

# Natural Resources and Environmental Issues

---

Volume 14 *Bear Lake Basin*

Article 9

---

2007

## Soils of Bear Lake, Utah

Patsy Palacios

*SJ & Jessie E Quinney Natural Resources Research Library, Utah State University, Logan*

Chris Luecke

*Watershed Sciences, Utah State University, Logan*

Justin Robinson

*Watershed Sciences, Utah State University, Logan*

Follow this and additional works at: <https://digitalcommons.usu.edu/nrei>

---

### Recommended Citation

Palacios, Patsy; Luecke, Chris; and Robinson, Justin (2007) "Soils of Bear Lake, Utah," *Natural Resources and Environmental Issues*: Vol. 14 , Article 9.

Available at: <https://digitalcommons.usu.edu/nrei/vol14/iss1/9>

This Article is brought to you for free and open access by the Journals at DigitalCommons@USU. It has been accepted for inclusion in Natural Resources and Environmental Issues by an authorized administrator of DigitalCommons@USU. For more information, please contact [digitalcommons@usu.edu](mailto:digitalcommons@usu.edu).



## SOILS OF BEAR LAKE

The most common soil at 40,350 acres in Rich County is the Pancheri cool silt loam. This is followed by the Solak gravelly loam at 32,150 acres, the Duckree loams at 29,460 acres, and the Kearn loam at 28,100 acres (Soil Conservation Service, 1982). Generally speaking, the soils immediately surrounding Bear Lake are strongly alkaline, gravelly to cobbly sandy loams, rapid to moderately rapid permeability, with low to extremely low sediment loads.

The soils in Rich County are used mainly for agriculture. About 11,600 acres are used as non-irrigated cropland, 48,400 acres as irrigated cropland, hay land, and pasture land, and 594,720 as rangeland and forest land. Native and improved grasses grow well in the valleys and surrounding foothills and mountains providing feed for cattle and sheep, the most important segment of the economy of the county.

Soils of the Bear Lake Basin itself can be divided roughly into seven categories based on location, depth, and size of particles (BLRC, 1979). The first general category is the deep soils of the upland flats west of Bear Lake. These soils are well drained and the textures range from silt loam to clay loam. These soils are used for non-irrigated cropland, range and wildlife habitat.

On the steep slopes east and south of the lake, the second category has soils that are gravelly, cobbly and shallow. These soils have a high content of rock fragments throughout and are best used for wildlife habitat.

The third category, mostly covered by development along the shores and beaches, is dominantly sandy loam with varying amounts of gravel. These semi-desert area soils are well-drained alluvial deposits. The water table in this area is at or near the surface for significant periods of the year.

The wet meadows near Laketown, Sweetwater, and Round Valley areas make up the fourth category. These soils are poorly drained silty clay loams with gentle sloping surfaces. These soils are used for pasture and meadow hay cultivation.



#### **Bear Lake From Overlook Pass**

*Photo from: <http://climchange.cr.usgs.gov/info/lacs/background.htm>*

The deep, well-drained, silty clay soils of the top slopes comprise the fifth group. This area is around the edges of the valley west of the lake. These soils are mostly used for irrigated cropland.

The sixth category is the soils of the foothills south of Bear Lake. These soils are well drained clay loam and contain a wide variety of rocks. They support a vegetative cover of sagebrush, grass and other shrubs that are used dominantly for rangeland and wildlife.

The final category is the forested areas of the high mountains. They are characterized by deep well drained gravelly or very cobbly loam textures. These

---

soils receive upwards of 30 inches of precipitation per year, mostly in the form of snow. Range, wildlife and timber are the major uses of these soils.

Part of the north, northwest, and northeast shores of the lake are sandy beaches. The remaining shoreline is rocky. However, this rocky zone is not extensive, extending only 12 feet into the lake. In general, the size of the particles decreases with increasing depth of the water. From the shore to a depth about 25 feet the bottom is sand, except for the rocky areas previously mentioned. This sand is gradually replaced by silt and marl. Below 80 feet the bottom material is a fine gray silt marl (Lamarra, 1979).