



Get Tickets: Sacred Cod

# The world broke multiple records for warmth in March

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By **Matt Rocheleau**

GLOBE STAFF APRIL 19, 2016

It keeps getting hotter. The actual global average temperature was higher than the historical average in March by a recordbreaking margin.

The National Oceanic and Atmospheric Administration on Tuesday released data showing that the average temperature across the earth's land and oceans in March was 2.2 degrees Fahrenheit above the 20th century average.

That was the highest monthly temperature departure among all 1,635 months on record, dating back to 1880.

“Most of Earth's land surfaces were warmer than average or much warmer than average ... with record warmth notable across eastern Brazil, most of eastern and central Africa, much of southeastern Asia, and large portions of northern and eastern Australia,” NOAA explained on its website.

The next highest departure was in February, which measured 2.18 degrees above the 20th century average.

After that, the next seven highest departures from normal were recorded within the past year,



continuing a trend in which scientists have recorded global average temperatures significantly above normal in recent years.

The extra 2.2 degrees in March made it the warmest March ever recorded.



It was the 11th record hot month in a row. NOAA said that is the longest such streak in its 137 years of recordkeeping.

The average global temperature from January through March was also farther above normal than any other three-month period on record.

“Parts of every inhabited continent and every major ocean basin had some regions with record warmth for the year-to-date,” NOAA said.

Some of the recent warmth has been attributed to a strong El Niño, an area with unusually warm sea surface temperatures in the equatorial Pacific Ocean that can dictate long-term weather patterns for much of the world. Typically, El Niño episodes last for about a year and occur several years apart.

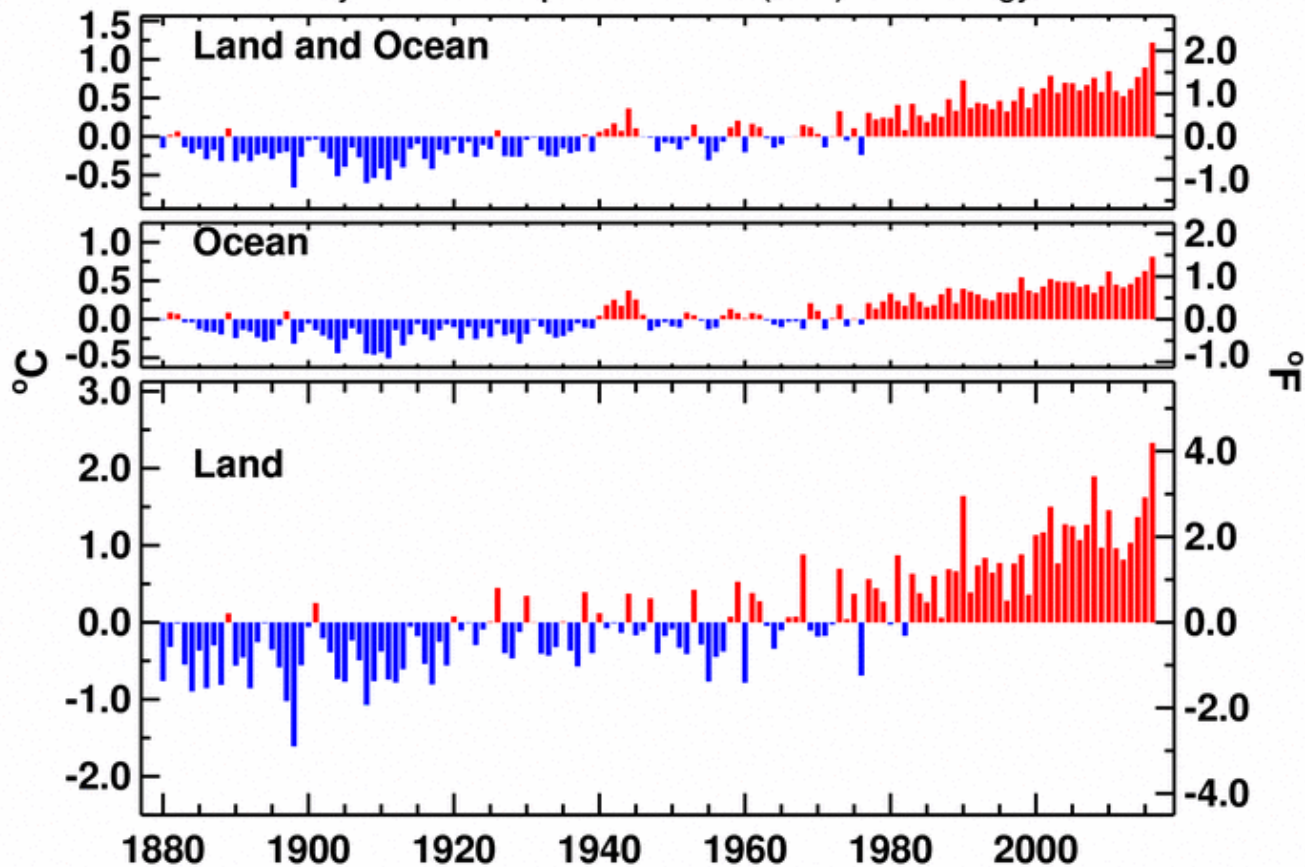
But another major factor has been what is commonly referred to as climate change or global warming. That phenomenon has prompted worldwide [concern](#). [Scientists say](#) humans are causing it by burning fossil fuels.



# March Global Surface Mean Temp Anomalies

NCEI/NESDIS/NOAA

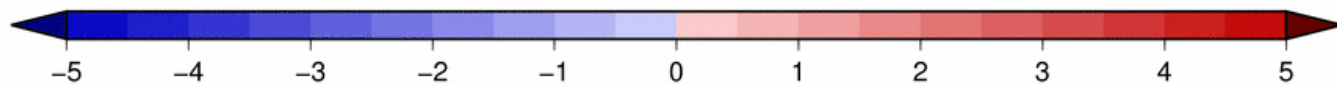
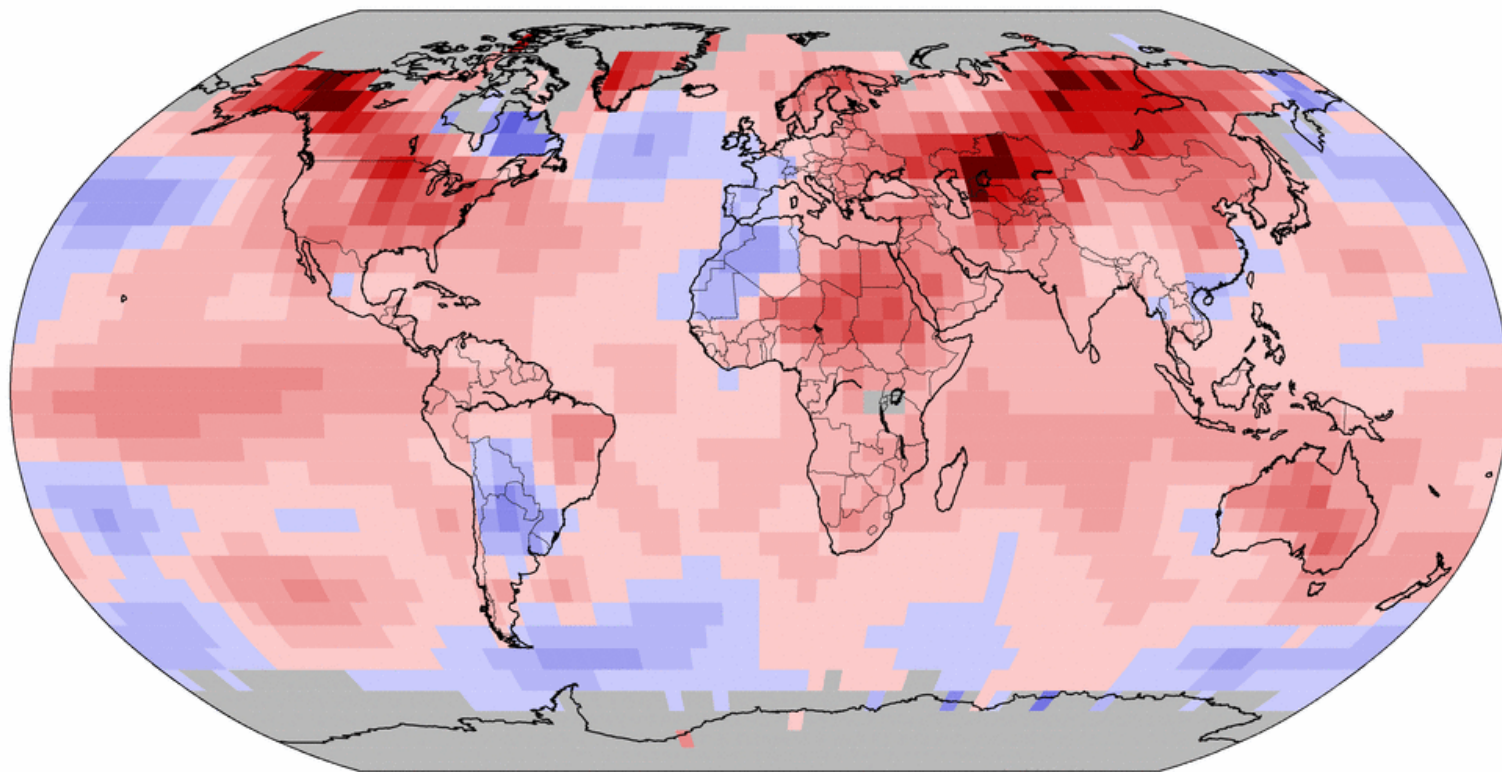
Analysis is based upon Smith et al. (2008) methodology.



NOAA

# Land & Ocean Temperature Departure from Average Mar 2016 (with respect to a 1981–2010 base period)

Data Source: GHCN–M version 3.3.0 & ERSST version 4.0.0



National Centers for Environmental Information  
Fri Apr 15 07:05:58 EDT 2016

Degrees Celsius

Please Note: Gray areas represent missing data  
Map Projection: Robinson


NOAA

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### **Kelly Ayotte faces uphill battle against N.H. history**

If the US senator loses reelection, she'll be able pinpoint when it happened: when she won her first term. [MORE...](#)

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### **14-year-old, 'a true friend to people,' killed by train**

The ninth-grader was "a super-creative, super-smart kid," his family said as they continue grieving his death. [MORE...](#)

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### **Firm with spotty past regains state's car inspection contract**

Applus Technologies Inc. was selected to provide testing equipment to more than 1,900 Mass. inspection stations. [MORE...](#)

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### **Cape Cod boaters spot great white off Sandy Neck Beach**

The great white shark momentarily disappeared before jumping about 5 feet out of the water. [MORE...](#)

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### **Charmian Carr, 73; portrayed Liesl in 'The Sound of Music'**

Ms. Carr fully embraced audiences' reverence for the musical, frequently appearing at sing-a-long performances. [MORE...](#)

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### **Needing support from communities, builders pay for it**

Local backing for a development project often comes with a price tag, bought as easily as lumber or



drywall. [MORE...](#)

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## Fast Forward: Red Sox surge, Bridgegate trial starts

The Sox are three games up on Baltimore, France holds a day of tribute to victims of the recent terror attacks, and more of the news you need to start your day. [MORE...](#)

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## Man to be arraigned in fatal Newton restaurant crash

Bradford Casler, 55, was indicted on two counts of motor vehicle homicide after the March incident. [MORE...](#)

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## Beer, politics, and a whole lot of tech talk at HUBweek

HUBweek organizers are grappling with how to ensure the annual festival does not cater solely to the business and academic elite. [MORE...](#)

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## Allston shooting leaves victim fighting for life

A man was shot Sunday night on Linden Street, according to Boston police. [MORE...](#)

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KEVIN CULLEN

## Counting your fish — and your blessings

Travis Roy got a chance to go ocean fishing, despite being attached to a 600-pound motorized wheelchair. [MORE...](#)

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## The great rabbit pardon of 2016



A Buddhist gardener felt sorry for rabbits being raised for slaughter at Codman Community Farms, so she bought them — 135 rabbits in all. [MORE...](#)

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ADRIAN WALKER

## Call an end to this insider game

Civic groups should not be able to take money from developers looking to buy support, much less solicit payment. [MORE...](#)

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## ‘Mermaid’ to go on display at Harvard museum — but she’s no Ariel

The Peabody Museum’s “FeeJee Mermaid” will be brought out to celebrate the institute’s 150th anniversary next month. [MORE...](#)

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## Rejecting opioids, pain patients find relief with marijuana

But the world of medical marijuana bears little resemblance to usual medical care. [MORE...](#)

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## Parents of Justina Pelletier sue Boston Children’s Hospital

The teen spoke out at a press conference to announce a lawsuit against Boston Children’s Hospital over her care. [MORE...](#)

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## Teen killed by train was 14-year-old boy from Newton

The teen was on the inbound track on Friday when he was hit by a Worcester/Framingham commuter rail train. [MORE...](#)

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## A medical collision with a child in the middle

Justina Pelletier has a metabolic disease. Or does she? With her parents and Children's Hospital deadlocked, she was placed in state custody. [MORE...](#)

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## Second boater in high-speed crash in Taunton has died

Stephen Joy, 67, of Bangor, Maine, died Thursday in Providence, authorities said. [MORE...](#)

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## Howard E. Butt Jr., 89; left grocery empire for spiritual pursuits

Mr. Butt advocated a role for the laity in improving the world through personal renewal within the professions, the family, and the local church. [MORE...](#)

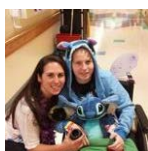
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## Milestone for Allston outreach: first student to attend Harvard

The university's Ed Portal opened in 2008 as a conduit to the community. [MORE...](#)

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## A difficult return to hospital for Justina Pelletier

The Conn. teen who returned home in June after a highly publicized legal battle in Mass. has been rehospitalized. [MORE...](#)

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## Two Mass. schools ranked among top 10 colleges in US

Move over Crimson; the Tigers are No. 1 on US News & World Report's 2017 university rankings. [MORE...](#)

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## Former student forces R.I. prep school to confront its past





Decades after Anne Scott said she was abused by an athletic trainer at St. George's School, she demanded action — and others are now coming forward. [MORE...](#)

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## Phillips Exeter sued over kicking out student who had sex

The N.H. school is being sued by the parents of a 15-year-old boy, saying it was wrong to withdraw their son after he had sex with another student. [MORE...](#)

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## 1 dead, 2 injured in Boston shooting

Police haven't officially identified the victims. According to friends, the slain man was 21-year-old Phillip Woods. [MORE...](#)

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12/16/13 | SECOND OF TWO PARTS

## Frustration on all fronts in struggle over child's future

The Justina Pelletier case sheds light on the fact that there are few good paths to resolution once doctors are convinced that parents are harming their child. [MORE...](#)

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## Columbus Day now Indigenous Peoples' Day in Cambridge

The City Council voted unanimously to change the holiday's name. [MORE...](#)

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## Supporters of recreational use of marijuana fill the Common

Massachusetts voters will decide in November whether to legalize marijuana for recreational use. [MORE...](#)

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## Cambridge aims to take pets out of pet stores



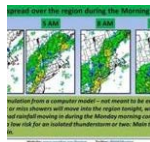
A proposed city ordinance would stop breeders from supplying animals to shops. [MORE...](#)

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## Humid and rainy day to start work week

Thunderstorms with lightning are possible in Greater Boston on Monday. [MORE...](#)

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## Judge orders city to allow 2-day marijuana rally

A judge granted an emergency order Friday that forced the city of Boston to grant a permit for this weekend's rally. [MORE...](#)

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## Sixteen stranded dolphins rescued in Wellfleet

The pod was transported to deeper waters in Provincetown, where the animals swam away. [MORE...](#)

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## Slowdowns reported on Boston-area highways

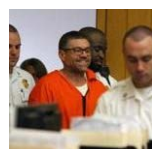
The ride into Boston is taking nearly 45 minutes on the Southeast Expressway. [MORE...](#)

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## Rate of uninsured in Mass. reaches all-time low

The US Census reports 2.8 percent of residents had no health insurance in 2015, down from 4.4 percent in 2010. [MORE...](#)

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## Father arraigned in New Bedford slaying

A prosecutor said Walter DaSilva was upset that his 19-year-old daughter did not visit him for Father's Day and that she was dating an older man. [MORE...](#)

## Somerville's innovative new school plan garners a \$10 million grant

The grant will help to open a new high school that won't have grade levels or traditional courses. [MORE...](#)

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## In Colo., a look at life after marijuana legalization

In November, Massachusetts voters are likely to consider a ballot question legalizing recreational marijuana. [MORE...](#)

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SPOTLIGHT REPORT

## Private schools, painful secrets

More than 200 victims. At least 90 legal claims. At least 67 private schools in New England. This is the story of hundreds of students sexually abused by staffers, and emerging from decades of silence today. [MORE...](#)

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## Families gather at 35th South Boston Vietnam Memorial ceremony

More than 200 people came, including the families of many who are honored at the monument. [MORE...](#)

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## Families of murder victims seek help moving

There is no formal program to assist families of homicide victims who want to move because they fear for their own safety. [MORE...](#)

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## Man dies diving off Nahant

Officials responded to a 911 call at 4:40 p.m. to a call for two divers in distress, Nahant Fire Chief Michael Feinberg said. [MORE...](#)

## Diver who died off Nahant Saturday identified as Danvers man

Vinicius O. Vianna, 42, was an experienced diver and was certified as a rescue diver. [MORE...](#)

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## Make-or-break vote for a new Minuteman High School

Residents in 16 communities will decide at the polls Tuesday whether to support a new \$145 million vocational school. [MORE...](#)

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## This day in history

Today is Monday, Sept. 19, the 263rd day of 2016. There are 103 days left in the year. [MORE...](#)

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## Diverse group of Boston officers chosen to wear body cameras

Training for the department's body camera trial run is set to begin Wednesday. [MORE...](#)

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## Brighton man facing perjury charges refused to come into courtroom

Court officers at the Suffolk Superior Courthouse put handcuffs on David Scher and hauled him in to be arraigned. [MORE...](#)

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## A cyclist's mecca, with lessons for Boston

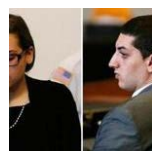
By innovating ways for cars and bikes to share the road, the Dutch have set the safety standard. [MORE...](#)

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## Teen stabbed six times in Melrose; suspects flee

The 17-year-old male was taken to Massachusetts General Hospital with non-life-threatening injuries. [MORE...](#)

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## Pair in Snapchat sex assault get 4-5 years in prison

The two were convicted of assault to rape, indecent assault and battery, and kidnapping in the attack that was carried out in the woods and shared on Snapchat. [MORE...](#)

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## Gabriele Amorth, 91, prominent exorcist priest

The Rev. Amorth, who began serving as an exorcist for the Rome diocese in 1986, published several books exploring the theme of good and evil. [MORE...](#)

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## Could \$22.3m budget gap threaten UMass Boston's growth?

Several construction projects have been plagued by unexpected setbacks that will cost the university extra millions. [MORE...](#)

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## MBTA to subsidize Uber, Lyft rides for customers with disabilities

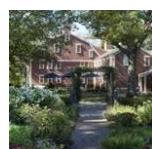
The first-of-its-kind partnership reflects a growing relationship between public agencies and ride-for-hire firms. [MORE...](#)

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## There is still a group of students who need help with student loans

In a region of top colleges, low-income, first-generation, and minority students struggle disproportionately to repay their debt. [MORE...](#)

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## A tale of two inns, three centuries of history

The Wayside in Sudbury and the Colonial in Concord honor the past and look to the future. [MORE...](#)

YVONNE ABRAHAM

## I'm so sorry, Mitt Romney

I've been tough on you over the years, and I feel awful about it. Because now I see how bad bad can be. [MORE...](#)

## What those gantries on the Pike are secretly doing

The devices will replace tollbooths on the roadway as the state makes the transition to all-electronic tolling. [MORE...](#)

## Few options for domestic violence victims

Like so many domestic violence victims, Wanda Rosa was powerless to separate herself from the abuser who murdered her. [MORE...](#)

## Rain to give state a break from drought

Overnight showers are expected to give the state a very brief respite from the drought. [MORE...](#)

## Key reports from Globe's Spotlight team on clergy sex abuse

The Boston Globe's 2001-2002 investigation into sexual abuses by clergy in the Catholic Church resulted in more than 600 stories. [MORE...](#)

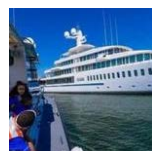
## 7-year-old boy pulled from Attleboro pool

The boy was conscious and later transferred to a Providence hospital, a fire official said. [MORE...](#)

## Testimony of Brian R. Mahoney

Brian R. Mahoney, a community newspaper columnist and longtime civic association leader, was a defendant in a defamation lawsuit in Suffolk Superior Court. [MORE...](#)

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## Was that Mark Cuban's yacht in Boston Harbor?

The Mavericks owner has said — more than once — that it's not his. Police beg to differ. [MORE...](#)

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## Feds have reservations about Green Line, but encourage state to move forward

The Federal Transit Administration said it needs a “good deal of clarifying information” before providing nearly \$1 billion in funding. [MORE...](#)

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## Nation's first lighthouse greets new century

Boston Light, originally built on Little Brewster Island in 1716, was honored on Wednesday with a ceremony complete with a giant cake. [MORE...](#)

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## Registry of Motor Vehicles terminates contract with Deloitte

In 2013, Deloitte was chosen for a \$76.8 million contract to help revamp the agency's decades-old software system. [MORE...](#)

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## Historic Boston lighthouse still shines on after 300 years

The storied site still serves as a navigational aid in Boston Harbor even as it has become a travel destination. [MORE...](#)

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## Wellesley investigates racially charged hate speech



The allegations involve hate speech posted on social media by high school students. [MORE...](#)

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## Quietly, Baker hosts GOP governors in Boston

Governor Charlie Baker hosted a meeting of Republican governors in Boston this week. But you wouldn't know it from his public schedule. [MORE...](#)

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## MBTA report faults worker abuse of Family Leave Act

Employees have figured out that they can use the law to avoid being disciplined for taking days off, a former MBTA bus superintendent said.. [MORE...](#)

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## Billerica parents plead for return to A-B-Cs

The school district is considering a hybrid grading model for the school system's youngest middle school students. [MORE...](#)

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## Dzhokhar Tsarnaev says he called brother to synchronize blasts

Tsarnaev told investigators he didn't care if his friends got hurt, according to court records unsealed Monday. [MORE...](#)

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## Goody Petronelli; trained champions at boxing gym

Mr. Petronelli, who trained Marvelous Marvin Hagler, has died at 88. His family said he had been in good health, but "died of a broken heart" after his wife died in October. [MORE...](#)

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# The struggle of Syrian migrants and refugees in Greece

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## Pope Francis accepts gift of potholder from Hingham child

“I cried. I absolutely cried,” said the girl’s mother Maura Naughton, who brought the gift to the Vatican. [MORE...](#)



## Justina Pelletier heads home after judge ends state custody

Pelletier will be in the custody of her parents Wednesday, ending a 16-month battle with Mass. over control of the teen. [MORE...](#)



JFK: 50 YEARS LATER

## Robert F. Kennedy saw conspiracy in JFK’s assassination

Robert F. Kennedy took on some of the Kennedy Administration’s hardest tasks, ones that created dangerous foes, and after the assassination, RFK wondered if one of them had done it. [MORE...](#)



EVAN HOROWITZ

## It’s August. Why are Mass. legislators done for the year?

Yes, it’s an election year. But that’s not the only reason our legislative session ends this week. [MORE...](#)



## Natural gas plan worries Weymouth

Weymouth unites in opposition to a natural gas compressor station proposed by Spectra Energy for

the Fore River. [MORE...](#)

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## David Ortiz's image carved in to Sterling corn maze

Davis Mega Maze is honoring the retiring Red Sox legend as the theme of this year's puzzle. [MORE...](#)

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## South Coast rail could cost \$1b more than estimated

Consultants for the MBTA have raised their cost estimates for the project to extend commuter rail service to New Bedford and Fall River. [MORE...](#)

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## 7 years after stroke, paralyzed woman awarded \$35m

A jury awarded Andrea Larkin, who was paralyzed from a stroke that she suffered after labor, \$35.4 million in a medical malpractice lawsuit. [MORE...](#)

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## Baker orders new rules to reduce greenhouse emissions

The order comes after a court ruling that the state has not done enough to meet its obligations. [MORE...](#)

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## Two prep school teachers ousted over misconduct

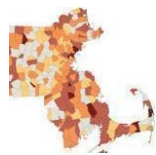
Concord Academy and Northfield Mount Hermon School in Gill each ousted a teacher after they acknowledged sexual misconduct with students dating back decades. [MORE...](#)

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## Remembering the Pendleton rescue

The Coast Guard commemorated "the greatest rescue by small boat in its history," which was accomplished without a compass or a windshield 60 years ago yesterday. [MORE...](#)



## A town-by-town look at the opioid epidemic's toll in Mass.

Some communities have been hit particularly hard by the epidemic. [MORE...](#)

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## Walsh hires in-house Olympics analyst

Walsh has hired a former Goldman Sachs real estate investment associate as Boston's first director of Olympic planning. [MORE...](#)

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## Thomas Niblet, 86; gave golf lessons to the Kennedys

A founding director of the New England PGA's Cape Cod Section, Mr. Niblet also built and owned Holly Ridge Golf Club in Sandwich. [MORE...](#)

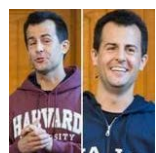
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## Wheelchair icon revamped by guerrilla art project

What began as a statement by a Cambridge artist and a Gordon College assistant professor has become a global movement. [MORE...](#)

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## Yale's most popular course is a Harvard class

The computer programming course CS50 has cemented its legacy at Harvard. Now, it has now crept into the blue-and-white's territory. [MORE...](#)

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## T debuts revamped map, real-time tracking info

Re-designed maps of the T system — the result of a map-making contest last year — were installed on 40 Green Line trolleys last week. [MORE...](#)

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## Judge grants police commissioner authority for 100 body cameras

The judge ruled that Commissioner Evans has the authority to order 100 Boston police officers to wear body cameras as part of a pilot program. [MORE...](#)



LITTLETON

## Chickens provide new form of animal therapy for memory loss patients

Unlike the more common animal-therapy programs, the chickens are not expected to interact in any particular way with patients. [MORE...](#)



## Brown University unveils 3D virtual-reality room

Its creators see the Yurt as a key site for exploration of not just school subjects, but also the potential of the medium itself. [MORE...](#)



## Goats will be eating their way through the Arnold Arboretum

Four goats that will be moved around to different areas of the property to eat and remove any unwanted plants. [MORE...](#)

FROM THE ARCHIVES | JUNE 13, 2002

## Victims of the Boston Strangler

Thirteen victims of the Boston Strangler were found in Eastern Massachusetts between 1962 and 1964. [MORE...](#)

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Ayotte faces uphill battle against Hassan and N.H. history

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