

BEACH RESTORATION PRACTICES



Department of
Environmental
Conservation

To reduce bacteria and nutrient loading

Projects that reduce the volume of contaminated stormwater runoff that drains into nearshore waters or reduce the presence of nuisance wildlife at municipally owned/operated bathing beaches are eligible for non-agricultural nonpoint source abatement and control funding under DEC's Water Quality Implementation Project (WQIP) grant program. Projects on the beach or on the upland beach area may include, but are not limited to:

- Porous pavement
- Bioinfiltration/bioretenion
- Rain gardens
- Stormwater tree trenches
- Greenways
- Beach re-naturalization
- Beach sand enrichment/nourishment
- Constructed wetlands
- Trumpeter swan or coyote decoys

Applicants should refer to this document for general and technical resources that can assist with the WQIP application process.



Beach Rain garden

Application Requirements

Applications for beach restoration practices must include the following documentation:

- A completed beach sanitary survey with identified potential sources of beach contamination
- Documentation that demonstrates the likelihood of project success and/or feasibility (if completed prior to submitting an application), including topographic surveys, borehole percolation test information, permits, construction designs or other feasibility designs

Technical Resources

An in-depth review of priority best management practices can be found in the following technical documents:

Raingardens/Bioinfiltration/Porous Pavement:

- Napaerala, T., DeGood, C., DeVaan, D. and U'Ren, S. 2015. *Low Impact Design and Construction to Improve Beach Water Quality and Reduce Frequency of Closures*. Proceedings of the Water Environmental Federation.
- 2015 New York State Stormwater Design Manual. Available online at: <http://www.dec.ny.gov/chemical/29072.html>

Beach Sand Enrichment/Nourishment:

- Committee on Beach Nourishment and Protection Marine Board and Commission on Engineering and Technical Systems National Research Council. 1995. Beach Nourishment and Protection. National Academy Press: Washington, D.C.
- Massachusetts Department of Environmental Protection and Massachusetts Office of Coastal Zone Management. 2007. *Beach Nourishment: MassDEP's Guide to Best Management Practices for Projects in Massachusetts*. Available online at: <http://www.mass.gov/eea/agencies/massdep/water/watersheds/beach-nourishment-massdep-guide-to-best-management-practices-for-projects-in-massachusetts-.html>
- U.S. Department of Commerce - National Oceanic & Atmospheric Administration. 2000. *State, Territory and Commonwealth Beach Nourishment Program: A National Overview*. Available online at: <https://coast.noaa.gov/czm/media/finalbeach.pdf>



Beach Sand Nourishment

Waterfowl Management:



Predator (Coyote) Decoy



Covered Trash Cans and Public Education (Signage)

- Gosser, A. L., M. R. Conover, and T. A. Messmer. 1997. Managing problems caused by urban Canada geese. Berryman Institute Publication 13, Utah State University, Logan, 8pp.
- United State Department of Agriculture (USDA). 2016. *Preventing and Managing Waterfowl Damage*. Animal and Plant Health Inspection Service – Wildlife Services.

General Resources

A general overview of beach restoration practices can be found in the following guidance documents:

- Koski, A and Kinzelman, J.L. 2010. A Review of Best Management Practices Benefiting Great Lakes Recreational Waters: Current Success Stories and Future Innovations. International Joint Commission: Beaches and Water Quality Workgroup.
- Rice, T. 2009. Best Management Practices for Shoreline Stabilization to Avoid and Minimize Adverse Environmental Impacts. Prepared for the USFWS, Panama City Ecological Services Field Office. Available online at:
<https://www.fws.gov/charleston/pdf/PIPL/BMPs%20For%20Shoreline%20Stabilization%20To%20Avoid%20And%20Minimize%20Adverse%20Environmental%20Impacts.pdf>
- Welch L.C. and Kinzelman, J.L. 2009. Health Beaches Action Guide: How You Can Help Your Great Lakes Shoreline. Alliance for the Great Lakes: Chicago, IL.

Additional Online Resources

Water Quality Improvement Project Program: <http://www.dec.ny.gov/pubs/4774.html>

Nonpoint Source Guidance and Technical Assistance Catalogue:
<http://www.dec.ny.gov/chemical/96777.html>

Water Quality Information: <http://www.dec.ny.gov/chemical/8459.html>

CONTACT INFORMATION

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