

Lake Wise Info Sheet



Shoreland Best Management Practices for Lake-friendly Living.

Benefits

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

VT DEC suggested BMPs for shorelands

Related Info Sheets:

Conserve & Protect Lakeshores
Lakeshore Buffers
Bioengineering

LOW IMPACT LAKESHORE DEVELOPMENT

Minimize disturbance & protect ecosystems



Description.

Low impact development (LID), also called green infrastructure (GI), refers to the practices and systems that protect ecological function of a landscape by minimizing disturbance and mimicking natural processes of water absorption and filtration to treat all stormwater runoff and protect water quality.

Applicability.

LID design principles and practices can be applied to planning, design, construction, and maintenance of a development or redevelopment project to minimize impervious surfaces and protect or restore native vegetative cover, healthy soils, and natural topography. These practices capture water runoff as close to the source as possible and support the natural (pre-development) movement of water within an ecosystem and watershed. LID can also be applied to a whole community in the form of ordinances or bylaws, such as a riparian buffer bylaw. Applied on a broad scale, these practices can maintain or restore a watershed's hydrologic and ecological functions.



Share the shore and preserve ecological integrity for the benefit of all - including you!

LID practices for lakeshore protection.

- Protect wildlife habitat, wetlands, biodiversity hotspots, and other sensitive natural areas
- Protect natural hydrology and connectivity
- Protect or restore lakeshore and stream buffers
- Minimize clearing of native vegetation and grading of natural topography
- Minimize soil compaction and disturbance
- Cluster development/conservation development
- Reduce impervious surfaces
- Capture and reuse or infiltrate water
- Preserve natural areas, minimize lawns
- Use curvilinear designs for roads and paths to promote sheet flow of water runoff
- Prioritize vegetated 'soft-scaping' over hardscaped retaining walls, drains, and pipes

VERMONT

DEPARTMENT OF ENVIRONMENTAL CONSERVATION
WATERSHED MANAGEMENT DIVISION



Graphics by Greenleaf Design, LLC



Identify and protect important features.

Evaluating the impact of existing or future development starts with identifying an area's natural systems and important features. Natural hydrology may include wetlands, shorelands, perennial and intermittent streams, vernal pools, and other water flow paths. Protect these waterways by preserving, enhancing, or restoring naturally vegetated buffers and by minimizing disturbance from humans or invasive species.

Identify and protect other valuable ecological features such as **natural plant communities**, **keystone species**, biodiversity hotspots, and wildlife habitat (e.g., loon nesting areas, shallow fish spawning waters, turtle nesting).

Maintain a functional landscape.

Prioritizing the protection of natural conditions (native vegetation, soil, topography) protects the natural processes of water detention, evapotranspiration, infiltration, and filtration that recharges groundwater, maintains stream baseflows, supports healthy ecosystems, and provides clean water. These are vital processes for a functional and resilient landscape that will support ourselves and generations to come.

Share the shore.

Low impact development can provide housing, preserve open spaces and working lands, and also protect natural hydrology and other vital ecological functions, such as forest connectivity. Minimizing disturbance (e.g., creation of lawns) and restoring natural areas can also enhance land value, aesthetics, desirability of a neighborhood, climate resiliency, connection to nature, well being, and quality of life for its inhabitants.

Clustering development and minimizing impervious surface cover with shared driveways and other methods can reduce construction and maintenance costs, reduce energy use, and increase accessibility. Managing all stormwater from a developed area captures and infiltrates all runoff as close to the source as possible. Minimizing site disturbance by fencing off and protecting native vegetation and natural topography helps to maintain the ecological function of an area to provide clean water, healthy soils, and wildlife habitat. See the **Vermont Stormwater Management Manual Rule & Design Guidance (2017)** for more info.

Changing Conventional Development & Municipal Policy.

Conventional development frequently causes extensive disturbance by clearing vegetation, compacting soils, and grading natural topography, which displaces habitat with lawns, degrades soil health, and causes significant impact to downstream waterways. This can be avoided by adopting municipal policy that protects natural resources and manages stormwater runoff during development and re-development projects.

See **Vermont League of Cities & Towns Guidance on Municipal Policy**.



VT Lake Wise Program

