



Islands Trust

TOOL 4 – Land Information Screening Tool

Introduction

The Land Information Screening Tool (LIST) is a mapping tool that integrates a range of existing data layers to support land use planning for housing. As a spatial decision support framework it integrates multiple geospatial layers, each representing an environmental, social, or infrastructural factor that contributes to overall land suitability.

The tool builds on Islands Trust's history of technical initiatives such as Sensitive Ecosystem Mapping, Steep Slope Hazard Mapping, the Freshwater Sustainability Strategy, Freshwater Atlas, Groundwater Recharge Mapping, and Watershed Resiliency Mapping. These earlier projects established a foundation of datasets, technical standards, and modelling processes. The LIST takes the next step by providing a composite lens through which relative land suitability can be consistently assessed across islands.

Data Layers

The 'Type I' mapping layers are the data layers that contribute to the presentation map. These are island-wide raster layers that directly contribute to the LIST layer. These layers must be spatially continuous and support spatial overlay analysis in ArcGIS Pro's Suitability Modeller. The Type 1 data layers in the current version are:

1. Freshwater Sustainability – Groundwater recharge, aquifer vulnerability, saltwater intrusion and watershed resiliency mapping layers incorporates these hydrological conditions directly into suitability calculations.
2. Ecosystem Protection – Sensitive ecosystems, at-risk ecological communities, and structural forest stages are included as mapping layers to incorporate biodiversity.
3. Hazard Avoidance – Landforms with steep slopes are included to identify unsafe or unsustainable development.
4. Community Integrity – A road adjacency layer is included to incorporated connected communities, avoiding sprawl while supporting sustainable density.

Type II Layers are vector layers that identify discrete features or non-suitable areas. These layers may be used to define land that is 'Not Applicable' to this analysis, e.g. Parks and Protected Areas, or conversely areas of environmental interest or concerns such as shoreline types. These layers can be readily modified to incorporate external mapping that does not meet the Type I raster standards, or are not regional datasets, e.g. local conservancy mapping products.

Type III layers are raster layers that are not part of the modeller, provide important data, but which are confidential, e.g. Archaeological or other Indigenous information. By enabling contributions from stewardship groups and First Nations, the LIST recognizes that community-based data can identify cultural sites, habitat corridors, and other values that may not appear in regional datasets.



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The LIST is more than a technical model — it is a planning framework grounded in sustainability. It provides both high-level, island-wide indicators (Type I data) and fine-grained, site-specific considerations (Type II data), ensuring that land use decisions are both evidence-based and context-aware.

The Model displays the integrated Type I data layers into a single suitability layer, with land classified along a spectrum of less suitable to more suitable.

Weighting: Weighting means giving priority to different criteria or factors that play a role in overall suitability. Each criterion or layer may have a different impact on the final decision. Weighting helps rank these criteria based on their importance in decision-making. The total percentage is capped at 100 with the various Type I layers weighted equally. This weighting can be adjusted by planners, local trust committees, or others.

Original Classification: is the original classification that came with the layer, these are not adjustable.