

A stack of four smooth, dark, wet stones is the central focus, resting on a bed of water. The stones are dark and glistening with water droplets. In the background, there are green leaves, some in focus and some blurred. The overall scene is serene and natural.

Environmentally Responsible Management of Parks and Public Spaces

“Green is Gold”

Col Town Beach and Sports Complex

Department of Parks and Recreation

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Walter V. Burke - Director
Sarah Klein – Assistant Director

Town Council

John T. Calouro, Chairman
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Advisory Board

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John Horne
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John Pacheco
John Squires



Protecting Our Environment

Know Your Property

Topography – Direction of land

What kind of buffer zone frames property

Storm Drains – How many / locations

Wetlands – Don't ignore them

Septic System / Sewer lines

Invasive Plants – Poison ivy / Bitter sweet

Ground Water – Does water infiltrate



- Invasive Birds – Canadian geese & swans
- Trees – Inventory with healthiness recorded
- Traffic Flow- Keep cars away from water
- Contributing Factors- Currents; neighbors; boating
- Fertilization- Chemical vs. Organic
- Usage of salt on roads during winter
- Effects of beach erosion

Protecting Our Environment

What We Observed

- Our land slopes toward the bay
- We found four storm drains
- One wetland area (poor condition)
- Two septic leaching fields (poor condition)
- Large amount of invasive plants
- Beach field saturated most days (bowled in the middle)



Protecting Our Environment

What We Observed

Geese gatherings on beach field

Most trees are dangerous

Kids screeching tires & driving near beach

Sewer plant in Warren –
Providence River

Sport field fertilized with
chemicals

We no longer use salt



Make A Plan

Collaborate & Bring In The Experts

Department of Environmental Management

Water Resources Management Council

Department of Health

Department of Transportation

Environmental Protection Agency

State Corp of Engineers

Water Resources Conservation Services

Delaware Bay

Federal organizations such as NOAA,
National Parks Service etc.

Conservation Groups



The resources they provide is crucial to the success of your facility.

They Are Not Your *Enemy*.

What They Bring To The Table

Professional experts in specialized areas

Personnel and departmental resources

Historical Perspective – GIS mapping

The Bigger Picture – surrounding communities

Equipment – beach groomers – low impact
backhoes

They help you understand permit requirements

Liability Protection

Political Clout – In a good way

Money – Their collaboration legitimizes
proposals

Grants – State, Federal, Private / Finding
matching monies



r Successes



- ▶ Removed two leaching fields and septic systems replaced with forced main sewer line;
- ▶ Installed vortex unit and bio swale on the north west corner of the 350 car parking lot;
- ▶ Installed new Parking Lot with six bio-retention “Rain Gardens”;
- ▶ Installed three bio retention water quality cells for parking lot and two playground areas;
- ▶ We planted over 150 trees;



Successes

We raised the beach field by up to 3 feet & planted trees to eliminate Canada geese

Installed a pervious pavers patio;

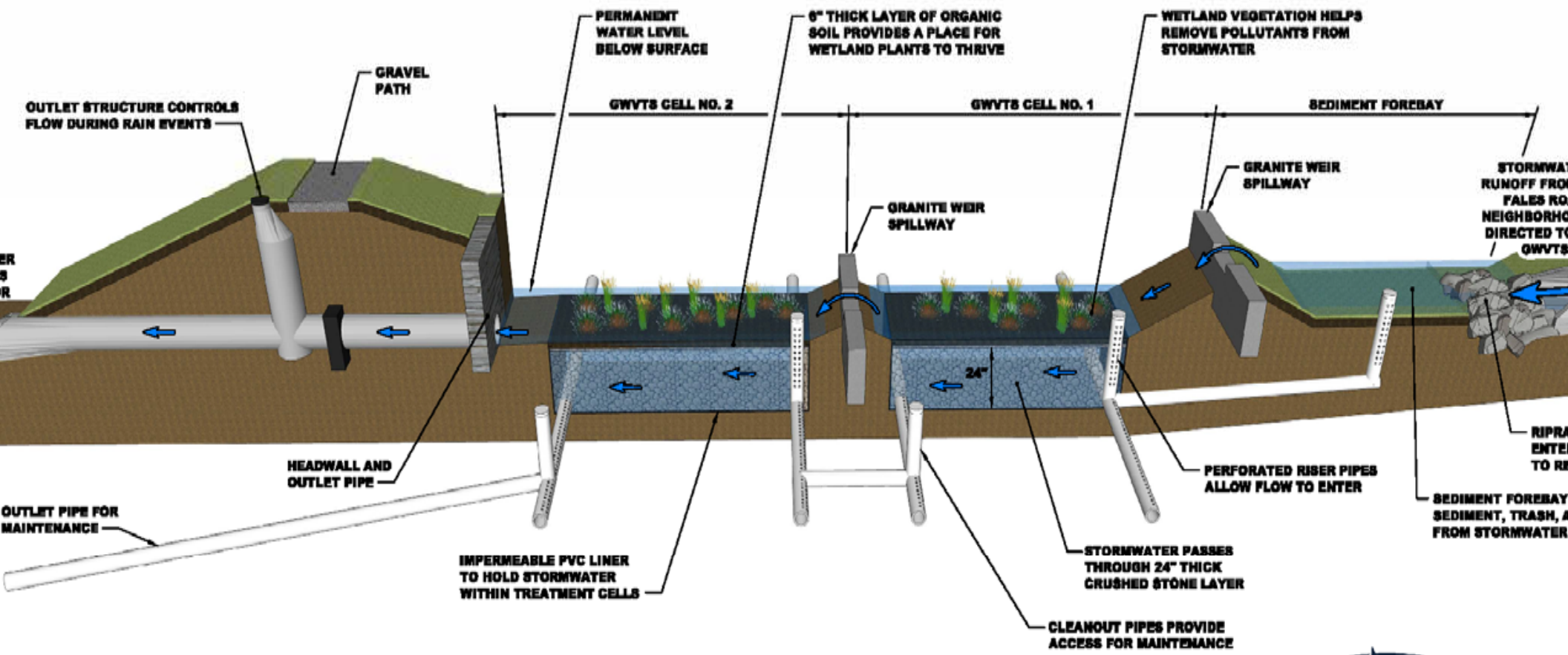
Planted “marsh grass” along north side of beach;

Planted a buffer of native plants on the northern border; and

Conducted educational programs with our camp children.

Summer of 2012 we had an 80% improvement in beach water quality. (closed only once in early June 2012) The summer of 2013 had 0 closures. 2014 closed only one day (during major rain storm).





GRAVEL WET VEGETATED TREATMENT SYSTEM (GWVTS) PROFILE

Additional Projects

10,000 project to build a large “gravel wet vegetated treatment system” which treats storm water coming out of a 36” storm drain and drains 95 acres of a residential neighborhood.

Installation of a barrier of the outfall within the wetland to allow storm water to percolate within the wetland area;

10,000 project to reduce the beach road from 20' wide to 10' wide – limit access to bikes, pedestrians and emergency vehicles;

Installation of a scenic overlook on the south side of the beach;

Installation of a barrier to address immediate erosion issues on the south side of the beach front

Installation of an educational kiosk along new pathways centered on the beach teaching children the importance of protecting the environment.

Upgrade all our sport field lighting to energy efficient lighting and change all park lighting to LED.

Upgrade pumps and hydro fracture two artesian wells to conserve water resources.

Installation of a sports plaza to include a hockey rink, two basketball courts, two tennis courts, two bocce courts, and three chess / checkers tables.



Other Related Projects

Restore the entire wetland area to help it be more productive;

Opened our new “Quinta-Gamelin Community Center”, and

Provide regional environmental training in partnership with our state agencies as stated earlier; Use of Solar Energy

Remove and replace the beach sand to make it more sanitary for visitors;

Design a plan to remediate the 1,458 acre Bristol watershed with Bristol Golf Course, Mt. Hope High School and Silver Creek.

We have partnered with NRCS, RI Conservation Commission, Save the Bay, NE Conservation Services, Save Bristol Harbor and BW School District to restore the athletic fields at Mt. Hope High School.

We received \$800,000 from DEM to carry out the Mt. Hope High School project



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2008, redesign of the parking lot began as a \$70,000 Supplemental Environmental Project (SEP), as required by the EPA.



- ▶ Installation of a drainage and piping system - controls storm water runoff
- ▶ Installation of hoods and bacteria filters in catch basins
- ▶ Vegetative buffer between parking lot and beach at Bristol Town Beach
- ▶ Installation of a Vortex storm water treatment system to capture fine-particle pollutants.
- ▶ Installation of a vegetated swale at the outfall of the drainage system
- ▶ Section 319 Nonpoint Source Abatement and Management - \$36,620 “Bristol Town Beach Storm water Pipe Retrofit Design and Permitting Project”



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- ▶ \$1,000,000 State Revolving Fund (SRF) low interest loan; ARRA funds for the design and construction of a new “Green” Parking Lot, Beach Field and water quality enhancements.
- ▶ In 2011, RIDEM contributed \$220,000 through a second Section 319 grant. “Gravel Wet Vegetated Treatment System” to collect storm water discharge from a 36” storm drain and a small drain pipe on our northern boarder.
- ▶ \$100,000 DEM Trails Grant; To create walking trails, reduce beach access road from 20ft wide to 10ft wide; fix erosion issue on south side of beach.
- ▶ \$400,000 DEM large Open Space and Recreation grant to build the Sport Courts plaza
- ▶ \$150,000 DEM small Open Space and Recreation grant to upgrade to energy efficient lighting.









