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Beach Restoration	Beach Sand Enrichment/ Nourishment	Beach Restoration Practices Factsheet	Cubic Feet or Cubic Yards	https://www.dec.ny.gov/docs/water_pdf/beacheswqip.pdf	Beach sand nourishment or enrichment is the practice of adding or replacing large quantities of sand or sediment to beaches to combat erosion, restore sand dunes, and remove pathogen laden sand. Replacement sand should be an appropriate grain size and quality to reduce future erosion.
Beach Restoration	Beach sloping/grading	Beach Restoration Practices Factsheet	Acre	https://www.dec.ny.gov/docs/water_pdf/beacheswqip.pdf	The redistribution and regrading of on-site beach sand without the nourishment or addition of any off-site beach sand or other material.
Beach Restoration, Green Infrastructure	Constructed Wetlands	NYS Stormwater Management Design Manual	Water Quality Volume (WQv) Treated	https://www.dec.ny.gov/docs/water_pdf/swdm2015chptr05.pdf	A constructed, shallow water area dominated by cattail, bulrush, rushes or reeds designed to simulate the water quality improvement function of natural wetlands.
Beach Restoration, Green Infrastructure	Porous Pavement	NYS Stormwater Management Design Manual	Water Quality Volume (WQv) Treated	https://www.dec.ny.gov/docs/water_pdf/swdm2015chptr05.pdf	Permeable paving is a broadly defined group of pervious types of pavements used for roads, parking, sidewalks, and plaza surfaces. Permeable paving provides an alternative to conventional asphalt and concrete surfaces and are designed to convey rainfall through the surface into an underlying reservoir where it can infiltrate, thereby reducing stormwater runoff from a site. In addition, permeable paving reduces impacts of impervious cover by augmenting the recharge of groundwater through infiltration, and providing some pollutant uptake in the underlying soils. Due to the potential high risk of clogging the pavement voids and the underlying soils, permeable paving should be limited in its use and should require strict adherence to manufacturer's specifications for installation and maintenance.

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Beach Restoration, Green Infrastructure	Rain Gardens	NYS Stormwater Management Design Manual	Water Quality Volume (WQv) Treated	https://www.dec.ny.gov/docs/water_pdf/swdm2015chptr05.pdf	A rain garden is a stormwater management practice intended to manage and treat small volumes of stormwater runoff from impervious surfaces using a conditioned planting soil bed and planting materials to filter runoff stored within a shallow depression.
Beach Restoration, Green Infrastructure	Stormwater Street Trees (Tree Planting/Tree Pit)	NYS Stormwater Management Design Manual	Water Quality Volume (WQv) Treated	https://www.dec.ny.gov/chemical/29072.html	Tree planting generally refers to concentrated groupings of trees planted in landscaped areas while tree pits, also called tree boxes, generally refer to individually planted trees in contained areas such as sidewalk cutouts or curbed islands. Tree planting can be used for applications such as landscaping, stormwater management practice areas, conservation areas and erosion and sediment control.
Beach Restoration, Green Instructure	Bioinfiltration/ Bioretention	NYS Stormwater Management Design Manual	Water Quality Volume (WQv) Treated	https://www.dec.ny.gov/docs/water_pdf/swdm2015chptr05.pdf	A shallow depression that treats stormwater as it flows through a soil matrix, and is returned to the storm drain system.
Beach Restoration, Stormwater Retrofits	Stormwater Planters	NYS Stormwater Management Design Manual	Water Quality Volume (WQv) Treated	https://www.dec.ny.gov/chemical/29072.html	small landscaped stormwater treatment devices that can be placed above or below ground and can be designed as infiltration or filtering practices. Stormwater planters use soil infiltration and biogeochemical processes to decrease stormwater quantity and improve water quality, similar to rain gardens and green roofs. Three versions of stormwater planters include contained planters, infiltration planters, and flow-through planters.
Culvert repair/replacement (Projects) or Nonpoint Source Program	Culvert repair/ replacement	Stream Crossings: Guidelines and Best Mangement Practices	Count	https://www.dec.ny.gov/permits/49066.html	Replacement or repair of culverts that are undersized or failing and leading to erosion of nearby soils. Replacement stream crossings should restore stream continuity.

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Decentralized Municipal Wastewater Treatment Facilities for Failing On-Site Treatment Systems	Decentralized Systems	EFC/DEC Engineering Report Outline for New York State Wastewater Infrastructure Projects	Number of user connections	https://www.dec.ny.gov/docs/water_pdf/swdm2015chptr05.pdf	Municipally owned decentralized wastewater treatment facility in areas with failing on-site treatment systems, including the necessary collection and conveyance system.
Green Infrastructure	Downspout Disconnection (Disconnection to Rooftop Runoff)	NYS Stormwater Management Design Manual	Water Quality Volume (WQv) Treated	https://www.dec.ny.gov/docs/water_pdf/swdm2015chptr05.pdf	Direct runoff from residential rooftop areas to designated pervious areas to reduce runoff volume and rates.
Green Infrastructure	Green Roof	NYS Stormwater Management Design Manual	Water Quality Volume (WQv) Treated	https://www.dec.ny.gov/docs/water_pdf/swdm2015chptr05.pdf	Green roofs consist of a layer of vegetation and soil installed on top of a conventional flat or sloped roof. The rooftop vegetation captures rainwater allowing evaporation and evapotranspiration processes to reduce the amount of runoff entering downstream systems.
Green Infrastructure	Stormwater Harvesting/ Reuse	NYS Stormwater Management Design Manual	Water Quality Volume (WQv) Treated	https://www.dec.ny.gov/docs/water_pdf/swdm2015chptr05.pdf	Collection and storage of stormwater runoff to be used for irrigation systems or filtered and reused for non-contact activities
Green Infrastructure	Stream Daylighting	NYS Stormwater Management Design Manual	Water Quality Volume (WQv) Treated	https://www.dec.ny.gov/docs/water_pdf/swdm2015chptr05.pdf	Stream Daylight previously-culverted/piped streams to restore natural habitats, better attenuate runoff by increasing the storage size, promoting infiltration, and help reduce pollutant loads.
In-Waterbody BMPs	Destratification Systems for Polymictic Lakes	Priority In-Waterbody Best Management Practices	Acre	https://www.dec.ny.gov/docs/water_pdf/wqipinwaterbody.pdf	Destratification systems create artificial circulation that completely mixes a stratified lake's waters. Systems include air injection diffusers placed near the botton of the lake or mechanical flow pumps placed at the lake surface that push surface water downward to create circulation.
In-Waterbody BMPs	Dredging	Priority In-Waterbody Best Management Practices	Acre	https://www.dec.ny.gov/docs/water_pdf/wqipinwaterbody.pdf	Dredging removes the top layer of sediments that hold biologically available nutrients involved in exchanges and interactions with the water column. Sediment removal may improve the overall water quality in lakes where nutrient loading from sediments is a major factor affecting nuisance weed and algae growth.

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In-Waterbody BMPs	Hypolimnetic Aeration	Priority In-Waterbody Best Management Practices	Acre	https://www.dec.ny.gov/docs/water_pdf/wqipinwaterbody.pdf	Hypolimnion aeration is used to increase oxygen circulation within a lake and increase oxygen content of the deep waters without causing enough turbulence to disrupt the stratified layers. Aeration of the lake bottom waters uses an air-lift device to pump or lift the deep, stagnant water layer for exposure to the atmosphere. This results in aeration and the loss of some gases such as carbon dioxide and methane. Then the water sinks back to the hypolimnion. Hypolimnetic aeration may also be accomplished by injecting pure oxygen or air into the bottom waters or by using an air-lift device along with injection. When the hypolimnion has sufficient oxygen, release of phosphorus from oxygen-depleted bottom sediments will be minimized, and this may result in decreased algae levels.
In-Waterbody BMPs	Hypolimnetic Withdrawal	Priority In-Waterbody Best Management Practices	Cubic Feet	https://www.dec.ny.gov/docs/water_pdf/wqipinwaterbody.pdf	Hypolimnetic withdrawal is most often accomplished through the installation of a pipe or siphon along the bottom of the lake, usually at the outlet. Water flows out of the hypolimnion by gravity, past the outlet to the receiving waters. If there is insufficient elevation for gravity flow, an auxiliary pump can be installed. Summertime hypolimnetic withdrawal serves to remove the high-nutrient waters, thus reducing the potential for algal blooms when the epilimnion and hypolimnion mix during fall turnover.
Nonpoint Source Program	Hydroseeding/ Maintenance of Vegetative Cover	Roadway and Right-ofWay Maintenance	Acre	https://www.dec.ny.gov/docs/water_pdf/roadwayrowbmp.pdf	Maintenance and inspection of vegetative cover in critical areas and reestablishment of vegetation in exposes soils to prevent erosion. Planting techniques may include drilling, tracking, hydroseeding, broadcasting, sprigging, and sodding.

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Nonpoint Source Program	Rain Barrels/Cisterns	NYS Stormwater Management Design Manual	Acres Treated	https://www.dec.ny.gov/docs/water_pdf/swdm2015chptr05.pdf	Rain barrels and cisterns capture and store stormwater runoff to be used for lawn or landscaping irrigation or filtered and used for nonpotable water activities, such as car washing.
Nonpoint Source Program	Road Ditch Stabilization	NYS Standards and Specifications for Erosion and Sediment Control (Blue Book) or Roadway and Right-of Way Maintenance	Acre	https://www.dec.ny.gov/chemical/29072.html or https://www.dec.ny.gov/docs/water_pdf/roadwayrowbmp.pdf	Techniques for providing stable conditions on roadside ditches (vegetative management practices, structural BMPs, etc.). Stable conditions should be maintained during routine sediment removal, clean-up, and ditch re-shaping operations.
Nonpoint Source Program	Septic tank pumpout	On-Site Wastewater Treatment Systems	Number of systems pumped	https://www.dec.ny.gov/docs/water_pdf/onsitewastewater.pdf	Periodic septic system inspections and routine pumping of the septic tank to prevent overflow of solids into distribution network and consequential failure of downstream treatment facilities.
Stormwater Retrofits	Dry Swale	NYS Stormwater Management Design Manual	Water Quality Volume (WQv) Treated	https://www.dec.ny.gov/docs/water_pdf/swdm2015chptr05.pdf	An open drainage channel or depression explicitly designed to detain and promote the filtration of stormwater runoff into the soil media.
Stormwater Retrofits	Dry Well	NYS Stormwater Management Design Manual	Water Quality Volume (WQv) Treated	https://www.dec.ny.gov/docs/water_pdf/swdm2015chptr05.pdf	Subsurface stormwater facilities that are used to collect and temporarily store stormwater runoff generated by clean rooftops; runoff is discharged through infiltration into the subsoil.
Stormwater Retrofits	Extended Detention Pond	NYS Stormwater Management Design Manual	Water Quality Volume (WQv) Treated	https://www.dec.ny.gov/docs/water_pdf/swdm2015chptr05.pdf	Pond that treats a portion of the water quality volume by detaining storm flows above a permanent pool for a specified minimum detention time
Stormwater Retrofits	Extended Detention Wetland	NYS Stormwater Management Design Manual	Water Quality Volume (WQv) Treated	https://www.dec.ny.gov/docs/water_pdf/swdm2015chptr05.pdf	A wetland system that provides some fraction of the water quality volume by detaining storm flows above the marsh surface.
Stormwater Retrofits	Hydrodynamic Systems	NYS Stormwater Management Design Manual	Water Quality Volume (WQv) Treated	https://www.dec.ny.gov/docs/water_pdf/swdm2015chptr05.pdf	Proprietary flow-through structures with a settling or separation unit to remove sediment and other pollutants
Stormwater Retrofits	Infiltration Basin	NYS Stormwater Management Design Manual	Water Quality Volume (WQv) Treated	https://www.dec.ny.gov/docs/water_pdf/swdm2015chptr06.pdf	An infiltration practice that stores the water quality volume in a shallow depression, before it is infiltrated it into the ground

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Stormwater Retrofits	Infiltration Trench	NYS Stormwater Management Design Manual	Water Quality Volume (WQv) Treated	https://www.dec.ny.gov/docs/water_pdf/swdm2015chptr06.pdf	An infiltration practice that stores the water quality volume in the void spaces of a gravel trench before it is infiltrated into the ground.
Stormwater Retrofits	Media filters	NYS Stormwater Management Design Manual	Water Quality Volume (WQv) Treated	https://www.dec.ny.gov/docs/water_pdf/swdm2015chptr05.pdf	structures or excavated areas containing a layer of sand, compost, organic material, peat, or other filter media to filter stormwater runoff and capture sediments, and other pollutants
Stormwater Retrofits	Multiple Pond System	NYS Stormwater Management Design Manual	Water Quality Volume (WQv) Treated	https://www.dec.ny.gov/docs/water_pdf/swdm2015chptr05.pdf	A group of ponds that collectively treat the water quality volume
Stormwater Retrofits	Organic Filter	NYS Stormwater Management Design Manual	Water Quality Volume (WQv) Treated	https://www.dec.ny.gov/docs/water_pdf/swdm2015chptr05.pdf	A filtering practice that uses an organic medium such as compost in the filter, in the place of sand
Stormwater Retrofits	Perimeter Sand Filter	NYS Stormwater Management Design Manual	Water Quality Volume (WQv) Treated	https://www.dec.ny.gov/docs/water_pdf/swdm2015chptr05.pdf	A filter that incorporates a sediment chamber and filer bed as parallel vaults adjacent to a parking lot.
Stormwater Retrofits	Pocket Pond (if applied with another practice)	NYS Stormwater Management Design Manual	Water Quality Volume (WQv) Treated	https://www.dec.ny.gov/docs/water_pdf/swdm2015chptr05.pdf	A stormwater wetland design adapted for the treatment of runoff from small drainage areas that has little or no baseflow available to maintain water elevations and relies on ground water to maintain a permanent pool
Stormwater Retrofits	Pocket Wetland	NYS Stormwater Management Design Manual	Water Quality Volume (WQv) Treated	https://www.dec.ny.gov/docs/water_pdf/swdm2015chptr05.pdf	A shallow wetland design adapted for the treatment of runoff from small drainage areas that has variable water levels and relies on groundwater for its permanent pool
Stormwater Retrofits	Pond/Wetland System	NYS Stormwater Management Design Manual	Water Quality Volume (WQv) Treated	https://www.dec.ny.gov/docs/water_pdf/swdm2015chptr05.pdf	A wetland system that provides a portion of the water quality volume in the permanent pool of a wet pond that precedes the marsh for a specified minimum detention time
Stormwater Retrofits	Shallow Wetland	NYS Stormwater Management Design Manual	Water Quality Volume (WQv) Treated	https://www.dec.ny.gov/docs/water_pdf/swdm2015chptr05.pdf	A wetland that provides water quality treatment entirely in a wet shallow marsh
Stormwater Retrofits	Stormwater Ponds	NYS Stormwater Management Design Manual	Water Quality Volume (WQv) Treated	https://www.dec.ny.gov/docs/water_pdf/swdm2015chptr05.pdf	Practices that have either a permanent pool of water or a combination of permanent pool and extended detention capable of treating the water quality volume

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Stormwater Retrofits	Surface Sand Filter	NYS Stormwater Management Design Manual	Water Quality Volume (WQv) Treated	https://www.dec.ny.gov/docs/water_pdf/swdm2015chptr05.pdf	A filtering practice that treats stormwater by settling out larger particles in a sediment chamber, and then filtering stormwater through a sand matrix
Stormwater Retrofits	Underground infiltration systems	NYS Stormwater Management Design Manual	Water Quality Volume (WQv) Treated	https://www.dec.ny.gov/docs/water_pdf/swdm2015chptr05.pdf	systems designed to capture, temporarily store, and infiltrate the water quality volume over several days
Stormwater Retrofits	Underground Sand Filter	NYS Stormwater Management Design Manual	Water Quality Volume (WQv) Treated	https://www.dec.ny.gov/docs/water_pdf/swdm2015chptr05.pdf	A filtering practice that treats stormwater as it flows through underground settling and filtering chambers.
Stormwater Retrofits	Vegetated Swale	NYS Stormwater Management Design Manual	Water Quality Volume (WQv) Treated	https://www.dec.ny.gov/docs/water_pdf/swdm2015chptr05.pdf	A vegetated swale is a maintained, turf-lined swale designed to convey stormwater at a low velocity, promoting natural treatment and infiltration.
Stormwater Retrofits	Wet Extended Detention Pond	NYS Stormwater Management Design Manual	Water Quality Volume (WQv) Treated	https://www.dec.ny.gov/docs/water_pdf/swdm2015chptr05.pdf	Pond that treats a portion of the water quality volume by detaining storm flows above a permanent pool for a specified minimum detention time
Stormwater Retrofits	Wet Pond	NYS Stormwater Management Design Manual	Water Quality Volume (WQv) Treated	https://www.dec.ny.gov/docs/water_pdf/swdm2015chptr05.pdf	Pond that provides storage for the entire water quality volume in the permanent pool
Stormwater Retrofits	Wet Swale	NYS Stormwater Management Design Manual	Water Quality Volume (WQv) Treated	https://www.dec.ny.gov/docs/water_pdf/swdm2015chptr05.pdf	An open drainage channel or depression designed to retain water or intercept groundwater for water quality treatment
Stormwater Retrofits	Wet Vaults	NYS Stormwater Management Design Manual	Water Quality Volume (WQv) Treated	https://www.dec.ny.gov/docs/water_pdf/swdm2015chptr05.pdf	underground structure that has a permanent pool of water which dissipates energy and improves the settling of sediment and other pollutants
Streambank/ Shoreline Restoration and Riparian Buffers	Geotextiles/ Vegetated Geogrids (Erosion Control Matting)	Hydrologic and Habitat Modification Management Practices Catalogue, Shoreline Stabilization Techniques	Acre	https://www.dec.ny.gov/docs/water_pdf/hhmbmp.pdf	Synthetic and natural materials usually in the shape of nets, mats or blankets used to assist the establishment of vegetation or placement of riprap.

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Streambank/ Shoreline Restoration and Riparian Buffers	Riparian Buffer	Hydrologic and Habitat Modification Management Practices Catalogue	Acre	https://www.dec.ny.gov/docs/water_pdf/hhmbmp.pdf	A corridor of trees, shrubs, and grasses of varying width located adjacent to and up gradient from waterbodies for the purpose of intercepting and filtering stormwater runoff, subsurface flow and groundwater flow from upland sources.
Streambank/ Shoreline Restoration and Riparian Buffers	Stream Grade Stabilization Structures	Hydrologic and Habitat Modification Management Practices Catalogue	Feet	https://www.dec.ny.gov/docs/water_pdf/hhmbmp.pdf	Selective use of instream flow control structures (such as check dams, current deflectors, habitat-improving dams, cribs) to control scouring and sedimentation in the stream channel.
Streambank/ Shoreline Restoration and Riparian Buffers	Structural Slope Protection (Rip-Rap)	Hydrologic and Habitat Modification Management Practices Catalogue	Acre	https://www.dec.ny.gov/docs/water_pdf/hhmbmp.pdf	The stabilization of steep or erosive slopes with rip-rap, retaining walls or other non-vegetative materials either on the streambank or upslope of the stream channel.
Streambank/ Shoreline Restoration and Riparian Buffers	Vegetated Cribbing (Live Cribbing)	Shoreline Stabilization Techniques	Acre	https://www.dec.ny.gov/permits/50534.html	Interlocking palnts of wood act as a live retaining wall with vegetation planted between the planks. This technique works best in areas with low wave action.
Streambank/ Shoreline Stabilization and Riparian Buffers	Live Staking or Root Wads	Hydrologic and Habitat Modification Management Practices Catalogue, Shoreline Stabilization Techniques	Acre	https://www.dec.ny.gov/docs/water_pdf/hhmbmp.pdf	The use of live dormant stem cuttings or tree root wads in combination with geotextiles or structural devices for erosion control along streambanks.
Vac-trucks in MS4 areas	Catch Basin Cleaning	Roadway and Right-of-Way Maintenance	Number of catch basins cleaned	https://www.dec.ny.gov/docs/water_pdf/roadwayrowbmp.pdf	The use of specialized equipment to manually or mechanically remove debris and sediment from catch basins in order to maintain their sediment trapping ability.