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Figure 1. Photo of Sheffield Cove

Site/Project Description

Site Description: Sheffield Cove is a picturesque and recreationally important shellfishing ground, which has historically been enjoyed by both Jamestown residents and visitors.

Overall Objective: To re-open Sheffield Cove for shellfishing by addressing sources of bacteria in the contributing watershed area.

Sheffield Cove was closed to shellfishing by RIDEM in 2009 as a result of bacterial exceedances found during the 2008 and 2009 routine sampling¹. Sheffield Cove is part of the West Passage Growing Area in Narragansett Bay.

In 2015, the *Stormwater Runoff & Water Quality Study of Sheffield Cove & Surrounding Watershed*² was completed and included 6 sampling events. The results of the sampling showed that 99% of the wet weather bacterial loads (and significant dry weather loads) originated from 2 catchments in close proximity to one another.



Figure 2. Sheffield Cove Watershed Areas

Results/Conclusions

Proposed management of the two primary sources must address both wet weather (stormwater) and dry weather (wildlife/wetlands/pet waste) sources.

STRUCTURAL MANAGEMENT: BMP's with the capacity to remove bacteria include vegetated treatment, filtration and infiltration.
BMP's selected: *Bioretention* along road shoulders for wet weather.
Subsurface Sand Filtration (Fig.3) under the roadway for dry and wet weather flows.

NON-STRUCTURAL MANAGEMENT: Field observations and lab tests confirm animal waste contributes to water quality issues in the Cove.
Recommendations: Develop a *Pet Waste Education Program*
Develop a *Waterfowl Control Plan*
Adopt a *Pet Waste Ordinance*
Manage dumpsters and uncovered solid waste

PHASE 1 of the study is funded by the current grant. The design and permitting of the *bioretention* areas and *subsurface sand filtration* system are underway. A *pet waste education plan* will focus on public awareness with a brochure suitable for mailing and posting by the Town.

PHASE 2 will continue the effort with expanded BMP's in the watershed.



Figure 3. Rendering of Subsurface Sand Filter

Acknowledgments & References

The project team would like to thank...

RIDEM – *West Passage, Growing Area 7, Triennial Report*¹

ESS Group, Inc.–*Stormwater Runoff & Water Quality Study of Sheffield Cove & Surrounding Watershed*²

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