



• **Heritage Distilling Co.** (HDC) is celebrating the grand opening of its brand new Eugene facility 5 pm Friday, Oct. 7, at 110 Madison Street with a ribbon cutting, pipes and drums, blessing of the stills and samples of HDC's products.

• **Community LendingWorks**, a nonprofit Community Development Financial Institution (CDFI) based in Springfield, Salem and Oregon City, was awarded a \$500,000 grant from the U.S. Department of Treasury's CDFI Fund. "The award will enable Community LendingWorks to increase lending and investment activity in low-income and economically distressed communities across Oregon," the nonprofit says.

• October is **Domestic Violence Awareness Month**. "To promote awareness and prevention efforts, and to foster widespread collaboration in creating safe relationships and communities," Womenspace says it will be partnering with several local businesses throughout the month, including Oct. 11 at The Bier Stein, with 100 percent of the proceeds of a keg donated by Falling Sky going to the Womenspace; Pints for a Cause Oct. 13 at Ninkasi; Sweet Life Petite donates 20 percent of daily sales Oct. 24; and Plank Town will donate 10 percent of daily sales Oct. 25. For additional information about Domestic Violence Awareness Month 2016, please contact Womenspace at 541-485-8232 or visit womenspaceinc.org or womenspace/facebook.

LANE COUNTY AREA SPRAY SCHEDULE

Oxbow Timber 1, 541-679-3322, plans to hire RRC Forestry Roseburg Resources, 541-679-3311, to aerially apply urea fertilizer to 2,655.2 acres south of Veneta and west of Lorane in Lane and Douglas counties near the North Sister, South Sister, Panther, Wolf, Jeff, Pheasant, Shaw, Sweden, Fish and Beaver creeks and the Smith River. See ODF notification 2016-781-11215, call Dan Menk at 541-935-2283 with questions.

Compiled by Gary Hale, *Forestland Dweller*, 541-342-8332, forestlanddwellers.org.

POLLUTION UPDATE

The Oregon Department of Environmental Quality (DEQ) fined **Shola Adeniji (doing business as Shola's Quality Plus Cleaners)**, located on Bailey Hill Road in Eugene) \$525 on Sept. 19 for failing to submit an annual report for 2015 to DEQ. The report was due March 1, 2016, and according to DEQ, such reports "are an important mechanism for DEQ to ensure that dry cleaners are complying with Oregon's waste minimization regulations." DEQ also noted in its cover letter to Adeniji that "[s]olvents used for dry cleaning can be toxic and therefore harmful to the public and the environment." DEQ sent reminder letters to Adeniji about the report in March, April, May and June, followed by a warning letter on June 17 and a pre-enforcement notice on July 12.

Doug Quirke/Oregon Clean Water Action Project

METEOROLOGIST ADDRESSES CHEMTRAIL THEORIES

From chemtrails to contrails, LCC talk to discuss climate science and pseudoscience

Standing on the sidewalk, you look up in the sky and see a curious crosshatching of straight white streaks. These are airplane contrails — clouds formed when water vapor condenses and freezes around small particles that exist in aircraft exhaust, according to NASA.

But to some in Eugene, these streaks are ominous signs of government engineering, and they call them "chemtrails." Lane Community College Dean of Science Paul Ruscher, who has a doctorate in atmospheric sciences from Oregon State University, will debunk the chemtrail conspiracy in an Oct. 26 talk, "Chemtrails, Climate Science and Clickbait: A Meteorologist's View of Pseudoscience," as part of Earth Science Week at LCC.

The idea for his talk started when he was teaching climate change and atmospheric sciences courses at LCC, Ruscher says. He would take students outside and they showed a "tremendous interest in contrails," with a number of them expressing the idea that they thought they were geoengineered to modify the climate.

A number of recent letters to the editor in *EW* have expressed similar ideas and related theories.

Ruscher will use science to move the discussion away from chemtrails and into contrails, he says. When it comes to global warming, he says, these airplane emissions "work like greenhouse gases; they do warm the atmosphere."

People are indeed seeing more contrails these days, Ruscher says, as jets are able to fly higher into the atmosphere and air traffic has increased. Also, he says, you can predict when contrails will persist, depending on how much water vapor there is in the atmosphere.

He refers those interested in participating in studying this phenomenon to citizen-science projects such as the

GLOBE (Global Learning and Observations to Benefit the Environment) program, in which citizens can document clouds and contrails in the interest of science.

Some chemtrail believers are concerned for the environment, he says, while others are on the conspiracy side, believing government poisoning is going on. But Ruscher says he sees "very little appreciation for how human activities can change what happens in the atmosphere." And Ruscher says that while cloud seeding to create rain happens in other areas of North America, it doesn't happen in the rainy Pacific Northwest.

Ruscher adds that he also wants to discuss the idea of "climatoblivia," a concept he is working on that encompasses those who are oblivious to understanding climate change because they think it doesn't directly affect them and those who want to wear blinders to ignore it.

The talk will use science to move the discussion away from chemtrails and into contrails.

— PAUL RUSCHER, LCC

He points out that his talk and its focus on climate change is particularly timely as Hurricane Matthew hits the Caribbean and the European Parliament voted Oct. 4 to back the Paris accord to fight climate change. The Paris agreement enters into force when at least 55 countries, representing 55 percent of global emissions, have joined.

European Union approval pushes it over that threshold. The U.S. and China already signed on. The accord seeks to limit greenhouse gas emissions and keep global temperature increases "well below" 2 degrees Celsius (3.6 Fahrenheit).

Ruscher says he hopes his talk will clear up some climate change misconceptions.

"Climate Science, Chemtrails and Clickbait: A Meteorologist's View of Pseudoscience" is 7 pm Wednesday, Oct. 26, rescheduled from Oct. 13, at the Lane Community College Downtown Campus, Room 112. The talk will be followed by a Q&A. The event is free and open to the public. For more on GLOBE, go to observer.globe.gov. Meanwhile, Eugene Citizens Against Geoengineering/Chemtrails is holding a forum of its own to discuss "possible health hazards" 6 pm Oct. 20 at the Eugene Garden Club, 1645 High Street, also free and open to the public.



The equinox passing is reflected in shorter days. The rate of change itself changes. Change in day length is fastest at equinox and slowest at solstice. The day-to-day change at equinox is about 3 minutes a day but only 30 seconds a day at winter solstice.

At the end of September, seeds of incense cedar were scattered to the winds and now their cones are raining down. The cones of incense cedar decompose over winter and are gone by spring.

The cones of Douglas fir, however, remain on the trees long after seeds are shed and then rot slowly after they finally fall to the ground. In late summer many of them are cut down by squirrels and hidden under logs until recovered later for a meal.

The cone scales are chewed away to expose the tender, nutritious seeds. Squirrels leave piles of cone scales at the end of logs where they were munched. The cones of true firs disintegrate from top down. The scales and seeds fall separately, a few at a time.

Long dry spells have caused bigleaf maple leaves to dry and turn brown early. Bracken ferns are getting brown on the roadsides and will collapse after the first hard frost. The lady fern will likewise keel over with a frost. Mosquito ferns on Delta Ponds are turning deeper and deeper red as temperatures dip to freezing. Sword fern, deer fern and spleenwort are evergreen ferns. Spleenworts are not common, so finding one is special.

David Wagner is a botanist who works in Eugene. He teaches moss classes, leads nature walks and makes nature calendars. Contact him directly at fernenmosses@me.com.