

Calendar of Events

administrator@seacolorado.org

December 12, 2023
- December 31, 2025

SEAC Wind Study Sponsorships
2023 - 2025

Executive Summary

Recent changes to ASCE 7 wind provisions have wrought havoc along the Colorado front range, seeing mistaken shifts of the Special Wind Region (SWR) boundary, a transition from ~50-year to ~700-year reference wind speeds, a risk-targeted reduction to the mapped speeds along the SWR border, and more. SEAC and CPP have managed to limp along with the Front Range Gust Map from 2006 using conservative approximations based upon the limited data available at the time. Not only is this information is outdated, but no regional wind study has ever been performed south of Castle Rock -- leaving wind speeds for half of the mapped Colorado SWR undefined. Furthermore, the SWR boundaries in ASCE 7-16 and 7-22 remain incorrect, especially south of the Denver metro area where Pikes Peak is no longer included.

Colorado needs a new study to correctly define and fully cover the CO SWR, and as before, we need to rely on SEAC members and their networks for funding and support of this significant effort, which is anticipated to cost on the order of \$200,000. Fortunately, we have found a willing and enthusiastic partner in Colorado Department of Homeland Security and Emergency Management (DHSEM), which enables us to apply for Federal Emergency Management Agency Building Resilient Infrastructure and Communities (FEMA BRIC) funding to cover up to 75% of the costs. We must raise A minimum of \$50,000 in funds by February 2024 in order to qualify for the FEMA BRIC grant. The SEAC board and NCSEA have already pledged \$5,000, bringing us to 10% of this goal. For the remainder, we are turning to the SEAC membership, AHJs, corporate donors, and other interested parties.

This study will have a significant and beneficial impact on structural engineers in Colorado, and we thank you in advanced for your support! Please consider donating to the study and sharing this information with anyone in your network who may be interested in supporting this important endeavor. Any individual or firm who sponsors at the Bronze Level or higher will receive recognition for their contribution online through SEAC.

Sponsorships

Platinum - \$10,000

Gold - \$5,000

Silver - \$2,500

Bronze - \$1,000

Iron - \$500

Contribution - \$100

Credit cards, checks, and money orders are accepted through our secure online form. You will receive a "registration" email as a receipt for your sponsorship. Additionally, if you prefer you can skip the form and send a check made out to "SEAC" and marked "Wind Study" to:

SEAC
303 S. Broadway
Ste 200-345
Denver, CO 80209

Explanation of Study and Funding Process

The SEAC Wind Committee is in the process of submitting a grant application to the Federal Emergency Management Agency (FEMA) for funding using the Building Resilient Infrastructure and Communities (BRIC) program through a sub-application process at the Colorado Department of Homeland Security and Emergency Management (DHSEM) in order to fund efforts to update the Colorado Front Range Gust Map. Currently, DHSEM and FEMA have a “Code Plus-Up” program where applicants may apply for Federal Funding through FEMA to update building codes at state and/or local jurisdiction levels for the purposes of further reducing losses due to natural disasters like wind, earthquakes and floods. According to ICC, up-to-date codes have the potential to avert approximately \$600 billion in losses due to disasters by 2060. Given this “Code Plus-Up” program, our proposal has a high likelihood of getting selected, and if we receive the grant, FEMA will cover up to 75% of the total project costs.

The SEAC Wind Committee has submitted a Notice of Interest (NOI) through the state DHSEM, which has been accepted. On December 22, 2023, the SEAC Wind Committee submitted a draft sub-application to DHSEM with a final application due by mid-February 2024. The Committee will be very active during this time while coordinating with the state DHSEM to ensure that the sub-application is complete, correct, and appeals to FEMA and DHSEM reviewers for selection and approval. As a vital part of the application, the SEAC Wind Committee must provide a commitment to fund 25% of the total project cost. The anticipated project cost is \$200,000, which means the SEAC Wind Committee will be responsible for providing a commitment of at least \$50,000.

We believe that this update is necessary given recent updates to the ASCE7 standard and the limitations of the previous study. The Special Wind Region along the Front Range of Colorado is in place due to the localized effects of the thermally-driven downslope winds that occur on a regular basis in the region. These are familiar to anyone living in the area and are strong enough to govern the design wind speeds for the foothills and adjacent communities.

The Front Range Wind Speed Map was originally commissioned in the early 2000s to provide clarity and guidance for design wind speeds along the northern Front Range of Colorado. It was largely developed by Dr. Jon Peterka and his team at CPP Wind Engineering Consultants who, at the time, were primarily responsible for the design wind speed maps in ASCE 7.

For budgetary reasons, the original study concentrated on the northern portion of the Front Range as it covered most of the major population centers. However, it was always recognized that there was a large portion of the Special Wind Region to the south of the Denver metropolitan area that would benefit from similar treatment in both determining appropriate design wind speeds and refining the extent of the area to which such provisions should apply.

The original study was conducted to be consistent with the requirements of ASCE 7-05, which had its foundations in Allowable Stress Design (ASD) principles. As such, the analyses concentrated on predicting design wind speeds for a 50-year Mean Recurrence Interval (MRI). With the introduction of ASCE 7-10 and the evolution towards reliability-based approaches, the Front Range Wind Speed Map was updated to include 700-yr and 1700-yr MRI wind speed contours. This was further updated to incorporate 3000-yr MRI values when this return period was added to ASCE 7-16 for Risk Category IV buildings.

The updates for longer return period MRIs were done by adjusting the earlier values by a conversion factor that is commonly used for non-downslope winds. Recent investigations indicate that this is likely conservative for downslope winds, resulting in

higher-than-optimal predicted wind speeds for the new longer MRIs. Current analysis techniques, with the additional ASOS (Automatic Surface Observation Station) wind data that has been available since the mid-1990s, allows storm separation techniques to build a more accurate wind climate model showing the relative contribution of different storm types at different MRIs. This should allow design wind speeds in large portions of the northern Front Range SWR to be reduced from current values and align better with reality.

The primary purposes of the currently proposed study are twofold:

To update the current Front Range Wind Speed map using state-of-the-art analysis techniques with the additional data available since the original study to refine design winds speeds to be adopted within the region.

To extend the map south to cover the entire Front Range, including additional major population centers such as Colorado Springs.

The overall outcome will be to enable improved sustainability and economy in construction while ensuring that the appropriate reliability and resiliency goals are met.

January 1, 2025
- December 31, 2025

2025 SEAC General Meeting Sponsorship

2025

SEAC General Meeting Sponsorship includes:

Exhibit table at the General Meeting or slide recognition on webinar

Full page company advertisement in SEAC newsletter during the month of sponsorship

2 complimentary registrations

One minute microphone time

Sponsorships are \$1,000 per meeting. Limit two sponsorships per meeting. Exclusive sponsorships of a meeting is \$1,500.

January 1, 2025
- September 30, 2025

2025 Fall Seminar Exhibitors & Sponsorships

Westminster Westin

10600 Westminster Blvd.

Westminster, CO 80020

2025 Fall Seminar

September 4, 2025

SEAC Board of Directors Meeting

Zoom

08:00 AM - 09:00 AM MST

Contact SEAC Administrator Dawn Miller at administrator@seacolorado.org if you are interested in attending.

September 11, 2025	Mental Health = Business Health Creating a Resilient Workforce Simpson Strong-Tie 5725 N Pecos St. Suite 100 Denver, CO 80221 10:00 AM - 03:00 PM MST <i>Only one registration is required per firm, and the contact person does not have to attend. The participants do not need to be finalized at this time of registration. The workshop organizers will follow-up with the contact person to get the names of the final participants and any dietary restrictions .</i>
September 12, 2025	Volleyball Tournament Kafadar Commons 1451 Illinois Street Golden, CO 80401 05:00 PM - 07:00 PM MST
September 18, 2025	SEAC NOCO Meeting Front Range Community College 4616 Shields Street Room #552 Fort Collins, CO 80526 07:30 AM - 09:00 AM MST
September 18, 2025	SEAC YMG End of Summer Picnic City Park 2001 Colorado Blvd. Denver, CO 80205 06:00 PM - 07:30 PM MST
September 22, 2025	SEAC October E-News Deadline E-News Deadline
September 25, 2025	SEAC Building Department Committee Meeting KPFF 1550 Wewatta St. Suite 200 Denver, CO 80202 10:00 AM - 11:00 AM MST <i>To join this committee meeting virtually contact Chad Mitchell at cmitchell@samiro.com</i>
September 25, 2025	2025 SEAC Annual Meeting PPA Event Center 2015 Decatur St. Denver, CO 80211 05:00 PM - 08:00 PM MST

October 2, 2025	<p>SEAC Board of Directors Meeting Martin/Martin Consulting Engineers 12499 West Colfax Ave Lakewood, CO 80215 08:00 AM - 09:00 AM MST <i>Contact SEAC Administrator Dawn Miller at administrator@seacolorado.org if you are interested in attending.</i></p>
October 6, 2025	<p>SEAC YMG Committee Meeting 12:00 PM - 01:00 PM MST <i>If you are interested in joining, contact Kamryn Froehle at ymg@seacolorado.org to receive the TEAMS invite.</i></p>
October 7, 2025	<p>SEAC Seismic Committee Meeting Virtual 08:00 AM - 09:00 AM MST <i>Contact Rob Jackson at rob.jackson@amentum.com for TEAMS link.</i></p>
October 7, 2025	<p>SEAC Sustainable Design Committee Meeting Virtual 01:15 PM - 02:30 PM MST <i>Contact committee chair Michael Lyons, Martin/Martin Inc. mlyons@martinmartin.com if you are interested in attending.</i></p>
October 9, 2025	<p>SEAC Business Management Committee Meeting Martin/Martin Consulting Engineers 12499 West Colfax Ave Lakewood, CO 80215 07:30 AM - 09:00 AM MST</p>
October 14, 2025	<p>SEAC Existing Structures Committee Meeting J.R. Harris & Company 1775 Sherman Street Suite 2000 Denver, CO 80203 08:00 AM - 09:30 AM MST <i>For the virtual link to this committee meeting contact Ben Cook at ben.cook@jrharrisandco.com</i></p>
October 15, 2025	<p>SEAC Education Committee Manufacturing Facility Tour Builders Colorado 17600 East Smith Road Aurora, CO 80011 08:30 AM - 11:00 AM MST</p>
October 16, 2025	<p>SEAC NOCO Meeting Front Range Community College 4616 Shields Street Room #552 Fort Collins, CO 80526 07:30 AM - 09:00 AM MST</p>

October 16, 2025	SEAC Wood Committee Meeting Lam-Wood Systems, Inc. 1580 W. 47th Ave Denver, CO 80211 12:00 PM - 01:00 PM MST <i>If you are interested in joining the meeting please contact Jeremy Crandall at wood@seacolorado.org</i>
October 27, 2025	SEAC November Newsletter Deadline Newsletter Deadline
October 30, 2025	SEAC Board of Directors Meeting Zoom 08:00 AM - 09:00 AM MST <i>Contact SEAC Administrator Dawn Miller at administrator@seacolorado.org if you are interested in attending.</i>
November 3, 2025	SEAC YMG Committee Meeting 12:00 PM - 01:00 PM MST <i>If you are interested in joining, contact Kamryn Froehle at ymg@seacolorado.org to receive the TEAMS invite.</i>
November 6, 2025	SEAC & SEI Colorado 2025 Fall Seminar Westin Westminster 10600 Westminster Blvd. Westminster, CO 80020 07:00 AM - 09:30 PM MST
November 18, 2025	SEAC Sustainable Design Committee Meeting Virtual 01:15 PM - 02:15 PM MST <i>Contact committee chair Michael Lyons, Martin/Martin Inc. mlyons@martinmartin.com if you are interested in attending.</i>
November 20, 2025	SEAC NOCO Meeting Front Range Community College 4616 Shields Street Room #552 Fort Collins, CO 80526 07:30 AM - 09:00 AM MST
November 20, 2025	SEAC Building Department Committee Meeting KPFF 1550 Wewatta St. Suite 200 Denver, CO 80202 10:00 AM - 11:00 AM MST <i>To join this committee meeting virtually contact Chad Mitchell at cmitchell@samiro.com</i>

November 24, 2025	SEAC December E-News Deadline E-News Deadline
December 1, 2025	SEAC YMG Committee Meeting 12:00 PM - 01:00 PM MST <i>If you are interested in joining, contact Kamryn Froehle at ymg@seacolorado.org to receive the TEAMS invite.</i>
December 2, 2025	SEAC Seismic Committee Meeting Virtual 08:00 AM - 09:00 AM MST <i>Contact Rob Jackson at rob.jackson@amentum.com for TEAMS link.</i>
December 5, 2025	2025 Gingerbread Bridge Competition - Sponsorships Colorado School of Mines Friday, December 5
December 5, 2025	2025 Gingerbread Bridge Competition - Bridge Entry Colorado School of Mines Friday, December 5
December 9, 2025	SEAC Existing Structures Committee Meeting J.R. Harris & Company 1775 Sherman Street Suite 2000 Denver, CO 80203 08:00 AM - 09:30 AM MST <i>For the virtual link to this committee meeting contact Ben Cook at ben.cook@jrharrisandco.com</i>