

# NAUSET HEIGHTS ASSOCIATION

## IS OUR DRINKING WATER IN GOOD HEALTH?

Location: One Standish Rd

Date: June 18, 2022

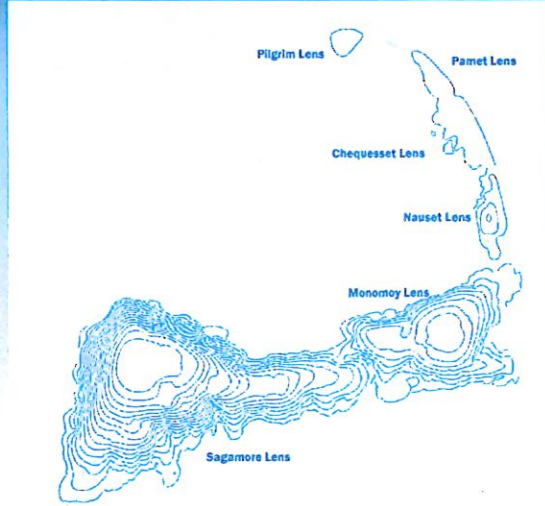
Time: 10:00 am

Speaker: Susan Brown, Asst. Supt.

### Talking Points

- **Sole Source Aquifer** - is an aquifer that has been designated by the United States Environmental Protection Agency (EPA) as the sole or principal source of drinking water for an area.
- **Orleans Water Quality**
  - Location of Wells
  - Micro-filtration
  - Treatment including Disinfection
- **PFAS/PFOS – per and polyfluoroalkyl substances in drinking water.**
  - What is it and where does it come from
  - PFAS/PFOS in Cape waters
  - Water testing for PFAS/PFOS in Orleans
- **WATER USE RESTRICTIONS**
  - Why do we need restrictions
  - Uses that are restricted
  - Allowed uses

# Cape Cod's Sole Source Aquifer



The Cape Cod Aquifer provides 100% of the Cape's drinking water, and for this reason has been designated a Sole Source Aquifer under the Safe Drinking Water Act by the Environmental Protection Agency.

Six hydrologically separate lenses comprise the Cape Cod aquifer system.



# Cape Cod's Sole Source Aquifer

**WHAT IS AN AQUIFER?**

Cape Cod's groundwater consists of six geologically distinct lenses, each with a different layer of rock or soil that is porous enough for water to flow through. It is this porous layer, instead of ordinary water, that is considered a hydrological lens. The lenses are separated by layers of rock or soil that are not porous enough to allow water to flow through. The water in each lens is replenished by precipitation that infiltrates the ground.

Each lens contains a convex mound of groundwater.

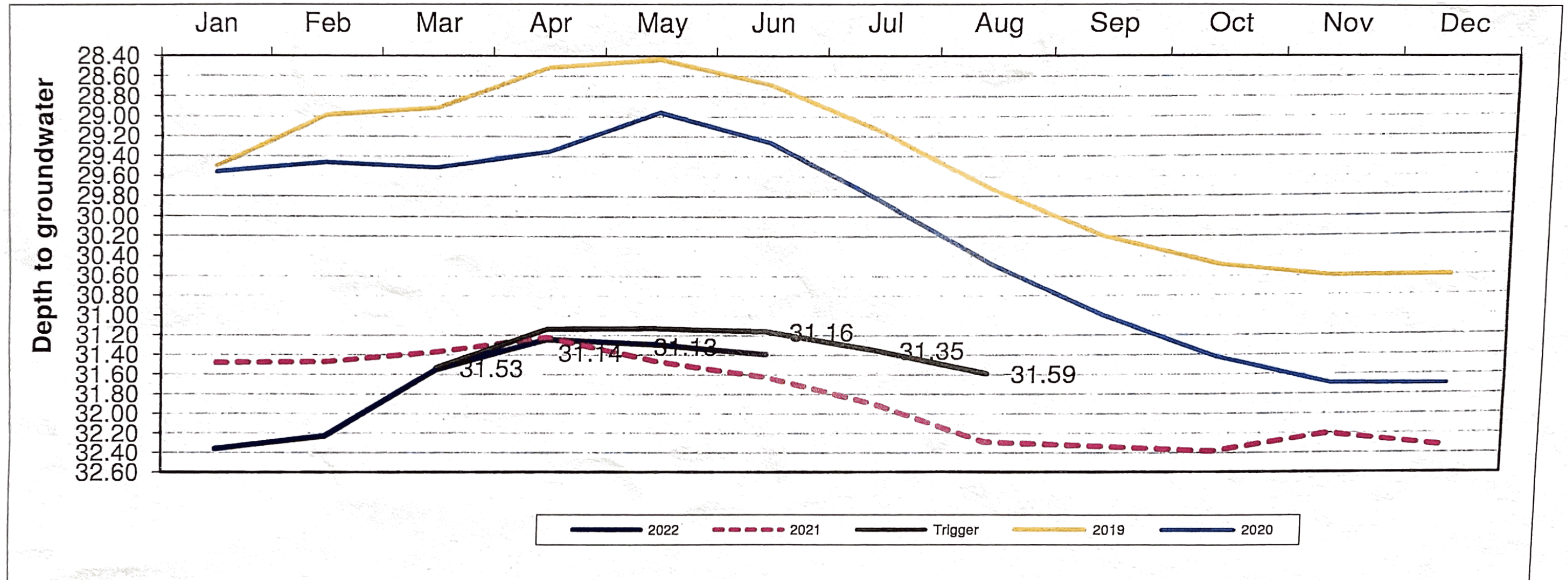
**HOW CAPE COD'S AQUIFER WORKS**

The water in Cape Cod's aquifer is replenished by precipitation that infiltrates the ground. The water then flows down to the aquifer, where it is stored. The water is then extracted from the aquifer and used for drinking water.

**HELP PROTECT OUR AQUIFER**  
WWW.CAPECODDRINKINGWATER.ORG

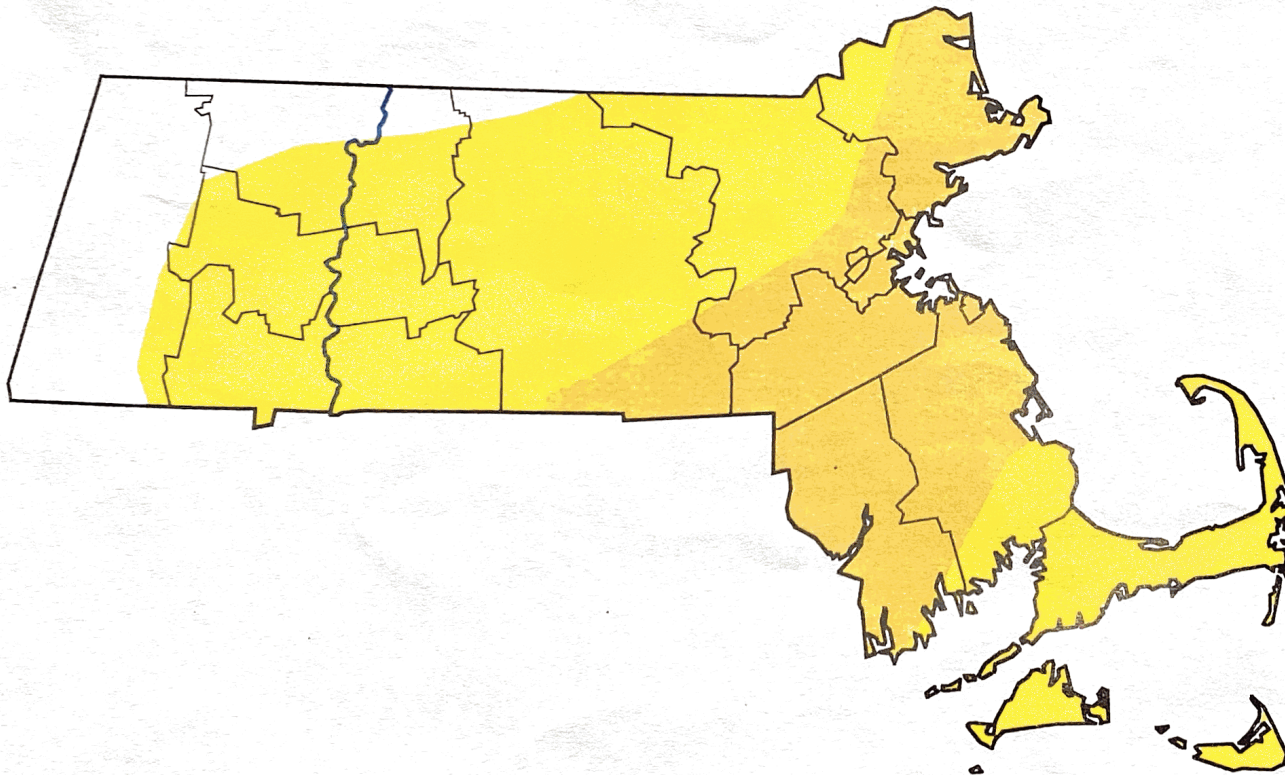
These mounds of groundwater are convex and therefore are referred to as "lenses" of groundwater.

# USGS WELL BMW22









# U.S. Drought Monitor Massachusetts

June 7, 2022  
(Released Thursday, Jun. 9, 2022)  
Valid 8 a.m. EDT



### Intensity:

-  None
-  D0 Abnormally Dry
-  D1 Moderate Drought
-  D2 Severe Drought
-  D3 Extreme Drought
-  D4 Exceptional Drought

*The Drought Monitor focuses on broad-scale conditions. Local conditions may vary. For more information on the Drought Monitor, go to <https://droughtmonitor.unl.edu/About.aspx>*

### Author:

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CPC/NOAA



[droughtmonitor.unl.edu](https://droughtmonitor.unl.edu)

Cape Cod Chronicle  
27 April 2022

# Orleans Adopts Watering Restrictions Through September

by Ryan Bray

ORLEANS – With the aquifer still at a low level, the board of water and sewer commissioners unanimously voted April 20 to implement watering restrictions in town from May through September.

With the vote, Orleans joins neighboring towns including Chatham, Harwich, Brewster and Dennis in adopting restrictions on non-essential water usage.

“We are not alone,” Sue Brown, the town’s assistant water superintendent, told the board. “All of us in the Monomoy lens will be instituting restrictions.”

Brown said water levels at the United States Geological Survey’s monitoring well in Brewster were found in March and April to be just slightly above the trigger point for requiring restrictions set by the town’s Water Management Act permit, which allows the town to withdraw water from the state. Restrictions are required to be enacted when levels are above the trigger point for 60 consecutive days, Brown said.

The town is no stranger to the restrictions, having implemented similar ones last year.

Residents are due to receive a notification in the mail

with their water bill at the end of the month outlining the restrictions, which will go into effect May 1 and run through Sept. 30.

The restrictions call for residents and vacationers to reduce non-essential watering to two days a week. On those days, watering will be allowed before 9 a.m. and after 5 p.m.

Non-essential uses include irrigation of lawns, gardens and shrubs; washing of vehicles (except for commercial car washes and instances where cleaning is needed for operational safety); and washing of exterior building surfaces, parking lots, driveways and sidewalks.

Allowable water uses include irrigation for new lawns and plantings; irrigating parks and public recreation fields through the use of automatic sprinklers outside the hours of 9 a.m. to 5 p.m.; irrigation of flowers and ornamental plants by means of handheld hose or drip irrigation systems and irrigation of lawns by handheld hose.

The current water levels are hovering right at the trigger point, and Brown said the town could lift the restrictions if water levels fall and stay below the trigger for 30 consecutive days. But based on typical summer rainfall in the region, she doesn’t anticipate the restrictions being

lifted this season.

“I don’t see that happening,” she said when reached by phone after the meeting. “I think as the summer goes it’s going to get drier.”

Even a good amount of rainfall this summer may not help improve water levels, Brown noted.

“Typically snow does better [getting into the groundwater],” she said. “Any rain we get gets sucked up by the plants, the grass and the trees. It doesn’t make it to the aquifer. Then if it rains too hard, you end up with a lot of runoff and it doesn’t make it to the aquifer. So snow is best, because it’s a slow melt.”

The restrictions are mandatory, and violators will be given a warning for a first offense. Subsequent offenses could be punishable by fines, but Brown said the water department will not be actively policing the restrictions.

“We are not going to be out there driving around trying to catch people, but you will have neighbors who will be calling and telling on people,” she said.

Email Ryan Bray at  
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over for ps2

# How you can reduce exposure to toxic chemicals

5/9/22  
GLOBE

By Kay Lazar

GLOBE STAFF

There are thousands of chemicals in our furniture, electronics, cleaning products, construction materials, clothing, and more, and just a fraction of them are regulated. Yet mounting evidence links many of these substances — stain and water repellents, flame retardants, antimicrobials, and others — to diabetes, cancer, thyroid disease, immune system dysfunction, and effects on children's cognitive development. The Green Science Policy Institute has tips on how to avoid

some of the most common of these chemicals:

When buying upholstered furniture, look for a TB 117-2013 label stating the item does not contain flame retardants.

Replace upholstered furniture that has a TB 117 label, which indicates flame retardants.

Furniture and children's products filled with polyester or wool instead of foam are unlikely to contain added flame retardants.

To reduce indoor dust levels, vacuum with a HEPA filter, wet mop, and dust with a damp

cloth.

Wash hands often, especially before eating or preparing food.

Avoid using rebonded carpet padding made from recycled or scrap polyurethane foam.

Tell manufacturers, retailers, and government agencies you want products without flame retardants.

Choose carpets and textiles without water and stain repellents (known as PFAS), which are often sprayed on after the product is manufactured.

Be wary of products labeled

“PFOA free,” a chemical in the PFAS family, as they often contain similar chemicals instead.

Avoid personal care products with “perfluor,” “polyfluor,” indicating the presence of PFAS chemicals, and “PTFE” (PFAS) on the label.

Sources: Green Science Policy Institute and the Social Science Environmental Health Research Institute at Northeastern University. Kay Lazar can be reached at [kay.lazar@globe.com](mailto:kay.lazar@globe.com) Follow her on Twitter @GlobeKayLazar.

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