Lake Wise Info Sheet

Shoreland Best Management Practices for Lake-friendly Living.

Benefits

- Water Quality
- Prevents Erosion
- Slow, Spread, Sink Stormwater
- Wildlife Habitat
- Visual Appeal
- Small spaces
- Low Cost
- Low Maintenance
- Protection & Resiliency

VT DEC recommended restoration practices

Related Info Sheets:

Bioengineering

Lakeshore Buffers

Planning Pathways

BEACHES & RECREATION AREAS

Share the shore

Description.

In Vermont, natural lakeshores are wetlands, forests, and/or bedrock. Few lakes have naturally occurring sandy shores. Shoreland best management practices can help to maintain artificial beaches and recreational areas while also protecting water quality and wildlife habitat so we can 'share the shore'. Stabilized and naturally vegetated areas, such as upland meadows or lakeshore buffers, filter upland runoff and delineate beaches, pathways, and lake access points, preventing sand and other pollutants from washing into the lake.

VT Lake Wise Program

Beach stabilization at Salem Town Beach in Derby with native plantings, infiltration steps, a split rail fence, and biodegradable erosion control materials to prevent erosion and delineate access while protecting a vegetated lakeshore buffer and wildlife.

Applicability.

Lakeshore beaches, recreational lawn areas, and other lake access areas that people enjoy year-round can be enhanced for ecological benefits and visual appeal with stabilized lakeshores and upland areas, native plantings and restoration areas, and intentionally designed sandy beach and access areas that minimize compaction and erosion of shorelands, soak up stormwater runoff, and provide wildlife habitat for terrestrial and aquatic species.

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WATERSHED MANAGEMENT DIVISION

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BEACHES & RECREATION AREAS

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BEFORE. Lake Reponda beach in Wilmington was undefined and eroding from upland stormwater runoff.

INSTALLATION. Stabilized with fiber coir rolls, erosion control blankets, native plantings, and stone step access.

1 YEAR LATER. Split-rail fence to delineate and protect.

3 YEARS LATER. Native plants flourish and no erosion!

VTLake Wise Program

Common Problems.

- Artificial sand beaches frequently erode into the lake, causing sedimentation and degradation of aquatic habitat, water quality, and lake health. Note that they are no longer permitted under the **Vermont Shoreland Protection Act**.
- Upland stormwater runoff from roads, parking lots, roofs, and lawns erode sand and sediments into the lake.

Lake-friendly Solutions.

- Define and limit sandy areas with stone, terracing, erosion control materials, fencing, and plantings.
- Stabilize and delineate beach areas with borders of native plantings to intercept and soak up upland water runoff to prevent erosion of beaches.
- Minimize and define access areas with **infiltration steps,** stone steps, boulders, and/or fencing.

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BEACHES & RECREATION AREAS

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Failing retaining wall at Brighton State Park, Island Pond. INSTALLATION. Erosion control with fiber coir rolls.

AFTER. Stabilized beach border with native plantings.

ADA compliant permeable geogrid and peastone pathway.

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Common Problems.

- Failing retaining walls from high energy wave action, ice push, and sink holes and heaving from upland stormwater runoff.
- Compaction of lake access areas from high foot traffic that tramples native vegetation and causes stormwater runoff and erosion of shoreland soils.
- Bank erosion, undercutting, and sloughing from cleared vegetated and lawns, undefined pathways, wave action, ice push, and stormwater runoff.

Lake-friendly Solutions.

- Replace retaining walls with more cost-effective and sustainable **bioengineering practices**, such as a slope regrade, fiber coir rolls, erosion control blankets, stone toe, and native plantings.
- Minimize and define **pathways** with peastone, mulch, **permeable pavers**, fencing, **infiltration steps**, stone steps, or mown paths.
- Reduce lawn areas and replace with delineated and stabilized **native restoration plantings**.

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BEACHES & RECREATION AREAS

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An upland meadow and rain garden slow down and soak up stormwater at steeply sloped Prouty Beach in Newport.

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A vegetated swale at Lake Shirley, MA and open-top culverts at Lake Eden F&W Access intercept road runoff.

Common Problems.

- Upland stormwater runoff from roads, parking lots, pathways, and roofs wash into the lake, eroding soils, beaches, and depositing sediments and other pollutants (fertilizers, pesticides, dog poop, oil from cars, excess nutrients, chemicals) into the lake.
- Large lawns do not soak up as much water as natural vegetation, especially on steep slopes, they require a lot of energy, and they displace wildlife habitat.

Lake-friendly Solutions.

- Capture upland stormwater runoff and soak it into the ground to protect lake health with **vegetated swales, rain gardens, infiltration trenches, filter strips of meadow plantings, filter berms, water bars,** and other stormwater treatment practices.
- Reduce lawn areas and replace with **meadows, 'no-mow' areas** (natural succession of native plants), or **native plantings**. Be sure to monitor for and remove any **invasive species**.

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