

Keeping stormwater out of the Charles

By Anna Eleria / Special To The Tab
Wednesday, March 1, 2006

Stormwater pollution, also referred to as non-point source pollution, is one of the most significant sources of pollution of the Charles River today. CRWA is taking the lead in reducing it with a new volunteer program called the Charles River “Find It and Fix It” Stormwater Program.

For the next two and a half years with funding from the Massachusetts Environmental Trust, the “Find It and Fix It” Program will recruit and train volunteers to assist in inspecting the river through visual surveying and water quality monitoring in order to identify areas in need of repair. Their reports will direct CRWA scientists to areas with pressing problems and help pinpoint the areas needing further study or initiate immediate calls for action so that municipalities and landowners can fix the problems.



Dave Kaplan, CRWA scientist, doing a Charles River shoreline survey in Newton

CRWA volunteers from Newton and other watershed communities will be conducting “shoreline surveys” or visual monitoring along a 45-mile river corridor from Farm Road in Sherborn to New Charles River Dam in Boston. This spring, river surveyors will assess the river’s baseline physical conditions and identify current or potential problems in the river, along its banks, and within the riverfront area. Volunteers will survey by canoeing or walking a half to two-mile stretch of river looking for areas of environmental degradation, erosion, and non-point source pollution. They will note the characteristics of the water, such as color, odor, and flow, in-stream and shoreline vegetation, nearby land use, and fisheries and wildlife habitat conditions. They will photograph their survey area, and they will map and characterize stormwater pipes discharging to the river.

Finding every source of pollution is a big job. The visual survey information will provide the basis for CRWA’s next steps in dealing with stormwater pollution. After compiling and reviewing this essential baseline data of river conditions, our staff will identify and prioritize the areas of most concern and determine the next steps for addressing problem areas, which may include water quality monitoring by CRWA.

The water quality monitoring will allow us to focus on wet weather problems and specific sources of pollution, including stormwater pipes and other source-specific sampling locations areas, using a new set of ears, noses and eyes to pinpoint problems. Pollutants of most concern in the urbanized Charles River watershed

include- but are not limited to- bacteria and viruses from combined sewage, waterfowl waste and pet waste, sediment and sand from winter de-icing applications and erosion, gasoline and oil and grease from vehicles, fuel dispensing stations and vehicle maintenance stations, and nutrients, such as nitrogen and phosphorus, from fertilizers, detergents and wastewater.

The 'fix it' step of the program involves sharing the results of our shoreline survey and water quality monitoring work with municipalities and other responsible parties and working closely with them to develop specific remediation measures, such as removing illicit connections to stormwater pipes, reducing use of pollutant products or equipment that generate pollutants, implementing stormwater best management practices, educating the public about stormwater impacts to the river and recommending measures to reduce them.

CRWA's extensive monitoring efforts, including the volunteer monthly monitoring program, habitat assessments and fish studies, have shown that stormwater pollution causes degradation of water quality, wildlife and fisheries habitat, recreational uses and aesthetic beauty. With help from a network of more than 70 volunteers, we monitor the health of the river on a monthly basis at 37 sites along the 80-mile long river.

Our data indicate that the river's water quality is generally very good over its entire length when no rain falls prior to sampling. However, during and after a rain event, water quality conditions in the river degrade and the river violates the state bacterial standards for swimming and boating. The problem is acute in Newton and other middle and lower watershed communities where urbanization and development invariably mean more impervious surfaces (i.e., buildings, streets, parking lots, driveways, etc.). This causes rainwater to flow over paved surfaces, instead of recharging into the ground, picking up manmade pollutants before flowing into storm drains that discharge into the Charles River and other bodies of water.

"The Find It and Fix It" program will get us one step closer to achieving our goal of a swimmable-fishable river.

Prospective volunteers should contact Pallavi Mande pmande@crwa.org, (781) 788-0007 x 232 or see www.charlesriver.org/projects/METwMyRWA/METFF.html.

For tips on what you can do to keep the river clean, see www.crwa.org/projects/stormwater/bleedsmallbrochure%20FINAL.pdf

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