

## FREQUENTLY ASKED QUESTIONS

### Reducing Stormwater Pollution in the Charles River Regulating Large Polluters under the Clean Water Act

#### Why do we need to reduce stormwater runoff into the Charles River?

Stormwater runoff is the largest source of pollution to the Charles River.<sup>1</sup> In a more natural environment, rainwater filters through the soil and back into the groundwater. In an environment with significant impervious surfaces, such as along the Charles River watershed, features like parking lots and large roofs cause heavy rainfall and the pollution it picks up to run directly into the river.

#### What are the impacts of this pollution?

Phosphorus and other nutrients carried by stormwater into the river degrades water quality and causes toxic cyanobacteria blooms, invasive species growth, and even fish kills.

Cyanobacteria, or blue-green algae, blooms are dangerous for pets and humans alike. Known to cause skin rashes, fever-like symptoms, respiratory or gastrointestinal distress, and in extreme cases, paralysis leading to death, and even linked to neurodegenerative diseases like ALS, cyanobacteria blooms are extreme hazards to public health and extremely toxic for pets. Cyanobacteria blooms also reduce dissolved oxygen levels in the river which harms aquatic life and can even cause fish kills.

In addition to environmental harm, this pollution limits human uses of the river, including recreational. The result is our waterways are public health hazards, at a time when residents need clean water, resilient parks, and healthy rivers the most.

#### Why is this a problem now?

With climate change bringing extreme heat and increased precipitation, cyanobacteria blooms are becoming more frequent and severe in our watershed. For the last decade, the Lower Basin of the Charles has experienced a cyanobacteria bloom almost every year, with the longest bloom spanning twelve weeks in 2020.

#### What are we asking the EPA to do?

Within the Charles River watershed, commercial, industrial, and large multi-unit developments (think big box stores, universities, etc.), which are **not** currently regulated for stormwater under the Clean Water Act, contribute 50% of the stormwater pollution despite representing only 20% of the watershed area. This represents a disproportionate impact that can be addressed by requiring a relatively small number

<sup>1</sup> U.S EPA New England Region, MassDEP. (2007). [Total Maximum Daily Load for Nutrients In the Lower Charles River Basin, Massachusetts CN 301.0](#)

of property owners to take the same steps local governments are taking to control stormwater runoff pollution.

In 2019, CRWA and CLF formally asked EPA to regulate large properties that are polluting the Charles River with stormwater runoff under the Clean Water Act. Where entities are not otherwise subject to traditional permitting frameworks under the Clean Water Act, EPA has something called “residual designation authority, or **RDA**,” which gives the agency the power to require stormwater discharge permits in certain situations, like when the discharges contribute to a violation of water quality standards. In the Charles River watershed, these permits are necessary to control sources of stormwater pollution in order to reduce pollution to safe levels, also known as the [“total maximum daily load”](#) (TMDL) for phosphorus. This is the amount of phosphorus that can go into the river without harming the health of the river.

The EPA announced in August 2020 that it was “beginning to evaluate whether a new program is needed to control stormwater pollution from certain commercial, industrial, and institutional sources in the Charles River watershed at sites that are not currently covered by any existing federal or state stormwater permit,” years later, the agency still had not taken any final action. In July 2022, CRWA and CLF notified EPA that we would take the matter to court if the agency continued to fail to act.

EPA announced in September 2022 that for the first time ever, many large property owners in greater Boston (the Charles, Mystic, and Neponset River watersheds) will be required to reduce stormwater discharge from their properties. However, the EPA has yet to commit to a timeframe and the threat of litigation continues.

### **How will this address the problem?**

Requiring these large properties to obtain stormwater discharge permits will force them to reduce and manage their own stormwater pollution, reducing the amount of phosphorus and other pollutants entering the Charles River. They will likely be required to do many of the same things our local governments are already doing. The health of the river cannot be fully restored until these large pollution sources are addressed.

### **How will RDA impact cities and towns?**

**RDA will lessen the burden on cities and towns.** Currently almost all cities and towns are already required to reduce stormwater pollution that comes from their community. They are responsible for the water at the end of the pipes, where stormwater flows out into rivers and harbors, regardless of where the stormwater or the pollution it carries comes from.

That means that, in addition to cleaning up stormwater pollution from roads and residential areas, towns also have to clean up stormwater from large commercial and industrial properties whose heavily polluted stormwater ends flows untreated into the town’s drains. Using RDA to clean up large commercial, industrial, and ultra high density residential property owners will mean that cities and towns will not have to shoulder the burden alone. Instead, the large private polluters will be required to do their fair share.

We already know we have enormous infrastructure problems facing us, and flooding will make this even worse as climate change brings us more frequent, heavy rains. Fortunately, cleaning up stormwater also

reduces flooding, and there are practical and cost-effective ways to do this. For example, significant reductions can be achieved by placing tree planters in parking lot islands and redirecting water into the soil, instead of into a storm drain. These changes impose a small cost on the individual property owner, while allowing the entire community to benefit from reduced pollution levels and increased reliability of potable water supplies.

We know stormwater pollution is not only an issue for the Charles. The outcome of this process will set an important precedent for how large stormwater pollution sources are dealt with statewide.

For more information, please contact Communications & Outreach Manager Julia Hopkins at [jhopkins@crwa.org](mailto:jhopkins@crwa.org).

Other resources:

[EPA website on the Charles River and RDA](#)