



Andrew Gottlieb
Executive Director

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David Cash, Administrator
Environmental Protection Agency Region 1
5 Post Office Square - Suite 100
Boston, MA 02109-3912

RE: Cape Cod Sole Source Aquifer Project Review

Dear Administrator Cash:

The Association to Preserve Cape Cod (APCC) writes in strong support of the U.S. Environmental Protection Agency's draft determination that the proposed multipurpose machine gun range (MPMGR) at Joint Base Cape Cod has the potential to contaminate the Cape's sole source aquifer, creating a public health hazard.

We urge the EPA to finalize its provisional determination as drafted and to not entertain any new proposals from the Massachusetts Army National Guard that would supposedly attempt to mitigate the project's impacts. As the EPA clearly stated in the draft report, the agency does not believe that any mitigation can reduce the potential of the project to contaminate the aquifer and concluded that the most effective way to mitigate significant future impacts to the region's drinking water and maximize environmental benefits is to not construct the MPMGR.

Founded in 1968, APCC is the Cape region's leading nonprofit environmental advocacy and education organization, working for the adoption of laws, policies and programs that protect, preserve and restore Cape Cod's natural resources. APCC focuses our efforts on the protection of groundwater, surface water, and wetland resources, preservation of open space, the promotion of responsible, planned growth and the achievement of an environmental ethic.

The Cape's sole source aquifer in the Upper Cape region has experienced significant degradation from activity at Joint Base Cape Cod (JBCC) over the decades, requiring the treatment of over 17 billion gallons of contaminated groundwater to date. Remediation efforts are still ongoing and have, so far, cost taxpayers \$1.4 billion. New, safe sources of drinking water are not readily available if current sources become contaminated and unusable, as is highly likely to be the case given recent revelations about the heavy load of PFAS and PFAS precursors migrating from JBCC toward surrounding community water resources. The need to protect the quality of the

aquifer beneath the Upper Cape Water Supply Reserve as an alternative site for water to replace local wells that will inevitably be polluted from JBCC contaminant plumes from other portions of the base has never been higher. Protecting the aquifer is made even more challenging due to the Cape's highly permeable sandy soil, which allows pollutants to easily reach groundwater.

Significantly, the proposed MPMGR would be located over the most productive part of the aquifer on the Upper Cape Water Supply Reserve, which was established for the purpose of protecting drinking water and wildlife habitat. Within 1,000 feet of the MPMGR site are seven Zone II Wellhead Protection Areas associated with 21 public water supply wells in the towns of Bourne, Falmouth and Sandwich, which are located between 0.7 to 6.2 miles from the project site. Because the MPMGR site is near the top of the groundwater lens, contaminants from the range would flow in multiple directions toward the public water supply wells.

According to the EPA study, approximately 1.3 million copper bullets are expected to be fired annually at the MPMGR. Contaminants from these bullets include copper, manganese, lead, chromium, strontium and antimony, with additional semi-volatile organic compounds such as nitroglycerin. The EPA study reports that the annual total mass of contaminants of concern in the ammunition includes copper (4590 kg), manganese (15.1 kg), strontium (15.0 kg), lead (6.78 kg), antimony (4.32 kg), and chromium (1.13 kg). In alternate types of ammunition that could be used, chromium input is 8.91 kg per year, with both types of ammunition containing about 400 kg of nitroglycerin.

The 1.3 million bullets fired per year, along with their associated contaminants, would be four times the number of bullets currently deposited above the aquifer from currently active small arms ranges. Use of the existing ranges has resulted in the detectable presence of contaminants in the soil. Over a 50-year project timeframe, the EPA estimates that more than 275 tons of bullets and their contaminants from the MPMGR would be released into the environment. Based on the detection of contaminants in the soil from the existing ranges, it is a reasonable assumption that exposure of the sole source aquifer to contaminants of the level produced by the MPMGR is inevitable and would present an unacceptable risk to the region's drinking water.

The National Guard's Environmental Assessment of the MPMGR states that "no impacts to groundwater are anticipated" and that overall environmental impacts would be "insignificant." However, the EPA has rightfully pointed out that the Guard has failed to provide sufficient information to the EPA—or to the public—to support this claim. Efforts by the Guard to conflate the history and impacts of small arms ranges to what can be expected from the proposed MPMGR—very much not a small arms range—are disingenuous at best and bear no relevance to the assessment of this large caliber range. Furthermore, the Guard has not proposed any mitigation measures that would address potential releases of contaminants to groundwater. Importantly, the EPA reports that, due to the project's size, location and intended use, it is uncertain that any proposed mitigation can reduce the potential for the project to contaminate the aquifer. Based on the compelling evidence presented in the EPA study, coupled with the past history of groundwater contamination from JBCC activity, APCC strongly agrees with the EPA's conclusion.



It is the EPA's responsibility under the Safe Drinking Water Act to make sure that strong protections are adopted and strictly followed in locations where a drinking water supply is dependent on a single aquifer, as is the case on Cape Cod. As the EPA pointed out in its study, neither the aquifer nor the public should be required to bear the risk and uncertainty of a large-scale expansion of pollutant loading that would occur from the MPMGR. Department of Defense training policies and needs have no relevance to EPA's statutory obligations when it comes to the overriding responsibility of protecting a community's only source of drinking water.

APCC once again underscores the EPA's conclusion that no degree of mitigation for MPMGR impacts offered by the National Guard can guarantee the future safety of the aquifer and that the most effective way to mitigate significant future impacts to drinking water is to not construct the MPMGR.

Therefore, the EPA should not engage with the National Guard in an attempt to formulate mitigation measures that, at the end of the day, will not eliminate the potential for adverse impacts to the Cape's aquifer. EPA's mandate under the Safe Drinking Water Act is both crystal clear and limited: to protect the quality of sole source aquifers to ensure the public's health and safety. It is not EPA's role to reformulate a proponent's project to remove the risks it presents. Instead, we urge the EPA to remain focused on its stated role and to finalize its provisional determination as drafted as quickly as possible.

APCC thanks the EPA for undertaking this comprehensive, well executed and extremely important study.

Sincerely,

A handwritten signature in blue ink, appearing to read 'Andrew Gottlieb', with a long horizontal flourish extending to the right.

Andrew Gottlieb
Executive Director