

Cotuit Water Department Irrigation Regulation (August 2021)

The primary purpose of the Cotuit Water Department is to provide sufficient high-quality drinking water and dependable water flow for firefighting. All of Cotuit's water is pumped from five wells in three relatively small wellfields. It is of utmost importance that the Water Commissioners, in their oversight responsibility for the Department, maximize conservation of the public water supply, to protect ground water, affected streams, ponds and wetlands near the wellfields, and to enable the Department to discharge their duties in an efficient manner. Department staff tend the pumps and wellhead equipment on a daily basis. They have recognized equipment stress and rapid drops in water tank levels resulting from extreme pumping demand on summer mornings. This peak pumping is associated with in-ground lawn irrigation systems in 500 or more of the Department's 2500 accounts.

During the summer months water demand reaches its peak and approaches the capacity of the system. An estimated half (50%) of the water consumption during the summer is used for lawn irrigation. Groundwater modeling conducted by the United States Geological Survey (USGS), as refined in 2021 by our consultant Sole Source Consulting,¹ shows that peak summer pumping rates are exacerbating drought conditions in Little River and its associated wetlands by diverting groundwater flow from the stream to the wells. Peak summer pumping reduces the flow rate in the Little River by as much as 32% in the area of Sampsons Mill Road. Reduced stream flow in Little River causes significant impacts to the aquatic habitat, water quality in Cotuit Bay, and the commercial oyster beds and other shellfish resources.

The purpose of this Regulation is to address the stress that lawn irrigation systems place on the aquifer resource in our village, our surface water bodies, and on the operational success of the Department.

¹ Hydrogeologic Technical Report Groundwater Modeling Project of Groundwater Surface Water Interaction of the Little River and the Cotuit Wellfield, Sole Source Consulting LLC, Centerville MA, April 19, 2021

Enabling Authority

In accordance with Article IX, Section 2 of the By-Laws of the Cotuit Fire District, the Cotuit Water Commissioners hereby adopt this Regulation.

Article IX states, “The Water Commissioners shall have the care, custody, management, and control of all the property, real and personal, relating to the Water Department; shall have authority to determine and establish from time to time a schedule of water rates; and make rules and regulations for the introduction and use of water. The Water Superintendent and Water Department Employees may enter upon the premises of any water taker to examine apparatus to ascertain the use to which the water is applied or to find or stop any waste.”

Irrigation Regulation

- I. As of August 30, 2021, the Cotuit Water Department shall not allow any new automatic, in-ground irrigation systems to be connected to the water supply system except as provided in Section II of this Regulation.
- II. The Board of Water Commissioners will consider applications to use public water for in-ground irrigation systems at the sole expense of the property owner. This exemption requires that said property owner install a new separate water meter for their irrigation system, at their expense, and will have to pay for that water at the highest rate established by the district as shown in Appendix A (Rate Policy). Justification for this exemption must be based on the applicant's concerns for environmental or geographic constraints such as impacts to wetlands, aquatic ecosystems or groundwater protection. Any exempted system must schedule an annual system inspection with the Cotuit Water Department to ensure that conservation elements are in good working order and that the original goals for conservation are being achieved.
- III. Existing customers that currently use public water for irrigation are hereby informed that the Board of Water Commissioners have raised the rates associated with excess water use. Irrigation users are encouraged

to install on-site private wells as an alternative source of water for landscaping and to remove their irrigation systems from the public water supply. Additionally, existing in-ground irrigation systems that are not switching to private wells for their irrigation, shall maintain and monitor state of the science water conservation equipment as parts of their systems. These shall include functional timers, smart controllers, and moisture sensors. Irrigation systems shall be subject to inspections consistent with the inspection goals outlined above in Section II of this regulation.

- IV. The Board of Water Commissioners reserves the right to institute a voluntary reduction or mandatory ban on all outside use during periods of water emergency as defined by the Commonwealth of Massachusetts MGL Part I, Title II, Chapter 21G, Section 15. All users of public water for irrigation shall follow the Department's guidelines regarding these conservation measures, only watering on odd or even days consistent with their street addresses during voluntary reduction periods, and not at all during bans.

Fines & Enforcement

The Regulation also establishes a schedule of fines for customers who violate any of the mandatory irrigation regulations. The fines begin with a warning for the first offense, a \$250 fine for the second offense, and a \$500 fine for the third or subsequent offense and can culminate in the discontinuation of water service related to irrigation for repeat offenders. Fines are levied under this Regulation on the basis of reconnaissance by Water Department staff. For example, observation of irrigation during rain events will be deemed a violation. Please contact us at the Cotuit Water Department for further assistance: (508) 428-2687.

Appendix A: Proposed Rate Schedule* (Usage is for a 6-month period).

Up to 10,000 gallons = Min Use \$40.00

10,001 – 20,000 gallons = \$4.00/1,000 gallons = \$40.00

20,001 – 40,000 gallons = \$5.50/1,000 gallons = \$110.00

40,001 – 60,000 gallons = \$7.15/1,000 gallons = \$143.00

60,001 – 100,000 gallons = \$15.00/1,000 gallons = \$600.00

100,001 – 200,000 gallons = \$20.00/1,000 gallons = \$2,000.00

200,000+ gallons = \$30.00/1,000 gallons

Example: 200,000 gallons of usage in a 6-month billing period would be calculated as follows.

+40.00+40.00+110.00+143.00+600.00+2,000.00 = \$2,933.00 each additional 1,000 gallons would cost \$30 each.

*The rates noted above are only an example using the proposed pricing and are subject to change in accordance with The Cotuit Fire District Bylaws, Article IX, Section 2 as quoted above in the Enabling Authority.