

TODAY	TONIGHT	THURSDAY	FRIDAY	SATURDAY	SUNDAY	MONDAY	TUESDAY
HIGH 40° A little snow at times; storm total 1-2"	LOW 22° Partly cloudy	48° 34° Cloudy and milder	48° 26° Partly sunny	49° 29° Mostly sunny	53° 27° Times of clouds and sun	50° 26° Increasing cloudiness	49° 24° Cloudy; snow at night

ALMANAC

Bend Municipal Airport through 5 p.m. yesterday.

TEMPERATURE		
Yesterday	Normal	Record
High 45°	42°	65° in 1962
Low 37°	24°	-19° in 1950

24 hours through 5 p.m. yesterday Trace Record 1.23" in 1907
Month to date (normal) Trace (0.08")
Year to date (normal) 0.66" (1.61")
Barometric pressure at 4 p.m. 29.91"

SUN, MOON AND PLANETS

Rise/Set	Today	Thu.
Sun	7:20am/5:18pm	7:19am/5:20pm
Moon	none/10:40am 12:33am/11:08am	
Mercury	7:31am/6:15pm	7:24am/6:07pm
Venus	6:49am/4:10pm	6:49am/4:12pm
Mars	10:41am/1:08am	10:39am/1:07am
Jupiter	7:12am/4:52pm	7:08am/4:49pm
Saturn	6:56am/4:25pm	6:53am/4:22pm
Uranus	10:34am/12:27am	10:30am/12:23am

Last New First Full
Feb 4 Feb 11 Feb 19 Feb 27

Tonight's sky: Orion, the hunter, climbs across the southern sky this evening.

Source: Jim Todd, OMSI

OREGON WEATHER

Shown is today's weather. Temperatures are today's highs and tonight's lows.

EAST: Chilly Wednesday; scattered snow showers. Partial clearing and cold at night. Clouds and sun Thursday.

CENTRAL: Mostly cloudy Wednesday; a few light rain and snow showers. Partial clearing and cold at night.

WEST: A shower or two Wednesday morning; a partly to mostly cloudy afternoon. Partly cloudy at night.

OREGON EXTREMES YESTERDAY

High: 61° at Ontario
Low: 24° at Crater Lake

City	Yesterday HI/Lo/Prec.	Today HI/Lo/W	Thursday HI/Lo/W
Astoria	48/41/0.45	47/38/c	47/43/c
Baker City	50/40/0.01	41/26/sf	42/32/c
Brookings	52/42/0.09	49/37/r	53/39/s
Burns	39/37/0.21	38/19/sf	40/29/c
Eugene	51/42/0.13	49/35/r	50/40/c
Klamath Falls	42/35/0.02	37/16/sn	40/21/c
Lakeview	36/35/0.08	34/10/sn	35/17/c

TRAVEL WEATHER

NATIONAL							
City	Yesterday HI/Lo/Prec.	Today HI/Lo/W	Thursday HI/Lo/W	City	Yesterday HI/Lo/Prec.	Today HI/Lo/W	Thursday HI/Lo/W
Abilene	71/42/0.00	78/58/s	69/34/c	Juneau	23/16/0.24	31/27/sn	34/20/sn
Albany	27/20/0.39	30/19/sf	33/17/s	Kansas City	42/24/0	55/43/pc	45/23/r
Albuquerque	64/35/0.00	63/38/c	49/25/pc	Lansing	32/11/0.00	32/18/pc	34/23/sn
Anchorage	8/30/0.00	16/10/c	18/8/s	Las Vegas	68/45/0.00	67/45/c	59/38/s
Atlanta	47/33/0.00	49/29/s	54/47/c	Lexington	33/19/0.01	37/22/pc	43/26/r
Atlantic City	35/34/0.25	35/31/pc	42/34/s	Lincoln	32/23/Tr	45/30/pc	32/16/sn
Austin	68/34/0.00	75/59/s	82/44/pc	Little Rock	46/27/0.00	55/43/pc	62/33/sh
Baltimore	36/31/0.01	25/25/pc	43/30/pc	Los Angeles	71/54/Tr	66/49/pc	68/48/s
Bellingham	62/41/0.00	38/22/sn	39/27/c	Louisville	39/25/Tr	40/27/pc	45/27/r
Birmingham	48/31/0.01	51/31/s	59/40/c	Madison, WI	31/18/Tr	30/24/pc	35/5r
Bismarck	30/24/0.00	35/7/c	15/3/c	Memphis	43/31/0.00	52/41/pc	60/31/sh
Boise	59/42/0.00	43/27/sh	45/32/c	Miami	65/52/0.00	68/46/s	71/59/s
Boston	34/31/0.48	35/28/sf	38/23/s	Milwaukee	33/23/0.00	33/27/pc	37/15/s
Bridgeport, CT	36/32/0.15	35/26/c	39/28/s	Minneapolis	42/29/0.00	45/30/s	54/33/sh
Burlington, VT	30/18/0.09	31/21/pc	35/29/pc	New Orleans	57/42/0.00	61/48/s	72/55/pc
Cleveland	62/46/0.09	29/12/pc	30/17/pc	New York City	33/30/0.28	35/27/c	38/32/s
Caribou, ME	29/14/0.51	34/25/s	31/14/c	Newark, NJ	34/30/0.24	36/26/c	41/27/s
Charleston, SC	50/37/Tr	52/28/s	56/45/pc	Norfolk, VA	39/34/0.06	46/30/s	49/39/pc
Charlotte	45/33/Tr	51/24/s	52/41/c	Oklahoma City	60/33/0.00	62/50/pc	53/28/pc
Chattanooga	45/31/0.00	49/28/s	50/40/c	Omaha	30/21/Tr	43/31/pc	34/13/sn
Cheyenne	58/28/0.00	54/20/c	32/22/pc	Orlando	55/41/0.00	60/34/s	67/44/pc
Chicago	33/21/0.00	34/27/pc	37/13/s	Palm Springs	80/58/0.00	77/52/c	72/48/s
Cincinnati	33/19/0.04	36/23/s	41/24/r	Peoria	26/22/0.00	37/31/pc	39/14/sn
Columbus, OH	61/35/0.10	32/17/pc	38/29/s	Philadelphia	36/30/0.18	34/25/pc	40/29/pc
Colorado Springs	61/35/0.00	61/26/pc	38/20/sf	Phoenix	82/57/0.00	78/52/c	71/45/pc
Columbia, MD	43/27/0.00	51/41/pc	47/22/r	Pittsburgh	30/23/0.02	31/14/c	37/31/pc
Columbia, SC	46/35/0.02	52/23/s	54/45/c	Portland, ME	32/26/0.64	35/26/c	38/17/pc
Columbus, GA	52/33/0.00	55/29/s	60/52/pc	Providence	38/33/0.21	34/28/sf	39/23/s
Columbus, OH	28/24/0.09	29/16/s	38/26/r	Raleigh	45/35/Tr	49/24/s	52/41/pc
Concord, NH	34/27/0.22	31/24/sn	36/11/s	Rapid City	55/17/0.00	52/19/sh	35/20/pc
Corpus Christi	70/37/0.00	49/28/s	50/40/c	Reno	57/42/0.03	43/22/c	43/26/s
Dallas	64/39/0.00	69/58/pc	71/38/c	Richmond	41/32/0.02	47/22/s	51/36/pc
Dayton	30/16/Tr	32/19/s	38/23/r	Rochester, NY	30/24/0.21	31/20/pc	37/26/pc
Denver	65/27/0.00	62/25/pc	38/21/pc	Sacramento	59/50/0.28	54/38/c	58/32/s
Des Moines	24/9/0.00	40/34/pc	36/11/sn	St. Louis	40/28/Tr	45/37/pc	47/23/r
Detroit	34/21/Tr	33/18/s	34/25/sn	Salt Lake City	50/28/0.00	41/28/sn	39/28/pc
Duluth	22/18/Tr	31/26/c	28/1/sn	San Antonio	66/39/0.00	74/58/s	79/46/s
El Paso	70/45/0.00	76/54/pc	67/36/c	San Diego	67/58/0.00	64/51/c	65/46/s
Fairbanks	-9/-12/0.00	-12/-17/sn	-12/-22/c	San Francisco	61/54/0.53	56/44/c	57/43/s
Fargo	25/24/0.00	32/17/pc	18/1/sn	San Jose	61/52/0.05	57/40/c	59/37/s
Flagstaff	52/35/0.02	47/22/c	40/14/pc	Santa Fe	61/27/0.00	58/34/c	45/20/pc
Grand Rapids	36/18/0.00	34/22/pc	35/24/sn	Savannah	54/38/0.00	55/30/s	59/47/pc
Green Bay	34/18/0.00	30/24/pc	35/13/c	Seattle	46/41/0.89	47/44/c	47/44/r
Greensboro	41/31/Tr	48/23/s	50/38/pc	Sioux Falls	28/20/Tr	40/23/pc	26/8/sn
Harrisburg	37/31/0.04	37/25/pc	42/29/pc	Spokane	50/38/Tr	40/27/pc	38/31/sn
Hartford, CT	34/27/0.52	33/24/c	36/17/s	Springfield, MO	46/20/0.00	54/43/pc	53/25/r
Havana	58/24/0.00	32/17/pc	38/29/s	St. Paul	54/17/0.00	60/40/s	60/40/pc
Helena	81/68/0.04	75/63/r	76/63/pc	Tucson	76/56/0.00	79/50/c	69/40/pc
Houston	66/39/0.00	70/60/pc	78/49/c	Tulsa	59/31/0.00	61/53/pc	57/29/c
Huntsville	45/28/0.00	48/29/s	56/35/c	Washington, DC	37/32/0.15	40/27/pc	45/36/pc
Indianapolis	33/20/0.00	34/24/pc	38/19/r	Wichita	57/34/0.00	57/40/pc	43/25/pc
Jackson, MS	51/28/Tr	59/42/c	66/38/c	Yakima	50/37/0.01	48/30/pc	49/34/c
Jacksonville	52/39/0.00	56/29/s	63/44/pc	Yuma	81/60/0.03	79/52/c	71/46/s

NATIONAL WEATHER

Shown are today's noon positions of weather systems and precipitation. Temperature bands are highs for the day.

NATIONAL EXTREMES YESTERDAY (for the 48 contiguous states)
National high: 85° at Gila Bend, AZ
National low: -12° at Boulder, WY
Precipitation: 2.02" at Plymouth, MA

City	Yesterday HI/Lo/Prec.	Today HI/Lo/W	Thursday HI/Lo/W
Seattle	47/40		
Portland	48/38		
Boise	43/27		
Billings	38/22		
San Francisco	56/44		
Los Angeles	66/49		
Las Vegas	87/45		
San Diego	64/51		
Anchorage	16/10		
Honolulu	75/63		
Juneau	31/29		
Chicago	34/27		
St. Louis	45/33		
Little Rock	55/43		
Atlanta	49/29		
Phoenix	78/52		
Albuquerque	63/38		
El Paso	76/54		
Dallas	69/58		
Houston	70/60		
San Antonio	62/50		
Fort Worth	62/50		
Phoenix	78/52		
Albuquerque	63/38		
El Paso	76/54		
Dallas	69/58		
Houston	70/60		
San Antonio	62/50		
Fort Worth	62/50		

UV INDEX TODAY

10 a.m.	Noon	2 p.m.	4 p.m.
1	1	1	0

The higher the AccuWeather.com UV Index™ number, the greater the need for eye and skin protection. 0-2 Low, 3-5 Moderate, 6-7 High, 8-10 Very High, 11+ Extreme.

ROAD CONDITIONS

For web cameras of our passes, go to www.bendbulletin.com/webcams

I-84 at Cabbage Hill: Mostly cloudy today; a snow shower during the afternoon.

US 20 at Santiam Pass: Chilly today; snow showers totaling a coating to an inch.

US 26 at Gov't Camp: Snow showers today totaling a coating to an inch.

US 26 at Ochoco Divide: Chilly today; a few snow showers. Partial clearing tonight.

ORE 58 at Willamette Pass: Chilly today with intermittent snow and flurries totaling a coating to an inch.

ORE 138 at Diamond Lake: Snow showers today totaling a coating to an inch or two.

SKI REPORT

In inches as of 5 p.m. yesterday

Ski resort	New snow	Base
Anthony Lakes Mtn	0	0-44
Hoodoo Ski Area	0	0-57
Mt. Ashland	1	30-52
Mt. Bachelor	4	80-88
Mt. Hood Meadows	0	85-129
Mt. Hood Ski Bowl	0	22-47
Timberline Lodge	0	0-97
Willamette Pass	0	42-80
Aspen / Snowmass, CO	0	28-42
Mammoth Mtn. Ski, CA	0	90-130
Squaw Valley, CA	0	0-109
Park City Mountain, UT	0	40-43
Sun Valley, ID	0	83-100

Source: OnTheSnow.com

Solar

Continued from A11

The farm will be on roughly 6 acres at OSU's North Willamette Research and Extension Center in Aurora, 20 miles south of Portland. It will include six sub-arrays of solar panels, allowing researchers to experiment with different configurations and crops.

Three of the arrays will be elevated 9-12 feet off the ground, allowing orchard-style equipment to pass underneath, and three will be partially elevated on single-axis trackers, rotating panels to face the sun throughout the day.

"What we're designing is a system where we can try different solar configurations, so we can see what works best for access to land," Higgins said.

Managing sunlight is already promising benefits for farmers. A 2015 study led by Higgins analyzed the effect of solar panels placed in a sheep pasture near the main OSU campus. Using meteorological equipment and soil moisture sensors, the lab found that grass beneath the panels used water 300% more efficiently



OSU via Capital Press
Chad Higgins, an associate professor in the College of Agricultural Sciences at Oregon State University.

and grew 90% more forage.

The study caught the attention of Dan Orzech, general manager of the Oregon Clean Power Cooperative, which has built community solar projects for churches, local governments and other groups across the state.

Orzech said the co-op decided to partner with Higgins, providing funding to buy and install the solar arrays that will later be repaid by selling the electricity they generate.

"It's kind of a unique con-

fluence of different programs coming together in one project," Orzech said.

The success of agrivoltaics could be a boon for solar energy, spurring greater investment and land availability for larger installations, Orzech said.

"What's interesting to me is this perception that solar and agriculture are mutually exclusive," he said. "Everyone just kind of assumes that was the case, until recently when (Higgins) and other researchers started demonstrating it

makes a lot of sense to combine them."

The solar farm is expected to produce 700-800 kilowatts of energy. OSU has already committed to buying some of the power, and Higgins is confident more subscribers will sign on.

"You get cheaper power than you normally would, and in doing so you're getting green energy, which is a good thing for the environment," Higgins said. "And you're helping to support the research mission of OSU, which is trying to help growers and American family farmers make more money, and in the process meet our renewable energy targets."

Higgins also hopes to show how electricity generated by solar arrays can be used to electrify other aspects of farming operations. For example, he said the power could go toward running electric tractors or replace burning natural gas in making nitrogen fertilizer.

"The plan is to slowly build out to have a fully sustainable, production-scale farm, and build the blueprints for that," he said. "We're not there yet, but we're damn close."

Water fees

Continued from A11

Even with the 17.39% fee increase, the state water department would only recover the equivalent of 2.5 full-time positions, which means 6.33 positions would still be lost, he said. The agency has also left seven positions unfilled during this biennium due to lack of revenues.

The Oregon Farm Bureau opposes HB 2142, arguing that farmers have been hit hard by the pandemic in domestic and international markets, which has already affected their ability to pay government fees.

"This is reflected in the fact that we're seeing fewer water rights transactions," said Mary Anne Cooper, OFB's vice president of public policy. "People are unable to invest in their farms."

Though the Farm Bureau supports a fully-functional water resources department, fees for water rights transactions have risen repeatedly over the past decade while wait times for applicants have just grown longer, she said.

"We're just seeing fees going up and up and up without corresponding value to users," Cooper said. "Our folks really cannot afford a fee increase in 2021."

The Oregon Water Resources Congress, which represents irrigation districts, hasn't yet taken a position on HB 2142 but is also troubled by rising government fees — not only at OWRD, but also at other state agencies.

"We need to find a better way to fund this agency," said April Snell, the group's executive director. "There needs to be a discussion about how to best fund not only the Water Resources Department but other natural resource agencies."

This sentiment was echoed by members of the House Water Committee, which is considering the bill.

"I am appalled that this is happening. I am appalled this agency is having to gut its staff," said Rep. Brad Witt, D-Clatskanie.

It's tough for farmers to support higher fees when they don't see an improvement in agency performance, said Rep. Mark Owens, R-Crane.

Bubble

Continued from A11

All the fervor has Wall Street openly debating whether the market is in a dangerous bubble, after months of batting away the possibility.

A bubble is what happens when prices for something run much, much higher than they should rationally be: They've been a regular occurrence through history, going back to tulips in the 17th century and pets.com at the close of the 20th.

"It is a privilege as a market historian to experience a major stock bubble once again," the famed value investor Jeremy Grantham, who has correctly called several major market turning points, wrote in a recent paper.

To be sure, most professional forecasters say the U.S. stock market is not headed for a crash, just slower returns than

before. But those optimists are having to do more work convincing others.

Robert Shiller, a Yale professor who won a Nobel prize for his work on explaining stock price movements, said the market looks vulnerable, but he cautioned that some hallmarks of a classic bubble aren't present today, such as investors talking about a "new era" for the economy. He also said that it's difficult to predict when the market will run out of momentum and turn lower.

"People often extrapolate trends, and they go on longer than you ever think," he said. "And then they disappear."

Here's a look at the causes for concern driving the bubble debate:

Day-trading frenzy

— The most glaring example of excess sweeping Wall Street now is GameStop's stock, which soared 1,625% in Jan-

uary. Shares of the struggling video game retailer have since fallen, but they remain way beyond a price Wall Street analysts say is rational based on its profit prospects.

No discounts to be found

— Perhaps more worrisome is that prices have been soaring across the stock market at a much faster pace than corporate profits. The two tend to track each other over the long term, so big dissociations give pause.

IPOs

— Massive support from the Federal Reserve means dollars are sloshing around markets looking for investments, and young and money-losing companies are rushing to take advantage by selling their stock to the public for the first time. Companies raised more than \$60 billion last year through IPOs of their stock, the most

since the dot-com bubble peaked in 2000, according to data compiled by Jay Ritter at the University of Florida.

For all the worries, much of Wall Street is still optimistic, forecasting more gains ahead.

COVID-19 vaccines have raised expectations that daily life will get closer to normal this year and return the economy to health. If earnings rise a lot and stock prices make only modest moves, prices would look more reasonable, and that's precisely what much of Wall Street expects to happen.

Then, there's the Fed. Past bubbles have popped after the Federal Reserve started raising interest rates in hopes of cooling off an overheated economy or markets. For now, the Fed seems to be years away from doing that. It's even said for the first time that it's willing to keep rates low for a while after inflation tops its 2% target.

Bezos

Continued from A11

While MacKenzie drove, Bezos wrote up the business plan for what would become Amazon.com. Bezos convinced his parents and some friends to invest in the idea, and Amazon began operating out of the Bezos' Seattle garage on July 16, 1995.

Amazon has gone far beyond selling paperbacks. It now produces movies, makes sofas, owns a grocery chain and even has plans to send satellites to space to beam internet service to earth. The company is one of the most valuable in the world, worth nearly \$1.7 trillion.

Bezos' riches have also swelled: His stake in Amazon is worth \$180 billion.

Scrutiny from regulators has also grown. Amazon and other tech giants have en-

joyed