



Extreme Heat

Presented by:

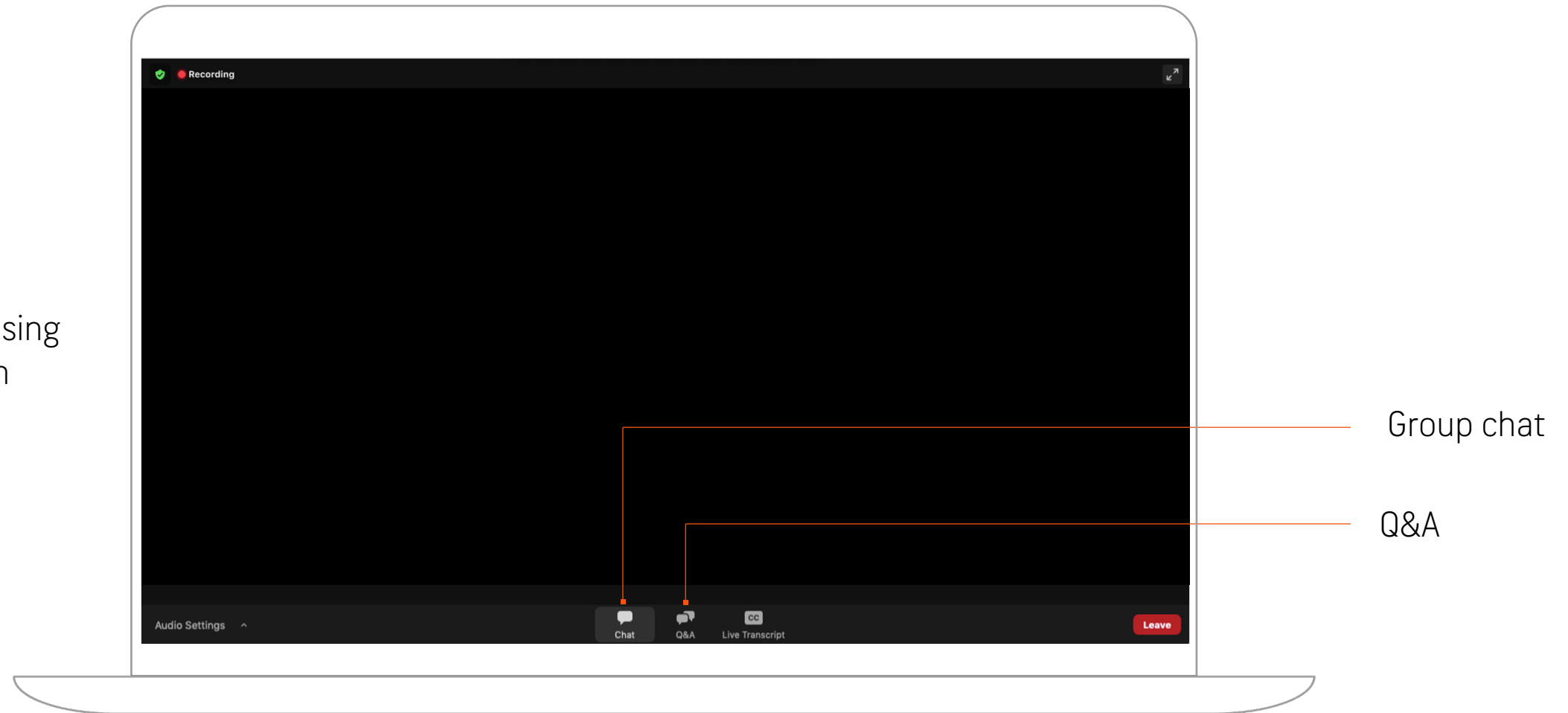
Tom Bedard, Emergency Preparedness and Business Continuity Manager at AccuWeather

Gary Nettles, AccuWeather Enterprise Solutions Account Executive

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Meet the Team



Tom Bedard

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AccuWeather Enterprise Solutions
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Jeremy Fisher

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Nevada State Board of Athletic Training- Board
Member/Treasurer



AccuWeather Presentation

Jeremy Fisher

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President of Medical Relationships

Fishnet, LLC

Nevada State Board of Athletic Training- Board Member/Treasurer

Jeremy Fisher is a native of Hamburg, Pa. He attended Lock Haven University, where he received a Health Science: Athletic Training degree in 2008. From there, he went to Villanova University, earning a Master's in Public Administration, with an emphasis on Public Healthcare initiatives, all while working with their football team and other sports. Jeremy left Villanova to take a position with Pivot Physical Therapy in Central Maryland as an out-reach athletic trainer, working at locations such as Mt. St. Mary's University, Frederick County Public Schools, The Washington Capitals/ Hershey Bears, and MLB Summer Woodbat. While in Maryland, Jeremy also interned with the Baltimore Ravens. In 2013, Jeremy moved to Las Vegas, NV, to be the Head Athletic Trainer of the Las Vegas Wranglers of the ECHL, and since then has been Director of Sports Medicine for the Las Vegas Outlaws (AFL), along with starting his own consulting firm in Sports Medicine and Occupational Health. In addition to his consulting firm, Jeremy completed his Doctorate in Public Health: Clinical Athletic Training from Temple (2018) and is the current Director of Sports Medicine for X-League, sits on the NV State Board of Athletic Training, and works game nights for the Vegas Golden Knights. He resides in Las Vegas with his wife, Emily, and their three sons.



Heat Related Illness (HRI)

- Varying ailments caused by exposure to heat to include, heat cramps, heat exhaustion, and heat stroke.
- Heat Cramps- the earliest onset of an exertional heat-related illness (Mild)
- Heat Exhaustion- characterized by a rapid pulse and heavy sweating, skin is red or ashen (Moderate)
- Heat Stroke- characterized by hot skin and lack of sweating from prolonged heat exposure (Worst Case)



HRI and Occupational Workers

- Most at-risk sectors- Construction, Public Works, Agriculture, and Protective Services (Law Enforcement and Fire)
- Rates (Incident/ 100,000 workers)
 - Overall Occupational Workers- 6.0
 - Fire- 390, Protective Service- 57, Public Works 35, Agriculture- 39¹
 - Construction Constitutes 40% of HRI cases in the workforce²
 - Men at greater risk than women
 - Age 16- 24, at greater risk.
- Nearly 80% of all cases happen in heat-waves³
 - Similar spikes in ED visits are seen each year
 - Shows correlation to not being acclimatized
 - As high as 44% of workers have experienced moderate to severe HRI⁴



It is not just HRI

- HRI can be compounded over days⁵
- Exertional heat stroke leads to rhabdomyolysis
 - Muscle break down
 - Renal issues/ failure
 - Musculoskeletal injury rates increase significantly
- Time loss from associated issues due to heat should also be considered.⁶
 - These losses are significant
 - Time loss and financial burden
- Prevention is key



Preventing HRI in the workplace

- Monitor the weather
- Set up proper acclimatization program when warm weather begins
- Monitor biometrics (Heart Rate and fluid consumption)
 - Maximum HR of $180 - 0.65 * \text{Age}$
 - Increases resting heart rate, this increase leads to injury
- Modify the workday and jobs
- Incorporate frequent breaks
- Each workplace is different and may require different modifications
- Seek an Occupational Health Consulting Group
 - My firm can help with this
 - jeremy@fishnetgroup.com



Work Cited


- 1- Heinzerling A, Laws RL, Frederick M, et al. Risk factors for occupational heat-related illness among California workers, 2000–2017. *Am J Indust Med.* 2020. 63(12): 1145-1154.
- 2- Kakamu T, Endo S, Hidaka T, et al. Heat-related illness risk and associated personal and environmental factors of construction workers during work in summer. *Sci Rep.* 2021. 11: 1119.
- 3- Schramm PJ, Vaidyanathan A, Radhakrishnan L, et al. Heat-related Emergency Department visits during the northwestern heat wave - United States, June 2021. *MMWR Morb Mortal Wkly Rep.* 2021 Jul 23;70(29):1020-1021.
- 4- Zawiah Mansor MPH, Ismail R, Hisham J. Effects of hydration practices on the severity of heat-related illness among municipal workers during a heat wave phenomenon. *Med J Malaysia.* 2019. 74(4): 275- 280.
- 5- Casa DJ, DeMartini JK, Bergeron MF, et al. National Athletic Trainers' Association Position Statement: Exertional Heat Illnesses. *J Athl Train.* 2015 Sep;50(9):986-1000.
- 6- Morrissey MC, Brewer GJ, Williams WJ, et al. Impact of occupational heat stress on worker productivity and economic cost. *Am J Indust Med.* 2021. 64(12): 981-988.




SkyGuard Weather Warnings

- Proactive notification that temperatures will meet your business' high temperature threshold
- Issued by a meteorologist with consultation privileges to call and discuss the forecast
- Sent by email, text message, Portal website, and SkyGuard Mobile application

SkyGuard Notification 3581
prepared exclusively for
Tom Bedard at AccuWeather



critical severe **moderate** low

 **NEW** Map

WEATHER CRITERIA

- High Temperature Warning

STARTS: 09/19/2022 12:00 PM CDT
EXPIRES: 09/19/2022 8:00 PM CDT

VALID LOCATIONS

- AccuWeather Wichita

COMMENTS

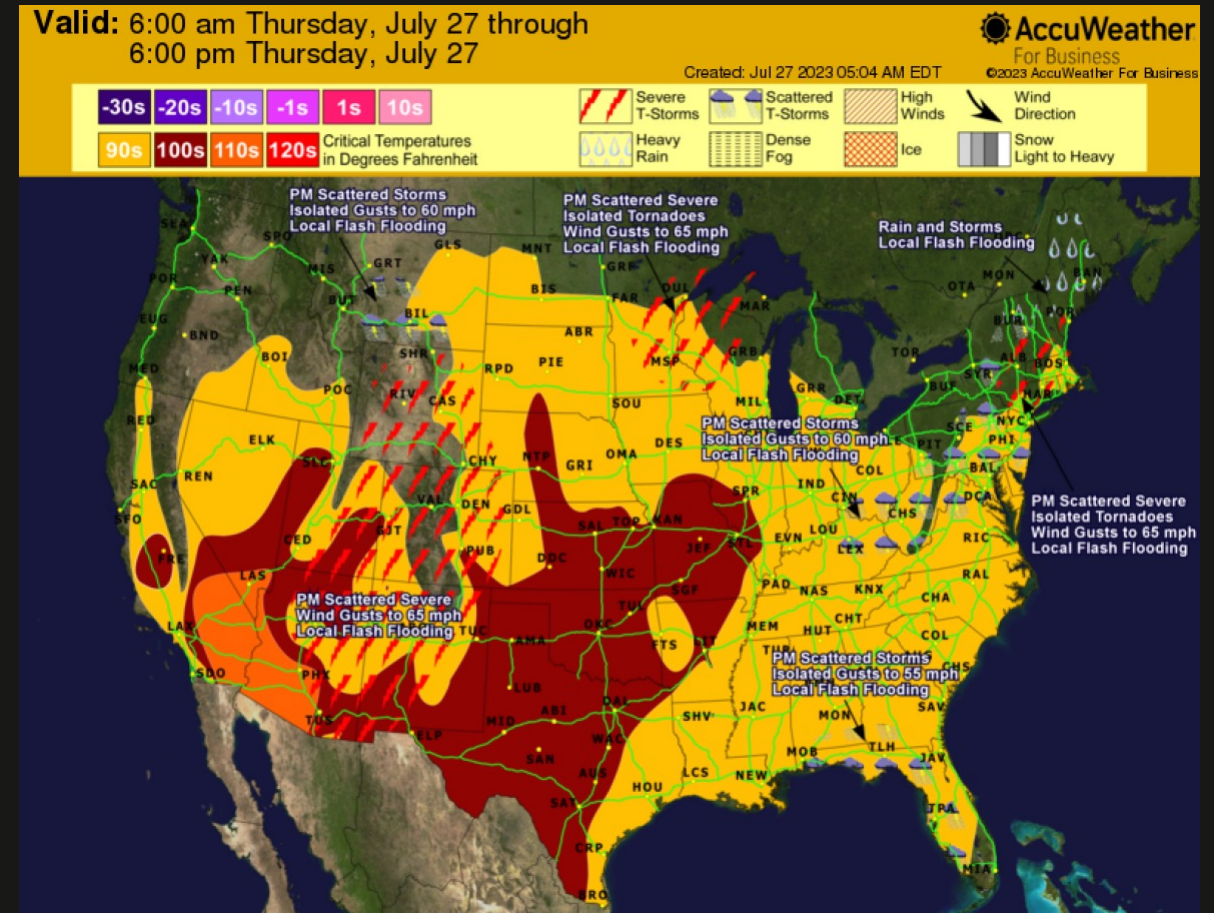
The heat index will surpass 95F today, topping out at 100F.

CLIENT SUPPLIED PROCEDURES

Turn on Gatorade machines for expected temperatures at or above 85F degrees.

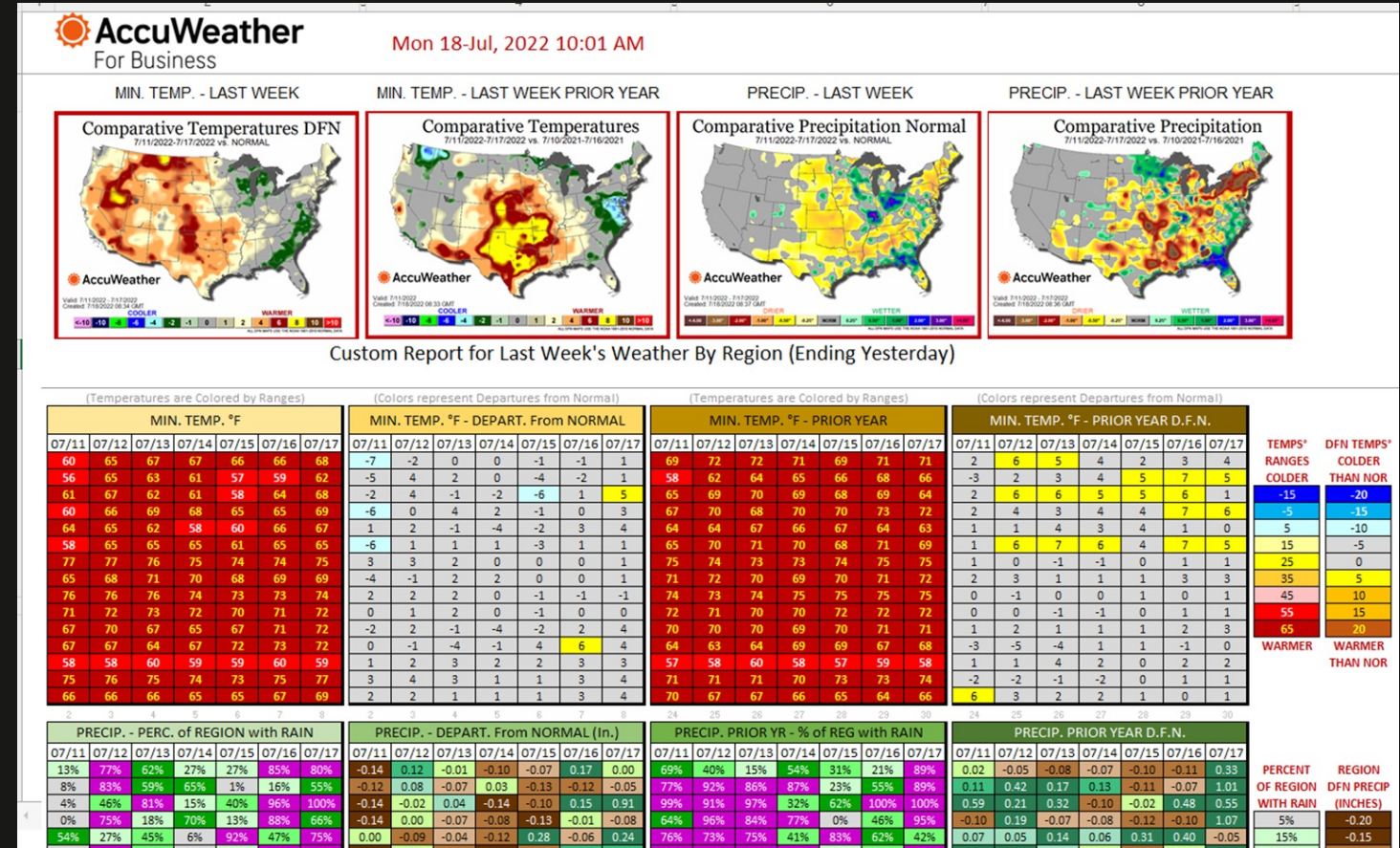
SkyGuard Forecast Services

- Weather threat awareness across the contiguous United States at on glance
- Quickly identify regions expected to experience high temperatures and severe weather
- Access to bring AFB Storm Warning Meteorologists onto conference calls to provide forecast briefings



Data Services

- Detailed historical and forecast data available via XML, FTP, SFTP, and email
- Enables businesses to review past heat stress trends and assess forecasted heat threats
- Hourly forecasts available up to 2- years into the future



Q & A

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Thank you

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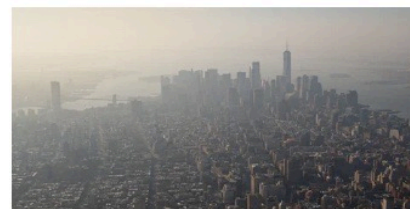
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