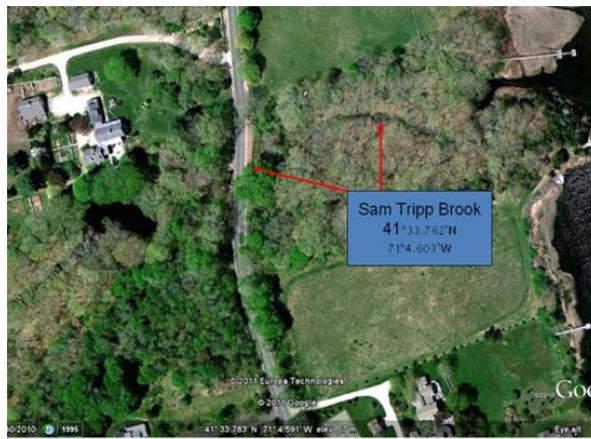


# Development of Designs for the Treatment of Stormwater Discharging from Drift Road to Sam Tripp Brook, Westport, MA

Westport Board of Selectmen  
 Water Resources Management Committee  
 Westport Town Hall  
 816 Main Road  
 Westport, Ma 02790



Approximate flow of stormwater along Drift Road into Sam Tripp Brook.

## Why does the stormwater from Drift Road need to be treated?

The volume of stormwater discharging from Drift Road into Sam Tripp Brook has increased in recent years. The higher volumes of stormwater, coupled with severe storms, led to the collapse of the Sam Tripp Brook culvert under Drift Road. While the culvert was replaced in 2012 with federal disaster re-

lief funds, the larger volumes of stormwater continue to cause erosion along the road, dumping sediments and pollutants into the brook. The excess flows are also causing erosion of the stream banks and bottom and contributing to the overall degradation of Sam Tripp Brook. In addition, Sam Tripp Brook flows into the East Branch of the Westport River, and the pollutants from this brook contribute to the closure of shellfish beds in the upper East Branch. The Massachusetts Division of Marine Fisheries (DMF) has identified this brook as a known contributor of fecal coliform bacteria. Fecal coliform bacteria are used by DMF to determine shellfish bed closures.

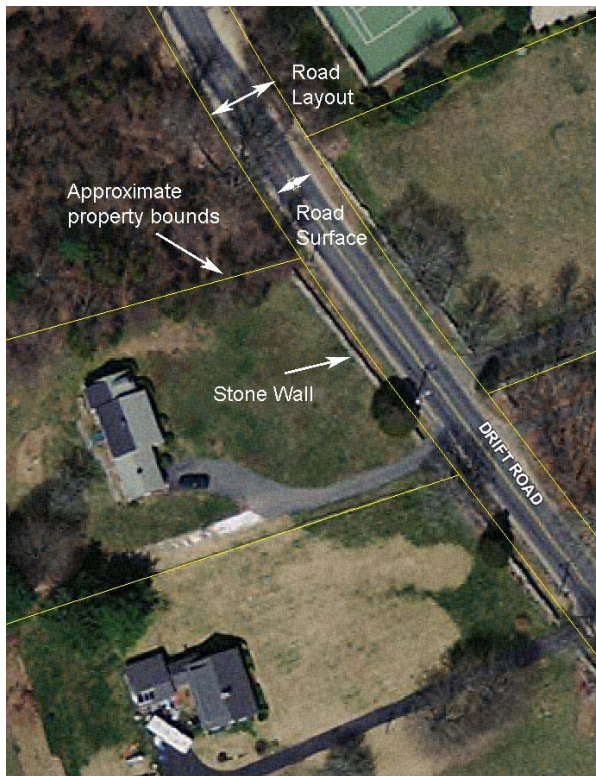
In 2012, the Town of Westport applied for, and received, a grant from the Buzzards Bay National Estuary Program (NEP), a unit of Massachusetts Office of Coastal Zone Management. The purpose of the grant is to develop engineering designs to reduce the volume of stormwater discharging to Sam Tripp Brook and to reduce the concentration of stormwater pollutants affecting both the stream and Westport River.

In August 2013, Polaris Consultants, LLC was hired to develop these stormwater treatment designs. The Buzzards Bay NEP will oversee and administer the contract on behalf of the town. This work is being undertaken in partnership with the Westport Water Resources Management Committee, the USDA Natural Resource Conservation Service, and the Westport River Watershed Alliance. The design phase will be completed by January 2014.

## What is the area covered by this work?

The area of stormwater contribution lies roughly between the junction of Riverside Street to the south of Sam Tripp Brook and Cardinal Lane to the north of Sam Tripp Brook. The treatment of stormwater will principally occur within the road layout. However, some property owners along the road may voluntarily participate in the effort to reduce stormwater by allowing discharges of treated stormwater on their property.

TO:



The town owns the road layout, which includes the paved road area and a strip of land on either side. This map shows approximate, not actual, property bounds along Drift Road.

### What is the road layout?

Municipalities not only own the paved surface of a town road, but they also own a strip of land on either side, in what is called the road layout. This land on either side of the road is not an easement on private property, the town owns it outright.

The photograph above shows an approximate boundary of the road layout and abutting properties based on maps from the town's Assessors office. As part of this project, Polaris will survey the road layout bounds wherever construction is planned so the town knows precisely where town property ends and private property begins.

It is worth noting that property owners sometimes place plantings or maintain lawns within the road layout. This is less of a problem on Drift Road be-

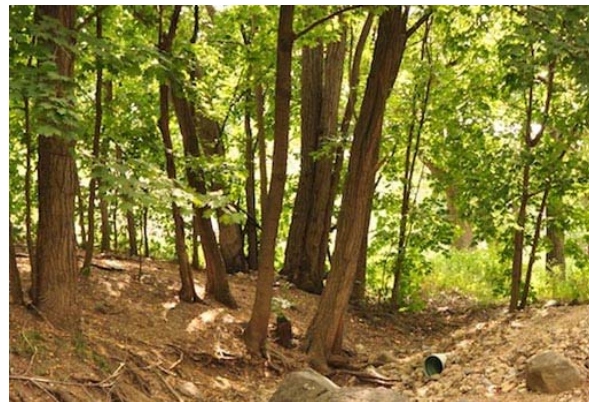
cause of its rural nature. However, where property owners have made alterations within the road layout, the town will try to avoid work in these areas where possible, and will work with the property owner to address the problem.

### How will the stormwater be treated?

There are various ways to treat stormwater. The approaches to treat stormwater are often referred to as Best Management Practices, or "BMPs." In a rural area like Drift Road, water from roads is often directed into the nearby woods and away from wetlands and streams. This is typically the easiest and least expensive option. Stone is typically placed at the outlet of the discharge pipe to reduce, disperse, and slow the stormwater. The water then just percolates into the soil. This may be a strategy useful in some areas of Drift Road.

Where directing flow into an upland wooded area is not an option, a biofiltration swale, or similar feature can be constructed on the side of the road. This is accomplished by excavating a trench then filling it with a mixture of topsoil, sand, and compost, and planting it with grass or other vegetation. This approach will help capture, temporarily store, treat, and slow the passage of stormwater.

The best way to treat stormwater depends on the types of soil present and the depth to groundwater. To determine site conditions, this fall, the Westport



Stormwater can be directed into wooded areas instead of into streams or wetlands.



Stormwater can be directed to swales and biofilters along the edge of a road, where some of the water can soak into the ground.

Highway Department will dig test pits along Drift Road to evaluate the soils.

### Who will pay for the construction of the stormwater designs?

The Town will work with state and federal agencies to obtain grant funds to pay for the construction of the final designs. Often match is required for these grants, and the Town hopes to meet these match requirements by providing in-kind services by the Town's Highway Department in installing some of the treatment systems.

### What can homeowners do to help?

One of the major contributors of stormwater runoff to any street drainage system is from the impervious surfaces (roofs, driveways, patios) from individual house lots. Disconnecting these impervious surfaces reduces the impact stormwater has on downstream resources - in this case Sam Tripp Brook and the East Branch of the Westport River. Disconnecting can be as simple as redirecting your roof downspouts to your lawn or garden area, or to a drywell or rain barrel. There are many inexpensive solutions as shown by the photographs. Garden and building centers can provide you with the materials you need.

Although somewhat more expensive, disconnecting your driveway from the road drainage system can



If your roof downspout flows into your driveway, which then flows into a town road, consider redirecting the downspout flow into your garden or a wooded area. Your effort will help the town to better manage stormwater pollution.

make the biggest impact. This could be done when your driveway needs resurfacing. Redirect the water to a lawn area or a rain garden. The stormwater will soak into the ground rather than flow onto the town road.

### Where can I find more information about this project?

For more information about this project, visit this website: [buzzardsbay.org/drift-road-westport-stormwater.html](http://buzzardsbay.org/drift-road-westport-stormwater.html).

This brochure was prepared and printed by the Buzzards Bay National Estuary Program at the request of the Westport Board of Selectmen and Westport Water Resources Management Committee. For more information about the Buzzards Bay National Estuary Program visit [buzzardsbay.org](http://buzzardsbay.org).

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