April 27, 2018

Glenda Velez - CIP
U.S. Environmental Protection Agency - Region 1
5 Post Office Square – OEP06-01
Boston, MA 02109-3912

Fred Civian
Massachusetts Department of Environmental Protection
One Winter Street - 5th Floor
Boston, MA 02108

Subject: Annual Update - NPDES Phase II General Permit
Town of Sandwich Stormwater Management Plan: Year 15 Update

Dear U.S. EPA and MaDEP:

As required under the NPDES Stormwater General Permit, the Town of Sandwich hereby submits this annual update of the Town’s Stormwater Management Plan (SMP). This report is a continuation of the original 5-year permit issued for the Town of Sandwich. During this year, the Town continued many efforts implemented in the initial permit and strove to meet goals that were planned but not met within the first five years. An update of Year 15 accomplishments are listed below and shown in the attached tables.

Year 15 Update
The Town of Sandwich continues to be very proactive in the field of stormwater management. It has satisfied the MS4 permit requirements and substantially completed all the goals laid out in the Stormwater Management Plan. This Annual Update provides a look at major accomplishments, new programs and goals. Below is a summary of Year 15 implementation.

Significant Accomplishments (Spring 2017 - Winter 2018)
Below is a list of some of the significant goals accomplished over the past year. Further details and illustrations of these accomplishments are show in the attached appendix.

Sandwich Harbor Stormwater Mitigation
The Town, in partnership with the United States Department of Agriculture’s Natural Resource Conservation Service, has begun a multi-year phased effort to mitigate the effects of nonpoint storm water pollution in Sandwich Harbor. This work will help restore water quality at Sandwich’s largest and most vital shellfish growing area. Construction funding has been made available through the USDA NRCS Cape Cod Water Resources Restoration Program, and the work will build on design efforts completed in previous years. So far, construction plans and specifications have been developed for the first phase, planned to be constructed in and adjacent to the Town Neck Beach parking lot. Bidding and construction are planned for the coming months.
Arbor Day Educational Outreach
The Town of Sandwich is committed to educating the public on the value of trees in the environment, and their vital role in the ecosystem. The Tree Warden meets with students at the Oak Ridge Elementary School each Arbor Day to discuss the role that trees play in improving water quality, reducing soil erosion, and absorbing carbon dioxide from the atmosphere. The Tree Warden also assists the students with planting a tree, commemorating Arbor Day.

Sandwich Marina Parking Improvements
The Town of Sandwich is focused on making storm water improvements to existing parking facilities and infrastructure. The Town of Sandwich recently made improvements at the Sandwich Marina to create additional boat storage & parking, with the goal of improving drainage facilities to minimize storm water impacts to the marina and adjacent resource areas.

Sandwich Library Parking Improvements
The Town of Sandwich recently made improvements to the parking areas at the Public Library, which included the construction of bioretention storm water facilities. In an effort to maximize the function of these facilities, the Department of Public Works has enlisted the help of a local Environmental Consulting Group (Horsley Witten) to assist with maintenance of plantings and landscaping in these areas.

Subdivision Rules & Regulations Update
The Engineering Department assisted the Planning Board with updates to their Subdivision Rules and Regulations. The updates included revisions to sections governing drainage and stormwater management. This incorporated current design references to enhance management techniques and comply with current practices.

Stormwater Mapping
In anticipation of new requirements expected to be part of the NPDES Stormwater General Permit reissuance, the Town’s Engineering Department has continued efforts to refine and improve mapping of catchment and subcatchment areas. This work is being incorporated into the Town’s Geographic Information System and will help future stormwater mitigation planning.

Stormwater Mitigation of Inland Ponds
The Town of Sandwich has continued efforts to mitigate stormwater pollution affecting the Town’s valuable freshwater ponds. The ponds provide valuable wildlife habitat, fishing, swimming, and recreation opportunities for the Town and its visitors. The Town’s engineering consultant conducted a study in which they updated the work of previous efforts with recent water quality sampling results and evaluation of BMP mitigation options. The Town is evaluating options to implement the recommendations of the study.

Household Hazardous Products Collection
The Town collaborates annually with four other neighboring communities to provide opportunities for residents to properly dispose of household hazardous products. This reduces the amount of hazardous material released to the environment, including water resources.

Municipal Solid Waste Disposal Enhancements
Town recently implemented a Pay-As-You-Throw program at the Solid Waste Transfer Station. This program requires users to pay for each bag of general trash disposed of. This, together with improvements to the recycling center has reduced the Town's municipal solid waste stream and increased recycling. The Department of Public Works also distributed compost bins for home composting and aired "Home Composting - Turning Your Spoils to Soil" on local TV (a MassDEP DVD). The Town gave away recycling and compost bins at this event.

Community Pride Day
The Town of Sandwich continues the annual Community Pride Day where residents participate in the cleanup of the Town. The DPW distributes equipment to assist in the cleanup of trash and identifies locations where residents can focus their efforts, such as at walking trails, roadsides, beaches, marshes and along shorelines. This event helps prevent trash from entering our valuable water bodies.

Stormwater Inspections and Monitoring
The Town continues to monitor erosion control at developments and inspect illicit connections throughout town as part of its SMP. The Town’s enforcement of this program has effectively cleaned up many sites, minimizing impacts to the Town’s drainage system and water bodies.

Stormwater Management Plan on Display
The Stormwater Management Plan is on display on the Town’s web site for public viewing. Additionally, the Town’s GIS allows the public to pinpoint specific stormwater problems and relay this information via e-mail to the Department of Public Works. The e-mail shows a map and ID number of the drainage facility so the DPW can quickly respond to any drainage issues. This process also allows accurate record keeping by the DPW.

Water Quality Groups
The Town of Sandwich is proactive in matters related to water quality in Sandwich and on Cape Cod. A consortium of Cape Cod Towns, Barnstable County, and local environmental non-profits has formed to support the Town’s efforts to address stormwater impacts. The Town has many public officials and volunteers actively involved with water quality committees including but not limited to the Sandwich Water Quality Advisory Board, Mass Estuaries Program, Popponesset Bay State DEP Pilot Intramunicipal Work Group and 3 Bays Initiative.

Status of Goals for Year 15
Similar to the original table submitted for the NPDES General Permit, the attached table shows goals proposed for all Six Control Measures. This updated table reflects new goals and the status of Year 1 through 15 goals. The yellow highlighted cells represent goals scheduled and met in each season of respective years. New goals mentioned earlier have also been included in the table.

The attached appendix shows several of the actions performed by the Town to meet the Year 15 goals listed in the table.

Overall Status of 15-Year Permit Term
As can be seen in the attached table, the goals in the Town’s SMP have been substantially met over the permit period. It’s important to note that several new goals were added to the Six Control Measures as the SMP evolved. Note: Some of the goals overlap in the Six Control Measures.
Recently completed/In Progress Goals of Six Control Measures

5.4 Construction Stormwater Runoff Control
4g. Recommended BMP’s
The Town requires developers to design drainage facilities using BMP’s. The Town had anticipated the Cape Cod Commission obtaining a grant to create a list of “Cape Cod BMP’s” to distribute to developers. The grant was not awarded, so the Town has prepared its own Stormwater BMP guidance document that draws on recognized standards tailored to suit conditions in the Town.

4i. Erosion Control Guidelines
The Town has prepared updated Erosion Control Guidelines to reflect current BMP practices and design. This guideline is available for developers and homeowners. The guideline will also complement enforcement letters for non-compliance.

5.5 Post Construction Stormwater Management
5f. Recommended BMP’s – See Goal 5.2, 4g above.

5h. Erosion Control Guidelines – See Goal 5.2, 4i above.

Future Stormwater Management Plan & Permit
The Town is reviewing the recently reissued MS4 permit. The Town’s SMP will be updated as necessary to comply with the new permit requirements.

Conclusion
The Town of Sandwich’s accomplishments over the permit period meet or exceed nearly all of the scheduled goals. Additionally, new goals have been created to further enhance the Towns Stormwater Management Plan. We trust that these accomplishments will satisfy the Massachusetts Department of Environmental Protection and the United States Environmental Protection Agency requirements for this permit. Please contact Sam Jensen of the Sandwich Engineering Department if you have any questions or require further information regarding this Annual Update.

Sincerely,

[Signature]

Samuel P. Jensen, P.E.
Assistant Town Engineer

Encl.

cc: G. Dunham, Town Manager
    P. Tilton, DPW Director, Town Engineer
APPENDIX
YEAR 15 UPDATE

• Sandwich Harbor Stormwater Mitigation Plans – Phase 1, 2018
• Community Pride Day Flyer
• Hazardous Materials Program Flyers
• Town of Sandwich DPW Pay-As-You-Throw Brochure
• Sandwich DPW How to Recycle Flyer
• Stormwater BMP Guidance
• Erosion Control Guidance
### F. Storm Water Management Program TIME FRAMES

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Note: Many of the BMP's above will continue beyond the initial 5-year permit period.
## F. Storm Water Management Program TIME FRAMES

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### ACHIEVEMENTS

1. Construction Stormwater Control
   - Stormwater Runoff Control
     - Continue to enforce driveway regulations to minimize stormwater impacts.
   - Educational Information & Public Participation
     - Distributed & displayed educational information. Earth Day Activities. Water & Sewer article.
   - Development Review
     - Continue to enforce stormwater and erosion regulations during development review.
   - Water Sampling
     - Health Department/County sample water quality annually. DPW sampled Mill Creek for 319 Grant.

2. Post-Construction Stormwater Management
   - Growth Incentive Zones - Stormwater Plans
     - Working with CCC on Growth Centers and Local Comprehensive Plan to address these issues.
   - Existing Laws and Regulations
     - Continue to enforce stormwater and erosion regulations and will evaluate need for updates.
   - Educational Information & Public Participation
     - Distributed & displayed educational information. Earth Day Activities. Water & Sewer article.
   - Development Review
     - Continue to enforce stormwater and erosion regulations during development review.
   - Catch Basin Cleaning
     - Continue to clean & monitor CB conditions. Will include Maintenance Plan on GIS.
   -Stormwater Posters
     - Displayed 4 Stormwater posters in Town buildings.

3. Pollution Prevention & Good Housekeeping in Municipal Operations
   - Stormwater Mitigation & BMP's
     - Cont'd using Town funds/grants to mitigate stormwater. Completed construction of 319 Grant.
   - Pollution Control & Mitigation Measures
     - Installed fuel spill cleanup kit. Will continue pollution control at DPW and Town buildings.
   - BMP Projects on Town-Owned Land
     - Will continue to implement BMP's at townwide projects.
   - DPW: On-Site Stormwater Containment
     - DPW inspects Transfer Station drainage facilities quarterly and entire site annually.
   - DPW Environmental Audit - EPA Program
     - Constructed Salt Shed and Interior washing area in DPW Garage.
   - DPW Training
     - Employees are trained about stormwater impacts. DPW attends stormwater seminars.

4. Elevate Student Engagement and Involvement in Water Quality
   - Tree Planting Program
     - Town has completed a Tree Inventory and Management Plan for Sandwich Village.

Note: Many of the BMP’s above will continue beyond the initial 5-year permit period.
### BRP WM 08A NPDES Stormwater General Permit Notice of Intent

#### F. Storm Water Management Program TIME FRAMES

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- **BMP**: BMP’s for Meeting TMDL
- **Year**: Goals completed in the season & year shown above. Words in red = goals not accomplished under the five year permit.

Note: Many of the BMP’s above will continue beyond the initial 5-year permit period.
1. GRAVEL BASE COURSE SHALL CONSIST OF INERT MATERIAL THAT IS HARD, DURABLE STONE AND COARSE SAND, FREE FROM LOAM AND CLAY. SANDY-LOAM AND/OR LOAMY-SAND SHALL BE EXCAVATED FROM ALL ROADWAY SUBGRADE IF FOUND AT THE TIME OF ROADWAY CONSTRUCTION.

**NOTES:**

- 1.5% GRADE
- APPROVED SUBGRADE
- FINISH PAVEMENT
- PROPOSED GUARD RAIL
- SEE DETAIL
- SEE PAVEMENT DETAIL
- FILL @ 3:1 SLOPE (MAX.)
- CUT @ 2:1 SLOPE (MAX.)
- SEE PLANS
- PROPOSED GUARD RAIL
- SEE DETAIL
- EXISTING GUARD RAIL
- TO REMAIN
- EXISTING SAND DUNE
- TO REMAIN
- EXISTING SAND DUNE
- VARIES
- SEE SITE PLAN
- SEE BIORETENTION W/ CURBING DETAIL
- 12" ASPHALT BERM
- SEE DETAIL
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- SEE BIORETENTION W/ CURBING DETAIL
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- CUT @ 2:1 SLOPE (MAX.)
- SEE PLANS
- PROPOSED GUARD RAIL
- SEE DETAIL
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- TO REMAIN
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- EXISTING SAND DUNE
- VARIES
- SEE SITE PLAN
- SEE BIORETENTION W/ CURBING DETAIL
- FILL @ 3:1 SLOPE (MAX.)
- CUT @ 2:1 SLOPE (MAX.)
- SEE PLANS

**TYPICAL PARKING LOT CROSS SECTION**

**TYPICAL PARKING LOT W/BIO CROSS SECTION**
1. EXISTING BITUMINOUS PAVEMENT SHALL BE REMOVED TO A CLEAN STRAIGHT EDGE VIA SAW

2. SEE SITE LAYOUT PLAN FOR PAVEMENT WIDTH AND LOCATION

3. AFTER PROPER COMPACTION (SEE PAVEMENT DETAIL) SAW CUT NEW PAVEMENT ABUTMENT 3/4" DEEP AND FILL WITH FIBER MODIFIED ASPHALT SEALER AS SHOWN.

4. VAN SPACES SHALL BE 8' MIN.


6. WOOD POSTS SHALL BE NOTCHED AS NECESSARY TO FACILITATE CURVES AND CHANGES IN DIRECTION.

7. ANY HOLLOW POST TO BE FILLED WITH 4000 PSI CONCRETE.

8. ALL METAL SHALL BE GALVANIZED, PRIMED AND PAINTED.

9. ALL JOINTS SHALL BE WELDED SOLID.

10. 3" DIAMETER REFLECTORS WITH GALVANIZED METAL BACKS SHALL BE INSTALLED AT APPROVED SPACES.

11. FOLLOWING CONSTRUCTION AND SITE STABILIZATION, STRAW/MULCH/COMPOST MATERIAL SHALL BE REMOVED OR DISPERSED ON SITE, AS APPROVED BY THE ENGINEER.

12. ALL SPLICES ARE TO BE MADE AT POSTS.

13. THE CONTRACTOR SHALL INSTALL TWO 3" CAPS AT 18 O.C. ON TOP OF THE GATE ARM.

14. THE CONTRACTOR SHALL INSTALL TWO 3" CAPS AT 18 O.C. ON TOP OF THE GATE ARM.

15. FOLLOWING CONSTRUCTION AND SITE STABILIZATION, STRAW/MULCH/COMPOST MATERIAL SHALL BE REMOVED OR DISPERSED ON SITE, AS APPROVED BY THE ENGINEER.

16. ALL MATERIAL TO MEET MANUFACTURER'S SPECIFICATIONS.

17. FOLLOWING CONSTRUCTION AND SITE STABILIZATION, STRAW/MULCH/COMPOST MATERIAL SHALL BE REMOVED OR DISPERSED ON SITE, AS APPROVED BY THE ENGINEER.

18. FOLLOWING CONSTRUCTION AND SITE STABILIZATION, STRAW/MULCH/COMPOST MATERIAL SHALL BE REMOVED OR DISPERSED ON SITE, AS APPROVED BY THE ENGINEER.

19. FOLLOWING CONSTRUCTION AND SITE STABILIZATION, STRAW/MULCH/COMPOST MATERIAL SHALL BE REMOVED OR DISPERSED ON SITE, AS APPROVED BY THE ENGINEER.
1. Send a representative sample of the topsoil to a testing laboratory only. Thoroughly review the project specifications for all clarifications required at a minimum of 30 days prior to ordering any correct deficiencies in the loam and stockpiled topsoil as directed by the landscape architect prior to installation.

2. Submit to the landscape architect for review and approval all required landscape submittals as described in the specifications to be brought to finished grade with at least 4" minimum depth of good soil. Including a plant list with plant size and quantities to be ordered prior to the placement of topsoil.

3. Furnish and install all plants as shown on the drawings and in the size and quantities specified on the planting schedule. Plant 3" prior to the placement of topsoil, loosen the subgrade of all larger than 1" in diameter, sticks, roots, rubbish, and other extraneous matter and legally dispose to an off-site location.

4. All plants to comply with applicable requirements of ANSI Z60.1 "American Standard for Nursery Stock." Latest edition, published by the American Nursery and Landscape Association Inc.

5. Plants to be grown under climatic conditions similar to those in the locality of the project for at least two (2) years. Use healthy nursery grown plants, free of disease, insects, and pests. Eggs or larvae, and have a well-developed root system. Treat hybrid stock and hybrids treated with any growth regulator with care to avoid injury to the emerging plant.


7. Plants to be grown under climatic conditions similar to those in the locality of the project for at least two (2) years. Use healthy nursery grown plants, free of disease, insects, and pests. Eggs or larvae, and have a well-developed root system. Treat hybrid stock and hybrids treated with any growth regulator with care to avoid injury to the emerging plant.

8. Seasons for planting:
   - Evergreen: April 1 to June 1
   - Perennials: April 15 to June 1
   - Groundcovers: September 15 to November 15

9. Planting dates is undertaken at sole risk of the contractor and it is the responsibility of the contractor to provide any additional maintenance and watering which may be required to ensure satisfactory plant and seed establishment.

10. All planted areas should be watered 2-3 times a week until acceptance of all completed planting work establishes the end of responsibility to ensure they are properly maintained, watered, and supplied with adequate amounts of water through the entire establishment period.

11. Inspect all areas to be planted or seeded prior to starting any maintenance, watering, or watering of any additional plants or seed. The landscape architect and engineer prior to beginning work. Provide proper preparation of all proposed planted and seeded areas for all landscape work.

12. Provide proper preparation of all proposed planted and seeded areas prior to the planting and seeding notes and specifications.

13. All plant layout and actual planting locations are to be held verified by landscape architect prior to planting. Notify the landscape architect of any variances in location prior to planting and request approval of any proposed changes.

14. Ball and burlap, freezing, sub-rooting and some species from top of balls and from top of burlaps, are required on shrub burlaps. If any, before setting.

15. Potting/plant: remove the plant from the pot and loosen or score the roots before planting to promote rootball root growth into the soil.

16. Placing plant upright and not at an angle. Dig planting holes large enough to accommodate the rootball and to avoid any compaction of the soil and roots beneath the grade line. Hand pack the soil around the entire rootball.

17. Do not the planting hole to the same depth as the rootball. Fill the space with good soil. After planting, fill the remaining area with good soil. Mix and turn the soil before planting to avoid compaction of the soil and roots beneath the grade line. Hand pack the soil around the entire rootball.

18. Create a 2" to 4" batter around the base of planting hole with remaining soil to begin batter.

19. Remove all plant tags and place from the plants.

20. Completion of all plant layout and actual planting locations based on plant list. All plants to be verified at time of delivery. Do not pile or store mulch around the plant crown or trunk.

21. Trim broken and dead branches from trees and shrubs after planting. Never cut a branch.
FOR IMMEDIATE RELEASE

CONTACTS: Paul Tilton
Sandwich Department of Public Works
508.833.8002

Jonathan Finn
sandwichspringclean@gmail.com

SANDWICH RESIDENTS TEAM UP TO CLEAN UP
ROADSIDE LITTER ON MAY 19TH

Neighborhoods Partner With Town on Community Pride Clean Up Day

(SANDWICH, MA - APRIL 12, 2018) As May sunshine replaces April showers, Sandwich residents look forward to Rhododendrons blooming, perennial flowers emerging and the smell of freshly cut grass. Unfortunately, they also discover a winters worth of nip bottles, soda cans, coffee cups and other carelessly tossed litter on their streets and roadsides. This year, Sandwich neighborhoods are teaming up to clean up litter on Community Pride Clean Up Day, a town-wide event on Saturday, May 19, 2018.

Powered by volunteers, Community Pride Clean Up Day is a grassroots event held in partnership with the Sandwich Department of Public Works and the Town of Sandwich. “Litter is an ongoing environmental issue on Cape Cod and throughout Massachusetts,” said Paul Tilton, Sandwich’s Director of Public Works. “It’s a challenge to keep up with the volume of trash illegally discarded out of passing cars. Community Pride Clean Up Day will give Sandwich neighborhoods needed assistance after a long winter and ahead of the summer season.”

To assist volunteers, the Sandwich Department of Public Works will be providing bags, gloves and trash pickers. The town will pick up filled bags following the event at designated locations.

The town-wide clean up encourages neighbors to band together to clean up their own streets and intersections. “Last year, the Galloping Hills neighborhood organized and had a very successful clean up. 20 volunteers filled dozens of jumbo trash bags with an unbelievable collection of fireball nip bottles, beer cans, and discarded personal items,” said Jonathan Finn, a resident of Chipman Road and an organizer of this year’s event. “People also had fun and a great sense of accomplishment. They met new neighbors and it only took a few hours of their time.”

The event also expands the momentum generated by the Great Massachusetts Cleanup — a series of grassroots clean ups in nearly 100 towns across the state. Discarded nip bottles have become one of the worst offenders when it comes to litter in Massachusetts and Cape Cod — ending up in our waterways where they leach toxic chemicals and harm marine life.

Residents and businesses in Sandwich are invited to get more information and sign-up for Community Pride Clean Up Day at facebook.com/groups/sandwichspringclean or by emailing sandwichspringclean@gmail.com. The Department of Public Works can be contacted at (508) 833-8002.

###
2018 HOUSEHOLD HAZARDOUS WASTE COLLECTION SCHEDULE

DID YOU KNOW
SOME HOUSEHOLD PRODUCTS ARE TOO TOXIC TO TRASH?

FREE disposal of:
Pesticides and Lawn Chemicals
Household Cleaners and Disinfectants
Arts & Crafts Chemicals
Hobby Supplies
Auto and Boat Fluids
Pool Chemicals
Paints, Polishes, and Stains*

*Latex and Acrylics will be accepted at Cape Cod Latex Paint & Recycling Initiative

www.loveyourlocalwater.org
Kalliope Chute
HazMat Environmental Specialist
1-800-319-2783
Cape Cod Cooperative Extension
Barnstable, MA 02630-0367

HHW Collections are funded by the Towns of Bourne, Sandwich, Mashpee and Falmouth; and Barnstable County's Cape Cod Cooperative Extension.

“Love your local water. It’s a Cape Cod Thing,” is a campaign of Barnstable County Government and Cape Cod Cooperative Extension to protect our drinking water.

Questions? Visit our website

www.loveyourlocalwater.org

Visit the FREE Collection for Residents of BOURNE, SANDWICH, FALMOUTH, MASHPEE, JOINT BASE CAPE COD

*Small Business disposal accepted. See inside panel for info.

Cape Cod Cooperative Extension
www.capecodextension.org

2018 Upper Cape Schedule

April 28
9am to 1pm
Sandwich Oak Ridge School
260 Quaker Meetinghouse Rd.

June 16
9am to 1pm
Falmouth High School
874 Gifford St., off Brick Kiln Rd.

August 18
9am to 1pm
Mashpee High School,
500 Old Barnstable Rd., off Rt 151

Oct. 20
9am to 1pm
Bourne Landfill,
201 MacArthur Boulevard
(RT 28 North)

* NON-RESIDENTS VISIT WEBSITE FOR REGISTRATION.
PROOF OF RESIDENCY REQUIRED.

www.loveyourlocalwater.org
facebook.com/loveyourlocalwater

Kalliope Chute
HazMat Environmental Specialist
1-800-319-2783
Cape Cod Cooperative Extension
Barnstable, MA 02630-0367

HHW Collections are funded by the Towns of Bourne, Sandwich, Mashpee and Falmouth; and Barnstable County’s Cape Cod Cooperative Extension.

“Love your local water. It’s a Cape Cod Thing,” is a campaign of Barnstable County Government and Cape Cod Cooperative Extension to protect our drinking water.
Household hazardous waste (HHW) collections protect our local drinking water. Most chemicals are too toxic to throw away in regular trash or dump down the drain, so FREE collections are being held to take that waste off your hands and keep it out of our water supply.

NOT A RESIDENT? VISIT WEBSITE FOR REGISTRATION. PROOF OF RESIDENCY REQUIRED.

Are you a small business and do you use chemicals? To make your state required disposal arrangements and obtain pricing, contact Kalliope Chute, HazMat Environmental Specialist, at #508-375-6699.

BRING THESE ITEMS TO YOUR COLLECTION

For items not listed here visit your town’s website for disposal instruction.

**PAINTS, POLISHES & STAINS *NO LATEX***
- Alkyd-Based Paint & Stain
- Marine Paints & Sealers
- Metal & Furniture Polish
- Oil-Based Paint & Stain
- Paint Thinner & Remover
- Solvent-Based Wood Finish
- Wood Preservatives
- Auto Paint (no latex)

**YARD CHEMICALS**
- Driveway Sealer with Solvent
- Fertilizers with Weed Killer
- Rodent Poison
- Weed Killer
- Insecticides
- Pesticides

**CLEANERS & CHEMICALS**
- Pool Cleaners & Chemicals Solvents
- Photo & Hobby Chemicals
- Oven Cleaner
- Drain Cleaner
- Spot Remover
- Acids
- Degreasers
- Disinfectants

**AUTO FLUIDS**
- Car Cleaner with Solvent
- Brake & Power Steering Fluid
- Bug & Tar Remover
- Camp Fuel
- Radiator Flush
- Car Polish
- Gasoline

To dispose of usable latex or acrylic paint visit Cape Cod Latex Paint and Recycling Initiative at www.townofbourne.com/paint

It is important to keep mercury out of our water supply. To dispose of household mercury products, bring items to your local HHW collection. If you come across large amounts in your home contact Kalliope at #508-375-6699.

<table>
<thead>
<tr>
<th>Thermometers, Thermostats, Barometers</th>
<th>Large amounts in jugs or bottles</th>
</tr>
</thead>
</table>

Please visit our website for more info:

www.loveyourlocalwater.org

facebook.com/loveyourlocalwater
Who wins with PAYT?
Everyone wins from the environmental and cost saving benefits. Residents who recycle to control their trash will have lower costs. PAYT is good public policy.

What is Dual Stream Recycling?
Dual stream is a system in which recyclables are collected in two streams. One stream is fiber (paper, cardboard) and the other is standard recyclables (glass, plastic, cans). Using only two streams of recyclables reduces the need to separate all materials brought to the Transfer Station.

Is there a limit to the amount of material I can recycle?
No. The Town encourages residents to recycle as much as they can. The more you recycle, the fewer bags you need to purchase and the more money you save. Consequently, the more residents recycle the less the Town of Sandwich pays to have their trash incinerated.

What is recyclable in Sandwich?
Sandwich residents may recycle a lot more than many realize. Recycling facilities now accept more types of materials and can sort them more effectively.

What types of material can be recycled?
- Newspaper and magazines with inserts
- Paperback books
- Office paper - staples, spirals, paper clips do not have to be removed.
- Colored paper
- Shredded paper in closed clear plastic or paper bags
- Junk mail, with windows
- Phone books
- Cereal boxes, paper towel tubes
- Pasta and cracker boxes
- Cardboard (unless it has food stains)
- Steel and tin cans
- Aluminum cans, pie plates, trays, foil
- Glass, containers
- All plastics marked #1-#7,

Ballasts, Fluorescent Lamps, Thermometers, Thermocouples, Ni-Cad Batteries
Automotive Batteries, Antifreeze, Waste Oil, Municipal Solid Waste (Household Trash)
Tin Cans, Glass & Plastic Bottles & Containers, Books, Newspapers & Magazines
Furniture, Carpeting, Rugs, Mattresses, Box Springs, Metal, Air Conditioners, Refrigerators, Propane Tanks, Tires, Returnable Bottles & Cans, Clothing
Leaves, Grass Clippings, Wood & Coal Ashes, Corrugated Cardboard

For further questions or information, please contact the Town of Sandwich DPW at 508-833-8002, or view the website at Sandwichmass.org – Public Works – Transfer Station – General Information

SAVE MONEY & REDUCE TRASH
NOW IS THE TIME FOR PAY-AS-YOU-THROW (PAYT) IN SANDWICH
Prepared by the Sandwich DPW with assistance from MassDEP

Printed on recycled paper
What is Pay-As-You-Throw?
Pay-As-You-Throw (PAYT) is a system much like electricity, gas or telephone under which the user pays a basic amount that covers fixed costs and then a user fee for the amount used.

How does PAYT work?
You buy blue, Town approved bags at stores where you usually shop. You put your trash in those bags and bring them to the Transfer Station to dispose of as you currently do with your trash.

Why would PAYT be good for Sandwich?
It would be fairer. Right now, every household, regardless of size, pays the same fee. Under PAYT, people who generate less trash would pay less by using fewer bags. It would remind people to recycle more, lowering the amount of trash thrown away and reducing the Town's trash disposal costs.

Why not continue to charge every household the same trash fee?
The present system is not fair. A lot of people, who are serious about recycling, are saying that they don't want to pay for the trash that other people throw away.

Is PAYT easy and convenient?
Yes. Residents will be able to buy bags at local stores where they shop. It's just that the bags will be different. They will be blue with the town logo printed on them.

What about large families?
If large families buy more than smaller families, they will have more to throw away and will have to buy more trash bags. The PAYT program will give them a chance and a new incentive to lower their costs by recycling everything they can. The present flat fee system doesn’t offer any choice or incentive to recycle. In PAYT towns, residents have reduced their trash tonnage by 25%-40% by recycling more, composting more, donating more and buying more wisely.

How will PAYT reduce Town Disposal Fees and User Costs?
Without PAYT, the annual cost of trash disposal per household will significantly increase. Currently, the solid waste budget is supplemented by the tax base. If you and most of the households in Sandwich actively recycle all you can, you will use less bags and the total cost of disposal will go down. We cannot control the cost of disposal per ton but, as a town, we can control the total tons that are sent to the incinerator, and that will lower our costs as a community.

How does PAYT help the environment?
As residents recycle more, less trash would go to Semass/Covanta Energy for incineration. Incineration of plastics and other recyclable material, contributes to global warming by adding CO2 to the atmosphere. By increasing recycling, we would save on raw materials, natural resources and energy consumption and reduce the amount of greenhouse gas.

What will not change with the PAYT?
- Household Hazardous Waste Days
- Christmas Tree recycling
- Yard Waste Drop off
- Compost processing

How much are PAYT bags and where can I buy them?
There are three sizes of bags available, a 30 gallon (barrel size) at a cost of $1.20, a 15 gallon (kitchen size) at a cost of $0.60 and 8 gallon (office size) at a cost of $0.25 (all costs subject to change). Bags are available at the following locations in Sandwich. Additional retailers may be added at a later date.
- Anchor Ace Hardware (Cotuit Rd)
- Aubuchon Hardware (Cotuit Rd)
- Aubuchon Hardware (Merchants Square)
- Meetinghouse Liquors (Cotuit Rd)
- Merchant Square Liquors (Merchant Sq)
- Mobil - Forestdale (Rt 130)
- Rt 6A Convenience Store (E. Sandwich)
- Sandwich Car Wash (Rt 130)
- Sandwich Food Mart & Deli (corner of Rt 130 & Cotuit Rd)
- Sandwich Mart & Spirits (Rt 6A)
- Stop & Shop (Merchant Square)
- Stop & Shop (QMH Rd)
- Tedeschi Food Shops (Rt 6A)
# How to Recycle in Sandwich

<table>
<thead>
<tr>
<th>MATERIAL</th>
<th>WHAT TO RECYLE</th>
<th>HOW TO PREPARE</th>
<th>DO NOT INCLUDE</th>
</tr>
</thead>
</table>
| METAL    | • Steel/tin and metal food cans  
          |                | • Rinse clean  
          |                | • Aerosol cans  
          | • Aluminum pie plates and trays  
          |                | • Labels OK  
          |                | • Paint cans  
          | • Deposit and non-deposit beverage cans  
          |                | • Coat hangers  
          |                | • Cookware  |
|          | Deposit cans may also be donated at the Sandwich Little League shed  
          |                | Recycle **DO NOT INCLUDE** items in the light-iron pile |
| GLASS    | • Clear and colored beverage containers  
          |                | • Rinse clean  
          |                | • Broken glass/auto glass  
          | • Food and sauce jars  
          |                | • Collar, neck rings & labels OK  
          |                | • Mirrors  
          | • Milk, water, soda, juice bottles  
          |                | • Caps & lids OK  
          |                | • Ceramics: plates, cookware  
          | • Shampoo, conditioner bottles  
          |                | • Drinking glasses  
          | • Laundry, bleach, fabric softener bottles  
          |                | • Light bulbs  
          | • Waxy gable cartons: Milk and Juice  
          |                | • Windows  |
|          | Deposit bottles may also be donated at the Sandwich Little League shed |
| PLASTIC  | • All number 1 thru 7 recyclable rigid plastic containers  
          |                | • Rinse clean, caps OK  
          |                | • Plastic bags: recycled in waste receptacles located in front of each compactor  
          | • Milk, water, soda, juice bottles  
          |                | • Styrofoam packaging of ANY KIND  
          | • Shampoo, conditioner bottles  
          |                | • Chemical and motor oil containers  
          | • Laundry, bleach, fabric softener bottles  
          |                | • Water/Garden Hose  
          | • Waxy gable cartons: Milk and Juice  |
| CARDBOARD| • All cardboard must be recycled and will not be allowed in the trash-trailer except as noted in **DO NOT INCLUDE**  
          |                | • Break down, flatten or fold  
          |                | • Contaminated boxes  
          |                | • Food soiled and frozen food boxes example: pizza and Chinese take out |
|          | Complete list on back of brochure |
| PAPER    | • Newspapers  
          |                | • Place in paper grocery bags  
          | • Magazines, catalogs  
          |                | • Food soiled as noted above  
          | • Junk mail, envelopes: tearable  
          |                | • Paper towels  
          | • Books  
          |                | • Tissues  
          | • Paper bags  
          |                | • Diapers  
          | • Phone books  
          |                | • Boxboard plastic liners: recycled in waste receptacles located in front of each recycling compactor  
          | • Office and computer paper  
          |                | Complete list on back of brochure  
          | • Boxboard: cereal, cracker – remove plastic liners  |

Paper (Fiber) is recycled in first or second designated compactor from left to right. Commingled metal, glass and plastic is recycled in third or fourth designated compactors from left to right. Only one Fiber and one Commingled compactor is open at a time. Limited recycling and Transfer station stickers may be obtained at the Town Hall Annex, 145 Main Street, across from the Sandwich Library. If unsure where a specific item should be recycled, please ask an attendant.

March 17, 2011
# How to Recycle Fiber (Paper) in Sandwich

## WHAT FIBER TO RECYCLE

<table>
<thead>
<tr>
<th>Item</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Booklets</td>
<td></td>
</tr>
<tr>
<td>Books: soft cover</td>
<td></td>
</tr>
<tr>
<td>Boxes: for office supplies, like paper clips</td>
<td></td>
</tr>
<tr>
<td>Boxes: cereal, cracker, pasta, shoe, etc</td>
<td></td>
</tr>
<tr>
<td>Boxes: with plastic window</td>
<td></td>
</tr>
<tr>
<td>Brochures: including glossy</td>
<td></td>
</tr>
<tr>
<td>Calendars: wall type</td>
<td></td>
</tr>
<tr>
<td>Cardboard: corrugated and paperboard</td>
<td></td>
</tr>
<tr>
<td>Catalogs</td>
<td></td>
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<tr>
<td>Clasp envelopes</td>
<td></td>
</tr>
<tr>
<td>Colored paper</td>
<td></td>
</tr>
<tr>
<td>Construction and kraft paper</td>
<td></td>
</tr>
<tr>
<td>Cover and card stock, index cards</td>
<td></td>
</tr>
<tr>
<td>Envelopes: with plastic windows or labels</td>
<td></td>
</tr>
<tr>
<td>File folders</td>
<td></td>
</tr>
<tr>
<td>Flyers</td>
<td></td>
</tr>
<tr>
<td>Glossy paper</td>
<td></td>
</tr>
<tr>
<td>Greeting cards</td>
<td></td>
</tr>
<tr>
<td>Lottery tickets</td>
<td></td>
</tr>
<tr>
<td>Mail</td>
<td></td>
</tr>
<tr>
<td>Magazines</td>
<td></td>
</tr>
<tr>
<td>Mat board: used in picture framing</td>
<td></td>
</tr>
<tr>
<td>Math paper: graph and ledger, etc</td>
<td></td>
</tr>
<tr>
<td>Newspapers: with or without inserts</td>
<td></td>
</tr>
<tr>
<td>Newsprint</td>
<td></td>
</tr>
<tr>
<td>Office and copy paper</td>
<td></td>
</tr>
<tr>
<td>Packing paper</td>
<td></td>
</tr>
<tr>
<td>Paper: lined and white</td>
<td></td>
</tr>
<tr>
<td>Paper: fax</td>
<td></td>
</tr>
<tr>
<td>Paper bags: brown and white</td>
<td></td>
</tr>
<tr>
<td>Paper bags: with handles</td>
<td></td>
</tr>
<tr>
<td>Paper towel and toilet paper tubes</td>
<td></td>
</tr>
<tr>
<td>Phone books</td>
<td></td>
</tr>
<tr>
<td>Photocopies</td>
<td></td>
</tr>
<tr>
<td>Post-it notes</td>
<td></td>
</tr>
<tr>
<td>Receipts</td>
<td></td>
</tr>
<tr>
<td>Shredded paper: in paper bags</td>
<td></td>
</tr>
<tr>
<td>Spiral notebooks</td>
<td></td>
</tr>
<tr>
<td>Writing tablets</td>
<td></td>
</tr>
</tbody>
</table>

## DO NOT INCLUDE

<table>
<thead>
<tr>
<th>Item</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Candy wrappers</td>
<td></td>
</tr>
<tr>
<td>Carbon paper</td>
<td></td>
</tr>
<tr>
<td>Disposable diapers</td>
<td></td>
</tr>
<tr>
<td>Envelopes with bubble wrap</td>
<td></td>
</tr>
<tr>
<td>Food-soiled paper and cardboard</td>
<td></td>
</tr>
<tr>
<td>Label backings</td>
<td></td>
</tr>
<tr>
<td>Paper cups or plates</td>
<td></td>
</tr>
<tr>
<td>Paper towels, napkins, tissues</td>
<td></td>
</tr>
<tr>
<td>Photographs</td>
<td></td>
</tr>
<tr>
<td>Take-out food containers: Chinese, etc</td>
<td></td>
</tr>
<tr>
<td>Tyvek® mailing envelopes</td>
<td></td>
</tr>
<tr>
<td>Waxed paper and cardboard</td>
<td></td>
</tr>
<tr>
<td>Waxy gable cartons: Milk and Orange Juice</td>
<td></td>
</tr>
</tbody>
</table>

Metal spiral notebooks, paper clips, plastic envelope windows, self-stick labels and staples are allowed to be recycled with the items listed above.

Items containing personal information should be shredded and recycled in paper bags.
REDUCE, REUSE & RECYCLE

TOWN OF SANDWICH DEPARTMENT OF PUBLIC WORKS

In an effort to encourage the 3 R's (Reduce, Reuse and Recycle) and minimize solid waste, below is a list of web sites from organizations providing opportunities for residents to donate and/or find free, usable items. Some charities will pick up items at homes and certain donations may be tax deductible.
The Oldest Town on Cape Cod

Town Boards & Committees

Click Here for listing of all filled and vacant Town board and committee seats.

Click the Following Button to View & Pay Tax Bills, Licenses & Other Permit Fees:

Online Payments

Click HERE for Town Credit Rating

New: Click https://sandwichma.opengov.com/ for New Town Financial Transparency Program (OpenGov)

Town of Sandwich Mission Statement

The government of the Town of Sandwich will provide the public with the highest, most efficient and effective level of service, with the resources available in a manner that exemplifies honesty, integrity and commitment to public service while honoring our rich history, protecting our environment and responsibly planning for our future.

Questions about a town beach?

Contact the Town's Recreation Director at (508) 888-4361 or via e-mail to recreation@townofsandwich.net

Click HERE for Beach Rules & Regulations

Click HERE for Fire Dept Beach Fire Permit Information

Click HERE for Police Dept Evening Beach Use Special Permit Information

NOTE: PDF DOCUMENTS MAY NOT PRINT PROPERLY FROM THE WEBSITE USING SOME VERSIONS OF THE FIREFOX WEB BROWSER. WE SUGGEST YOU DOWNLOAD PDF's TO YOUR COMPUTER BEFORE PRINTING IF YOU USE FIREFOX

TALENT BANK

VOLUNTEER & SERVE YOUR COMMUNITY

ADA/ACCESSIBILITY INFO

MAILING LIST

SIGN UP FOR THE TOWN OF SANDWICH EMAIL

HIGHLIGHTED LINKS

- Town of Sandwich By-Laws
- November 2017 Zoning Bylaws
- November 2017 Zoning Bylaws Planning & Economic Development Department
- Subdivision Rules Regs 2018
- Subdivision Rules Regs 2018
- Long Range Plan - May 2017 Update
- Board of Selectmen - Long Range Plan - May 2017 Update
- Town Charter - 2014
- Town Charter: As Adopted by Town Meeting in May 2013 and Approved by State Legislature and Governor in February 2014.

NEW ONLINE

- Emission Control Guidelines
- Updated guidance from the Engineering Dept. regarding Emission Control to all contractors, property owners, and others.
- Stormwater BMP Guidelines
- Updated guidance from the Engineering Dept. regarding Stormwater Best Management Practices to aid developers, designers, contractors, and others.
- 2018-04-30 Sandwich Economic Initiative Corporation Agenda
- 2018-05-07 Annual Town Meeting Agenda

SANDWICH TOWN NEWS

- Annual Town Meeting: Mon May 7
- Annual Town Election: Thurs May 10
- Click HERE for Sample Ballot
- Click HERE for Police Dept Firearm Use Permit Information
- Click HERE for Population by Census Tract
- Click HERE for Town Manager's Proposed FY19 Budget
- Click HERE for Household Hazardous Waste Collection Info
- Click HERE for Fire Dept Special Fire Protection District
- Click HERE for Police Dept Firearm Use Permit Information
- Click HERE for Draft Comprehensive Water Resources Management Plan
- Click HERE for CWRMP Appendix Material
- Click HERE for 2015 KDA Wing School Feasibility Study
- Click HERE for 2012 Simma Wing School Master Plan Study

Town of Sandwich

Main Town Hall
100 Main Street, 02536
E-Mail: townhall@sandwich.net
© 2018 Town of Sandwich
Stormwater management is an important aspect of site development and construction in all areas of Town. As noted in the Town’s Stormwater Management Plan (SMP) and Local Comprehensive Plan (LCP), Stormwater Best Management Practices (BMPs), when properly designed and implemented, can protect water quality, reduce the risk of flooding, minimize the expense of conventional infrastructure, and become part of an attractive landscape. All stormwater management facilities should be designed in accordance with applicable regulations and engineering standards, including the Town’s Protective Zoning Bylaw and Subdivision Rules and Regulations. These require that stormwater be managed with naturally vegetated low areas on the site that are designated for drainage and protected from future development. This approach is one element of Low-Impact Design, which can be highly effective, and is recommended for incorporation with all site development. The LCP states:

**Low-Impact Design Applications**

The low-impact development, or LID, site design approach is a precise arrangement of natural and engineered technologies. The devices, or Integrated Management Practices (IMPs), function as a comprehensive system across the site to achieve the goals of:

- Peak flow control;
- Volume reduction;
- Water quality improvement (filter and treat pollutants); and
- Water conservation.

Future development in Sandwich should use LID principles, which can be generally described as incorporating a series of techniques in the conceptual site plans with decentralized stormwater management to reduce the environmental footprint of new development.

Specific measures identified in the LCP include:

**Site Design and Layout** - LID applications used in Sandwich should integrate hydrology and stormwater management into site design using existing conditions to influence the location and layout of roadways, buildings, and parking areas. Buildings and roadways are placed in areas less sensitive to disturbance, and the stormwater management system design creates a symbiotic relationship between the development and natural hydrology.
Decentralized Stormwater Treatment System - The goal for Sandwich is to reduce impervious surface areas that drain directly into conventional pipe-and-pond stormwater systems. Creating small drainage basins and more natural treatment systems such as swales, bioretention areas, infiltration structures, and filter strips should include LID stormwater treatment design.

Filter Strips – Filter strips are bands of densely vegetated slopes, designed to reduce water runoff volume and improve water quality prior to entering stormwater drainage basins.

Bioretention Cells (Rain Gardens) – Rain gardens, also known as bioretention cells, are vegetated depressions that store and infiltrate runoff. Rain gardens are designed to encourage vegetative uptake of stormwater to reduce runoff volume and pollutant concentrations.

Vegetated Swales (Bioswales) – Vegetated swales are broad, shallow channels designed to convey and infiltrate stormwater runoff. The design of swales in Sandwich should seek to reduce...
stormwater volume through infiltration, improve water quality through infiltration and vegetative filtering, and reduce runoff velocity by increasing flow path lengths and channel roughness.

**Infiltration** – Infiltration includes designs that enhance water percolation through a media matrix that slows and partially holds stormwater runoff. Infiltration practices also promote groundwater recharge and facilitate pollutant removal.
Subsurface Retention Facilities (Stormwater Vaults) – Subsurface retention facilities are typically constructed below parking lots (either permeable or impervious) and can be built to any depth to retain, filter, infiltrate, and alter the runoff volume and timing. This practice is well suited to dense urban areas or areas with constraints of open space uses such as in Sandwich Activity Centers.

Pocket Wetlands – Pocket wetlands are constructed wetland systems designed to control stormwater volume and facilitate pollutant removal. Pocket wetlands generally have less biodiversity than natural wetlands, but still require a base flow through the wetland to support the aquatic vegetation present. Pollutant removal in these systems occurs through the settling of larger solids and coarse organic material and also by uptake in the aquatic vegetation.

Roadway Design - Basic strategies for low-impact roadway design in Sandwich should include narrow road widths, shared driveways, and open-section roadways. Parking lot design includes breaking up large paved areas into smaller lots, maximizing shared parking, providing adequate parking (based on actual demand rather than general standards), and using permeable paving where appropriate. The design objectives for roadways and parking lots are to:

- Reduce total impervious surfaces;
- Reduce road and parking construction and long-term maintenance costs;
- Provide safe access and adequate parking;
- Minimize disturbance to natural site hydrology;
- Create opportunities for stormwater treatment and infiltration; and
- Improve site appearance.

Example Open-Section Road For LID Development in NH

Low-impact roadways use a narrower, more traditional design that enhances site character and produces less runoff, which is directed to roadside swales for treatment and conveyance. This technique helps to filter roadway runoff, promote infiltration, and reduce runoff velocity, resulting in lower peak discharge rates. If properly designed, open section roadways will be no more prone to flooding than conventional roadway profiles.
Turnarounds and Cul-De-Sacs - Cul-de-sacs should be designed to reduce runoff and improve character, while still providing sufficient room for emergency vehicles and delivery trucks to maneuver. One treatment for the circles is landscaped islands built as bioretention areas with proper grading to catch and treat roadway runoff.
Parking Lot Design - Expansive parking lots that drain to catch basins create large volumes and high velocities that require pipe-and-pond stormwater infrastructure. LID parking design should be incorporated into new developments in Sandwich to create multiple parking areas at different elevations that can reduce the amount of grading necessary to preserve natural hydrology.

Contact the Town of Sandwich Engineering Department for a list of storm-water projects that can be viewed locally.

Additional information may be found at the following:

- **Town of Sandwich Local Comprehensive Plan**

- **Massachusetts Stormwater Handbook**

- **Low Impact Development Center**
  https://lowimpactdevelopment.org/

- **UNH Stormwater Center**
  https://www.unh.edu/unhsc/

- **Town of Sandwich Zoning Bylaw and Subdivision Rules & Regulations**
EROSION CONTROL GUIDELINES

APRIL 2018

Property owners and their construction contractors are responsible for managing stormwater and preventing offsite discharge of sediment and other stormwater-borne pollution. Besides being a nuisance, sediment and other pollution can permanently damage drainage systems and impair receiving waters and other sensitive features. Property owners and their contractors can minimize erosion and sedimentation by properly implementing appropriate Best Management Practices (BMPs). Sample BMPs and links to resources for additional information are included below.

A properly implemented erosion control program will:

- Minimize exposed soil areas through maintaining existing vegetation, site control, construction sequencing, temporary seeding, and other management measures;
- Protect downslope resources;
- Provide and maintain barriers and devices to manage stormwater runoff and erosion; and
- Establish a permanent vegetative cover or other stabilization as soon as possible.

Prior to construction:

- Review and adhere to all applicable permit requirements;
- Install appropriate BMPs, such as a stone construction entrance, sediment barriers, etc.
- Protect all vulnerable features downslope of the proposed work with appropriate BMPs.

During construction:

- Limit construction vehicle access to approved driveways only.
- Replenish crushed stone driveway aprons as needed to prevent sediment tracking.
- Do not exceed slopes of 2-Horizontal to 1-Vertical (2H to 1V)
- Restrict disturbances to the approved limits of work.
- Apply erosion control blankets, mulch, or bonded fiber matrix to exposed soils that will not be permanently stabilized within 30 days. Mulch should be hydraulically applied and anchored with netting or approved tacking agent.
- Inspect all BMPs at least once per day during rain events and at least once per week during dry weather. Repair deficiencies immediately.
- Promptly remove any soil, debris, or other material that has washed onto adjacent properties. Restore affected areas immediately.
At the close of construction:

- Stabilize disturbed areas with grass and 6-inches of topsoil or other approved method. Foundation plantings and mulch may be established in areas retained by walls with slopes less than 3H to 1V.

- Apply soil stabilization fabric/erosion control blankets to disturbed areas sloped more than 3H to 1V and as needed.

- Pipe roof drains to drywells.

- Grade final driveway aprons to maintain the gutter line of the adjacent street and pave in accordance with the Town’s driveway regulations. Provide berms or curbing along sides of driveways as needed.

- Remove and properly dispose of all silt fence, hay/straw bales, and other BMPs after vegetation is established and the site is stabilized.

Sample BMPs:

**Site Configuration**

**Typical On-lot BMPs for Lot Above Roadway**

![Diagram of typical on-lot BMPs for a lot above a roadway.

Source: PA DEP Erosion and Sediment Control Program Manual NTS
Typical On-lot BMPs for Lot Below Roadway

FILTER FABRIC FENCE OR SEDIMENT FILTER LOG (TYP)

THE AREA DOWNSLOPE FROM THE FILTER FABRIC FENCE MAY NOT BE UNDER DEVELOPMENT OR OTHERWISE DISTURBED.

PA DEP Erosion and Sediment Control Program Manual
Sediment Barriers

Small-Scale Site Development Driveway Apron Plan

**DRIVEWAY APRON PLAN VIEW**

- **TEMPORARY DRIVEWAY APRON CROSS-SECTION**
  - Excavate 9" and replace with 9" compacted gravel
  - 3" of 3/4" to 1 1/2" crushed stone

- **COMPLETED DRIVEWAY APRON CROSS-SECTION**
  - 2 1/2" bituminous concrete

**PROPERTY LINE**

- Variable distance from property line to pavement (all disturbed areas shall be loamed & seeded)

- (3/4" to 1 1/2" crushed stone temporary apron, 3" thick shall be maintained during construction phase)

- Maintain gutter line

- Road
Erosion Control Blanket

INSTALL BEGINNING OF ROLL IN 6" x 6" ANCHOR TRENCH, STAPLE, BACKFILL AND COMPACT SOIL.

STARTING AT TOP OF SLOPE, ROLL BLANKETS IN DIRECTION OF WATER FLOW

PREPARE SEED BED (INCLUDING APPLICATION OF LIME, FERTILIZER, & SEED) PRIOR TO INSTALLATION OF BLANKET.

REFER TO MANUFACTURER'S RECOMMENDED STAPLING PATTERN FOR STEEPNESS AND LENGTH OF SLOPE BEING BLANKETED.

THE BLANKET SHOULD NOT BE STRETCHED; IT MUST MAINTAIN GOOD SOIL CONTACT.

OVERLAP BLANKET ENDS 6" (MIN.) WITH THE UPSLOPE BLANKET OVERLYING THE DOWNSLOPE BLANKET (SHINGLE STYLE). STAPLE SECURELY.

Source: PA DEP Erosion and Sediment Pollution Control Program Manual
The following chart is designed to help select erosion and sediment control practices that may be appropriate for the site. It is often advantageous to use several practices, including retaining existing vegetation, as a combined treatment approach for addressing erosion and sedimentation issues at the site.

Vegetative cover is the best and often the most cost-effective practice for controlling site erosion!

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Additional information for BMPs and managing sites may be found at the following:

MassDEP - Erosion & Sedimentation Guidelines  

MassDOT Erosion and Sediment Control Field Guide  

PA DEP Erosion and Sediment Pollution Control Program Manual  

EPA - Stormwater Menu of BMPs  
http://cfpub.epa.gov/npdes/stormwater/menuofbmps/index.cfm