Innovative Land Use Planning Techniques: A Handbook for Sustainable Development

Steep Slopes & Ridgeline Protection Model Ordinance

Erica Anderson, Senior Planner
Lakes Region Planning Commission
(603) 279-8171
eanderson@lakesrpc.org
Innovative Land Use Techniques: A Handbook for Sustainable Development

- Concept – Provide guidance and models for RSA 674:21
- Handbook & Reference Tool
- Collaborative Effort
The Genesis of the Models

The New Hampshire Regional Environmental Planning Program (REPP) is addressing the need for guidance and technical assistance on Innovative Land Use Controls authorized by RSA 674:21.

Partners include the:
- Department of Environmental Services
- Office of Energy & Planning
- Regional Planning Commissions
- Expert Working Group

http://www.des.nh.gov/REPP/
ILU Guide Contents

23 Topics

Each Chapter Includes:

I. Background and Purpose
II. Appropriate Circumstances and Context for Use
III. Legal Basis and Considerations
IV. Examples
V. Model Ordinance
Multi-Density Zoning Techniques

- Transfer of Development Rights
- Lot Size Averaging
- Feature-Based Density
- Conservation Subdivision
- Village Plan Alternative
- Infill and Village-Style Development
- Agriculture Incentive Zoning
- Urban Growth Boundary
- Inclusionary Zoning
Environmental Characteristic Zoning

- Stormwater Management
- Steep Slope and Ridgeline Protection
- Wildlife Habitat Management
- Water Resources Protection:
  - Wetlands
  - Drinking Water
  - Shoreland and Riparian Areas
  - Flood Hazard Area Zoning
  - Erosion and Sediment Control
Site Design Techniques

- Transit-Oriented Development
- Pedestrian Oriented Development
- Access Management
- Dark Skies Lighting
- Energy-Efficient Development
- Landscaping Regulations
State Interest

- DES, OEP, and the State RPCs have committed to work with towns to implement the model ordinances and adapt them to suit each town.

- The process is collaborative and each model can be adapted to represent the town’s objectives.
Steep Slopes Ordinance

Lakes Region

19% ≥ 15-25% slope
12% > 25% slope
Legal Basis in NH

- Regulating development on steep slopes is authorized under:
  - RSA 674:16, the Zoning Grant of Power
  - RSA 674:21, Innovative Land Use Controls
  - 674:21, I (j), Environmental Characteristics Zoning
Reasons to protect Steep Slopes & Ridgelines

- Health and Safety
- Infrastructure
- Aesthetics
- Water Quality
Steep Slopes Model

Based on 3 Principles:

- Slope/Density Provisions
- Soil Overlays
- The Guiding Principles Approach
Why These Principles?

They reduce the negative impacts of hillside development.

- Danger to public safety
- Expensive infrastructure
- Excessive cuts and fills
- Unattractive slope scars
- Erosion and drainage problems
- Inaccessible to Emergency Response
Framework for regulating Steep Slopes and Ridgelines

Ohlshansky Principles

1. Topography
2. Slope Stability
3. Drainage & Erosion
4. Infrastructure
5. Access
6. Aesthetics
7. Natural Qualities
8. Fire Hazard
9. Recreational Values
10. Open Space
1. Topography

Steep Slope defined as a grade $\geq 15\%$
2. Slope Stability

- Effect of grading
- Potential for erosion/landslides
3. Drainage & Erosion

- Flood-prone areas
- Downstream structures
- Drainage patterns
- Soil types
4. Infrastructure

- Expensive to extend
- Septic systems difficult to construct and maintain on steep slopes
- State law - no septic system on a slope ≥ 33%
5. Access

NH Department of Transportation recommends:

- commercial driveways ≤ 8% grade
- residential driveways ≤ 15% grade

§236:13 - “Establish grades that adequately protect and promote highway drainage and permit a safe and controlled approach to the highway in all seasons of the year.”

Long steep roads with switchbacks =

- erosion and runoff
- higher potential for accidents
- Difficult or No access for emergency vehicles
6. Aesthetics

Communities should document the rationale for protecting aesthetics:

- Symbolic peaks or hillsides
- Community values
- Map & photograph significant sites
- Blend development into landscape
- Minimize contrasts in gateway areas
7. Natural Qualities

- Map habitats
- Rare and endangered plant and animal species
- Migration of wildlife species due to development
8. Fire Hazard

- Frequency & causes
- Safety methods
- Response times
- Access requirements
9. Recreational Values

- Regional needs
- Trails and views
- Access points
10. Open Space

- Integrate into steep slope regulations - % of area reserved for open space

- Mechanisms:
  - greenways
  - wildlife habitat preservation areas
  - conservation areas
Ridgeline Development
How to Proceed with Ordinance Development

- Form a committee
- Decide the terms best suited to your community
- Planning Board approval
- Public Hearing
- Present at Town Meeting
Key Element

You need:

A Solid Justification for the Ordinance

Steep Slopes = Based on science and data

Ridgeline Protection/Viewshed = Based on framework developed by the community
Steep Slopes Ordinances

Lakes Region:
- Sandwich
- Hebron
- Gilford
- Sanbornton
- Holderness

Other Regions:
- Lyme
- New Durham
Slopes ≥ 15%: 11,468 acres

Slopes ≥ 25%: 6,942 acres
Case Study: Town of Holderness

- Planning Board formed a Committee
- Drafted ordinance
- Planning Board approval
- 2 public hearings held
- 2008 Town Warrant
- Results... ADOPTED!

http://www.holderness-nh.gov
Steep Slopes Development Process & Design Requirements

Tool for Planning Boards and Applicants

Lot within Steep Slopes Overlay

YES

Confirm Slope of Site Disturbance Area

Slope ≥ 25%

YES

No Structure Allowed

Slope ≥ 15%

NO

No Step Slope Requirement

NO

Slope ≥ 15%

NO

No Structure Allowed

YES

Usable Area ≥ Requirements in Zoning or Soil Classification

YES

No Structure Allowed

NO

Sediment & Erosion Construction Plan
- During Construction
- Post Construction

Lot Coverage
- RR < 15% Usable Area*
- CR < 35% Usable Area
- CD < 50% Usable Area

*Usable Area = Total area excluding wetlands & slopes ≥ 25%
Questions?