

Tahoe Regional Planning Agency

... leading the cooperative effort to preserve, restore
and enhance the unique natural and human
environment of the Lake Tahoe Region.

A Property Owner's Guide to **LAND CAPABILITY** *and* **LAND COVERAGE**

What is Land Capability?

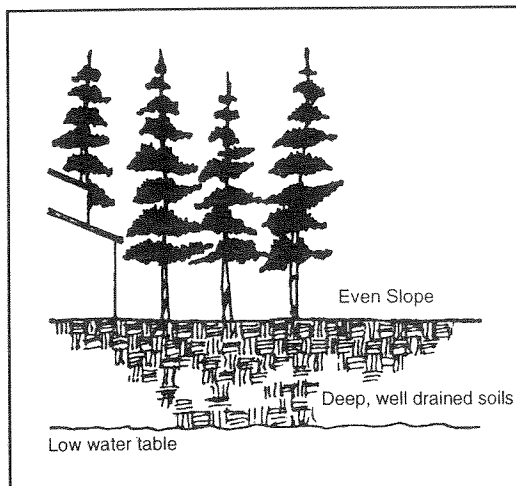
Land capability is defined as "the level of use an area can tolerate without sustaining permanent (environmental) damage through erosion and other causes."¹

In other words, construction of a 2500 square foot home with a garage and RV pad can impact one parcel differently than another, depending on the parcel's soil type and slope. The parcel that would suffer more environmental damage if it were developed would be more environmentally

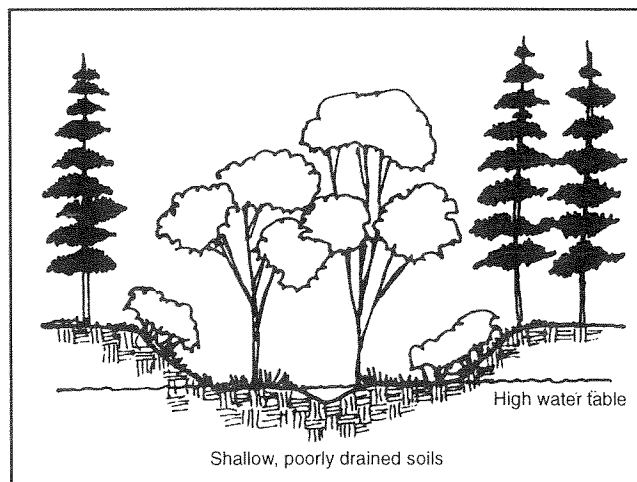
sensitive and would have a lower land capability. Fortunately, potential hazards related to land use can be evaluated in advance. That is what TRPA's land capability evaluation systems are designed to do.

Permanent land disturbance is most commonly measured in terms of land coverage, or impervious surface, and includes any man-made structure, improvement, or coverage that prevents normal precipitation from directly reaching the surface of the land underlying the coverage.

1 — *Land Capability Classification of the Lake Tahoe Basin, California-Nevada*; Robert G. Bailey, 1974.



Higher Capability



Lower Capability

How is Land Coverage Regulated?

Control of land coverage alone does not solve all environmental problems caused by land development. It is "deemed, however, to be the most critical element in the land disturbance that has created the basic environmental problems facing the Lake Tahoe Basin."¹

The amount of land coverage allowed on a parcel is determined by the parcel's land capability. A parcel with higher capability is less sensitive to disturbance and has a greater amount of allowable coverage. The base allowable coverage for a single-family home parcel ranges from 1% to 30% of the parcel size or project area. However, allowable coverage cannot be developed on the most sensitive

parcels. Coverage is a valuable transferable development right and can be transferred from the most sensitive parcels to parcels with high capability (see "Coverage Transfers" section).

Many parcels have areas of high capability and areas of low capability. Allowable coverage associated with low capability areas can be counted toward the total allowable coverage on the parcel. Generally, however, all the coverage must be located on the higher capability areas of the parcel.

For more information on the potential coverage on residential parcels, call your local building department or the TRPA project review staff at (775) 588-4547.

The Bailey Land Capability System

The Bailey Land Capability System was developed in 1970 by a multi-agency, interdisciplinary team of natural resource experts led by Robert G. Bailey, a hydrologist with the U.S. Forest Service, in cooperation with TRPA.

The Bailey System is used to determine land capability on residential parcels developed before 1989 and on non-residential parcels.

The Bailey Land Capability System uses seven land capability districts:

Capability Class	Allowable Coverage
6, 7	30%
5	25%
4	20%
3	5%
2	1%
1a, 1b, 1c	1%

Lands located in high hazard geomorphic areas, such as canyons and floodplains, are classified land capability district 1.

How to Determine Your Bailey Score

Property owners who want to add to or modify a home built before 1989 must determine their land capability to find out how much more, if any, land coverage is allowed on their property.

For example, if Mr. Smith owns a 20-year old home, and wants to build a garage, he must first determine his land capability and allowable coverage.

Mr. Smith should contact TRPA to submit a request for land capability verification. TRPA staff will then visit Mr. Smith's property to measure the slopes on the property and verify whether the mapped soil area is accurate as depicted in the Bailey Report. If necessary, TRPA staff will recommend closer site inspection and soil analysis through a Land Capability Challenge application. This procedure will determine if the capability of the parcel is something other than what was mapped. TRPA will then notify Mr. Smith of his verified capability and corresponding allowable coverage.

Owners of older homes may find their parcels exceed the maximum coverage allowed under today's rules. Coverage created under local permit before the TRPA standards were adopted is legal coverage, even though it may exceed the amount of coverage that may be allowed today. Owners of those parcels are not allowed any additional coverage, but they may, in many cases, move the coverage from one place to another on the parcel.

The Individual Parcel Evaluation System

The Individual Parcel Evaluation System (IPES) was adopted in 1987 as a more parcel-sensitive method to determine development eligibility and allowable coverage for residential parcels. IPES is applied only on vacant residential parcels.

In 1987 and 1988, vacant residential parcels in the Lake Tahoe Basin were evaluated for eight elements:

- Relative erosion hazard
- Runoff potential
- Access
- Stream environment zones
- Condition of local watershed
- Ability to revegetate
- Need for capital improvements in vicinity of parcel
- Distance from Lake Tahoe

Each parcel was given an IPES score ranging from 0 to 1000. Parcels with an IPES score of 726 (the IPES "line") or higher were deemed to be equivalent to Bailey land capabilities 4-7 and are eligible for development of new single family homes. When certain progress is made toward protecting environmental quality, TRPA lowers the IPES line, thus increasing the number of parcels that are eligible for development. The IPES line has been lowered in Douglas County and in Washoe County. For more information on movement of

the IPES line, contact the TRPA Land Capability Office at (775) 588-4547 ext. 212.

Coverage on IPES Parcels

Base allowable coverage on IPES parcels is determined by two of the eight elements: the relative erosion hazard and the runoff potential.

Because only two of the eight elements determine coverage, two parcels may have identical IPES scores, but different percentages of allowable coverage. Base allowable coverage is generally applicable to the entire parcel of one-third acre or less or to a one-third acre (14,520 square foot) building site designated by the IPES evaluation teams. The building site coverage can be applied to a larger area if TRPA staff determines the land contiguous to the building site exhibits the same characteristics. Allowable coverage on parcels smaller than one-third acre can be determined by multiplying the percentage figure by the area of the parcel outside any designated stream environment zone.

To determine allowable coverage in TRPA-approved subdivisions, planned unit developments or on parcels 5 acres or larger, contact the TRPA Land Capability Office at (775) 588-4547 ext. 212.

Coverage Transfers

Owners of smaller residential parcels may find their base allowable coverage isn't enough to build a reasonably-sized home, or to add a small garage. The land coverage transfer program was designed to address these and other unique situations.

Within the maximum coverage limits outlined in the Regional Plan, owners of those parcels may acquire coverage from another parcel in the vicinity, retire the coverage on that parcel, and transfer it to their parcel.

Different project uses (residential, commercial, public service) have differing limits on the amount and type of coverage that may be transferred.

Conditions of Coverage Transfers

Coverage can be transferred from a parcel (the sending parcel) to another (the receiving parcel) that is less sensitive to disturbance. In other words, the receiving parcel must have a land capability or IPES

score equal to or greater than the sending parcel. Remembering that land coverage is the most critical element in land disturbance, TRPA's goal is to direct coverage away from areas of lower capability to areas less sensitive to disturbance.

The sending and receiving parcels in a coverage transfer must be in the same hydrologically-related area, of which there are nine in the Tahoe Region. Once the transfer is complete, the sending parcel is deed restricted to retire the use of the transferred amount on that parcel.

TRPA must approve all coverage transfers. The California Tahoe Conservancy is currently the only TRPA-designated land coverage bank in the Region. All other transfers are brokered on the private market. In Nevada, a land coverage bank is under consideration. For more information, contact the TRPA Land Capability Office at (775) 588-4547 ext. 212.