

**CONTACT**

POLICY DEPARTMENT

ELIZABETH KOCIENDA

212.382.4788 | ekocienda@nycbar.org

MARY MARGULIS-OHNUMA

212.382.6767 | mmargulis-ohnuma@nycbar.org

**REPORT ON LEGISLATION BY THE  
ANIMAL LAW COMMITTEE**

**Int. 1425-2019**

**Council Members Powers, Rosenthal, Richards, Cabrera, Holden, Levine, Chin, Ayala, Gjonaj, Vallone, Brannan, Yeger, Rivera, Reynoso, Rodriguez, Cumbo, Koslowitz, Adams, Lander, The Public Advocate (Mr. Williams)**

A Local Law to amend the administrative code of the city of New York, in relation to making it unlawful to work carriage horses whenever the heat index reaches or exceeds 90

**THIS LEGISLATION IS APPROVED**

**I. SUMMARY OF THE PROPOSED LEGISLATION**

Int. 1425-2019<sup>1</sup> would amend Section 17-326 of the Administrative Code of the City of New York to impose additional restrictions on operating carriage horses in hot weather. While current law prohibits carriage horses from being worked when the street-level air temperature reaches or exceeds 90 degrees Fahrenheit or when the wet bulb temperature reaches or exceeds 85 degrees Fahrenheit,<sup>2</sup> the proposed legislation would further prohibit carriage horses from being worked when the National Weather Service’s Heat Index reaches or exceeds 90 degrees Fahrenheit.<sup>3</sup>

**II. JUSTIFICATION**

The Animal Law Committee of the New York City Bar Association supports the proposed legislation because it aims to better protect carriage horses in New York’s hot and humid weather. In particular, the legislation would require use of the “real feel” temperature — as measured by the National Weather Service’s Heat Index — to determine when it is too hot for carriage horses to be worked.

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<sup>1</sup> The full text of the bill is available at [https://legistar.council.nyc.gov/ViewReport.ashx?M=R&N=Master&GID=61&ID=3860318&GUID=13DA12A3-FDAA-4ED4-B102-9C6E3C19A350&Extra=WithText&Title=Legislation+Details+\(With+Text\)](https://legistar.council.nyc.gov/ViewReport.ashx?M=R&N=Master&GID=61&ID=3860318&GUID=13DA12A3-FDAA-4ED4-B102-9C6E3C19A350&Extra=WithText&Title=Legislation+Details+(With+Text)). (All websites cited in this report were last visited on June 5, 2019.)

<sup>2</sup> N.Y.C. Admin. Code § 17-330(o); 24 R.C.N.Y. § 4-05(b)(2).

<sup>3</sup> The Heat Index measures how hot it feels when relative humidity is taken into account, along with the air temperature. National Weather Service, Heat Index, <https://www.weather.gov/safety/heat-index>. Under the proposed bill, the Commissioner of the DOHMH or the Commissioner’s designee would measure relative humidity using a state-of-the-art hygrometer or similar device.

As background, hot weather has long been a danger to New York City's carriage horses. Indeed, the City's first significant legislation regulating the carriage horse industry — which prohibited operating carriage horses in extreme heat<sup>4</sup> — was enacted thirty years ago in response to several incidents in which carriage horses collapsed or died during heat waves.<sup>5</sup>

Those restrictions have remained substantively unchanged since that time. In particular, carriage horses must not be worked when the street-level air temperature reaches or exceeds 90 degrees Fahrenheit or when the “wet bulb” temperature (taken by wrapping a wet wick over a temperature bulb<sup>6</sup>) reaches or exceeds 85 degrees Fahrenheit.<sup>7</sup>

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<sup>4</sup> See Local Law No. 89-1989, § 3. A predecessor bill, Local Law No. 4-1982, simply prohibited operating horses “during adverse weather or other dangerous conditions which are a threat to the health or safety of the horse.” Local Law No. 4-1982, § 1 (renumbered as Local Law 64-1982).

<sup>5</sup> Local Law No. 89-1989; Paul L. Montgomery, *New York Heat Climbs to 98, and More of It Is Predicted*, N.Y. TIMES (July 19, 1982), <https://www.nytimes.com/1982/07/19/nyregion/new-york-heat-climbs-to-98-and-more-of-it-is-predicted.html> (“Two carriage horses collapsed and died in the heat in Manhattan, one outside the Sheraton Centre at 53d Street and Seventh Avenue and the other just inside Central Park near the Avenue of the Americas and Central Park South, the police reported.”); Ronald Sullivan, *Hydrants Closed as Heat Persists*, N.Y. TIMES (July 20, 1982), <https://www.nytimes.com/1982/07/20/nyregion/hydrants-closed-as-heat-persists.html> (“It was so hot and humid in the city yesterday that carriage horses were banned from the streets. Three of the horses died in Sunday’s heat.”); Glenn Fowler, *Carriage Horse Dies Near Park; 4th of Summer*, N.Y. TIMES (Aug. 5, 1982), <https://www.nytimes.com/1982/08/05/nyregion/carriage-horse-dies-near-park-4th-of-summer.html> (“A 12-year-old carriage horse collapsed and died yesterday morning on Central Park South, the fourth such animal to die on Manhattan streets in less than three weeks.”); *Koch to Take Steps to Protect Horses*, N.Y. TIMES (Aug. 19, 1988), <https://www.nytimes.com/1988/08/19/nyregion/metro-datelines-koch-to-take-steps-to-protect-horses.html> (“A public furor erupted over the treatment of horses after Whitey, a 9-year-old gelding, collapsed Sunday en route from Central Park to his stable on East 62d Street.”); see also James Brooke, *Heat Wave Stall Over City; 4 More Die*, N.Y. TIMES (June 12, 1984), <https://www.nytimes.com/1984/06/12/nyregion/heat-wave-stall-over-city-4-more-die.html>; Eric Pace, *Staying Cool Is the Order of the Sweltering Day*, N.Y. TIMES (June 10, 1984), <https://www.nytimes.com/1984/06/10/nyregion/staying-cool-is-the-order-of-the-sweltering-day.html>; Arnold H. Lubasch, *Council Passes Law Restricting Carriage Horses*, N.Y. TIMES (Sept. 8, 1989), <https://www.nytimes.com/1989/09/08/nyregion/council-passes-law-restricting-carriage-horses.html>; Melissa Holbrook Pierson, *Horses Deserve Better*, N.Y. TIMES (May 24, 1998), <https://www.nytimes.com/1998/05/24/nyregion/soapbox-horses-deserve-better.html> (“On one memorable July day in 1982, three [horses] dropped in their traces; another collapsed in 1988.”).

<sup>6</sup> A. M. Y. Razak, INDUSTRIAL GAS TURBINES: PERFORMANCE AND OPERABILITY 395 (2007) (“Wet bulb temperature is the lowest temperature to which air can be cooled by the evaporation of water into the air at a constant pressure. It is therefore measured by wrapping a wet wick around the bulb of a thermometer and the measured temperature corresponds to the wet bulb temperature. The dry bulb temperature is the ambient temperature. The difference between these two temperatures is a measure of the humidity of the air”).

<sup>7</sup> N.Y.C. Admin. Code § 17-330(o); 24 R.C.N.Y. § 4-05(b)(2). The New York City Department of Health & Mental Hygiene monitors temperatures from a central weather station. See *Caring for Horses Working in NYC*, <https://www1.nyc.gov/site/doh/health/health-topics/caring-for-horses-working-in-nyc.page>.

Despite current heat restrictions, advocates monitoring carriage horses still report carriage horses being driven during heat advisories. See, e.g., Andrew Ramos, *Animal Rights Activists Say NYC Carriage Horses Reported to Duty During Heat Advisory*, PIX 11 (Aug. 6, 2018), <https://pix11.com/2018/08/06/nyc-carriage-horses-reported-to-duty-during-heat-advisory-animal-rights-activist-speak-out/> (“Under sweltering heat that surpassed 90 degrees, the city’s carriage horses reported for duty along Central Park South Monday morning, according to animal rights activists.”); *Horses and the Heat: Is That All There Is At Play Here?*, THE BRONX CHRONICLE (July 24, 2014), <https://thebronxchronicle.com/2014/07/14/horses-and-the-heat-is-that-all-there-is-at-play-here/>.

The proposed legislation would also stop carriage horses from being worked when the National Weather Service's Heat Index reaches or exceeds 90 degrees Fahrenheit. The Heat Index seeks to measure how hot it "really" feels when relative humidity is combined with the air temperature.<sup>8</sup> For example, if the air temperature is 88 degrees Fahrenheit and the relative humidity is 80%, then the Heat Index — or "real feel" temperature — is 106 degrees Fahrenheit.<sup>9</sup> And that makes intuitive sense: as any New Yorker knows, humidity makes a hot day feel hotter.

So, too, for New York's horses: horses lose 8 to 10 gallons of fluid when exercised in a hot environment.<sup>10</sup> And when humidity is high too, horses are unable to cool themselves by evaporation, causing their core temperature to rise.<sup>11</sup> Indeed, just 17 minutes of moderate exercise raises a horse's temperature to potentially dangerous levels.<sup>12</sup> Not surprisingly, hyperthermia, or heatstroke, is a leading cause of death for horses.<sup>13</sup> Heat is particularly dangerous for carriage horses, as they are permitted to work up to nine hours in any twenty-four hour period, seven days a week.<sup>14</sup> The full extent of this danger is difficult to assess, as existing law does not mandate that drivers report heat-induced collapses.<sup>15</sup>

While Department of Health and Mental Hygiene heat regulations already account for relative humidity to some extent — carriage horses may not be driven once the "wet bulb" temperature has reached 85 degrees Fahrenheit<sup>16</sup> — the wet bulb metric can differ significantly

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<sup>8</sup> National Weather Service, Heat Index, note 3 above; National Weather Service, What Is the Heat Index?, <https://www.weather.gov/ama/heatindex>. Relative humidity measures the amount of moisture in the air, expressed as the actual vapor density over the saturation vapor density. University of Illinois at Urbana-Champaign, Department of Atmospheric Sciences (DAS), WW2010, "Relative Humidity," [http://ww2010.atmos.uiuc.edu/\(Gh\)/guides/mtr/cld/dvlp/rh.rxml](http://ww2010.atmos.uiuc.edu/(Gh)/guides/mtr/cld/dvlp/rh.rxml).

<sup>9</sup> National Weather Service, Heat Index Chart, <https://www.weather.gov/media/unr/heatindex.pdf>.

<sup>10</sup> Holly Cheever, *Conditions for Carriage Horses Are Abusive on Streets and in Stall*, NEW YORK TIMES (Jan. 17, 2014), <https://www.nytimes.com/roomfordebate/2014/01/17/horse-carriages-are-not-just-a-ride-in-the-park/conditions-for-carriage-horses-are-abusive-on-streets-and-in-stalls>.

<sup>11</sup> *Id.*

<sup>12</sup> Teresa Pitman, *When the Rider Is Hot, the Horse Is Hotter*, Horse Journals, <https://www.horsejournals.com/horse-care/seasonal-care/summer/when-rider-hot-horse-hotter> (quoting Prof. Michael Lindinger).

<sup>13</sup> Holly Cheever, *The Urban Carriage Horse Ride – A 21st Century Anachronism* (Feb. 19, 2014), [https://www.hsvma.org/the\\_urban\\_carriage\\_horse\\_ride#.XKettleSWyUk](https://www.hsvma.org/the_urban_carriage_horse_ride#.XKettleSWyUk); Jason L. Turner and Sandra Barraza, *Help Your Horse Handle Heat Stress* (Guide B-711), New Mexico State University, College of Agricultural, Consumer and Environmental Sciences (Oct. 2017), [https://aces.nmsu.edu/pubs/\\_b/B711.pdf](https://aces.nmsu.edu/pubs/_b/B711.pdf).

<sup>14</sup> N.Y.C. Admin. Code § 17-330(g)(1).

<sup>15</sup> The law does require drivers to report vehicular accidents involving horse carriages and to notify DOHMH's Bureau of Animal Affairs if a horse dies while working or under suspicious circumstances. 6 R.C.N.Y. §§ 2-212(i)(5), (p)(3); 24 R.C.N.Y. § 4-12(h); 24 R.C.N.Y. § 4-02.

<sup>16</sup> 24 R.C.N.Y. § 4-05(b)(2). Notably, the wet bulb temperature differs from the WetBulb Globe Temperature (WBGT), the latter of which takes into account air temperature, humidity, wind speed, sun angle, and cloud cover. National Weather Service, WetBulb Globe Temperature, <https://www.weather.gov/tsa/wbgt>. At least some experts argue that WBGT provides a superior metric for measuring real-feel heat. Alejandra O'Connell-Domenech, *Activists*

from the temperature that the horse really feels (as measured by the Heat Index). For instance, an 86-degree air temperature in 90% relative humidity would mean a wet bulb temperature of just over 83 degrees<sup>17</sup> — conditions in which carriage horses could still work. Yet using the Heat Index, those same conditions “really feel” like 105 degrees and, according to the National Weather Service, pose a “danger” of heat disorders with prolonged exposure or strenuous activity.<sup>18</sup>

### III. CONCLUSION

For the reasons above, the Animal Law Committee supports Int. 1425-2019.

Animal Law Committee  
Christopher Wlach, Chair

June 2019

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*Hail Horses’ Move to Park; Hacks Unhappy*, THE VILLAGER (March 6, 2019), <https://www.thevillager.com/2019/03/activists-hail-horses-move-to-park-hacks-unhappy/> (quoting Dr. David Marlin, a horse physiology and heat-stroke expert).

<sup>17</sup> National Weather Service, Dewpoint and Wet-bulb from Relative Humidity, [https://www.weather.gov/epz/wxcalc\\_rh](https://www.weather.gov/epz/wxcalc_rh) (assuming a station pressure of 1013 hPa); *see* Swedish Meteorological and Hydrological Institute, “Air Pressure and Sea Level” (April 23, 2014), <http://www.cnyweather.com/wxbarosummary.php> (noting that 1013 hPa is the average air pressure at sea level).

<sup>18</sup> National Weather Service, Heat Index Chart, note 10 above.