 as an option for the duct tightness testing in the newly proposed Section A4.1.
- Addendum o clarifies that a system must be operated in order to achieve the stated purpose of the standard to define minimum requirements for acceptable indoor air quality. Currently the standard is being interpreted by some to say that a system could be installed and turned off and still be in compliance.
- Addendum q - Historically, local exhaust fans have been permitted to serve the dual function of providing whole-house ventilation and local exhaust. When serving as dual-duty fans, the whole-house rate and the local exhaust rate have not been required to be additive. This proposed change is needed to clarify that the whole building ventilation rate can be credited towards the local exhaust rate, and that the rates are not required to be additive, according to Francisco.

ASHRAE, founded in 1894, is a building technology society with more than 50,000 members worldwide. The Society and its members focus on building systems, energy efficiency, indoor air quality, refrigeration and sustainability within the industry. Through research, standards writing, publishing and continuing education, ASHRAE shapes tomorrow's built environment today.