



## Soil Resources Inventory

### Background

Soil is defined as the unconsolidated portion of the earth's crust modified through physical, chemical, and biotic processes into a medium capable of supporting plant growth. Soil properties influence the natural and the physical infrastructure of the landscape and ecosystems. The National Park Service (NPS) recognizes that a thorough inventory and evaluation of soil resources within national parks is needed for comprehensive management, interpretation, and understanding of park resources.

Soil surveys conducted throughout lands under NPS stewardship provide an orderly, on-the-ground, scientific inventory of soil resources.

### The Soil Resources Inventory (SRI) includes:

- Maps of the locations and extent of soils
- Data about physical, chemical, and biological properties of those soils
- Information derived from those data about potentialities and problems of use on each kind of soil

The information is in sufficient detail for application by park managers, planners, engineers, and scientists to specific areas of concern. The Inventory & Monitoring (I&M) Program supports soils mapping and inventory based on standard terminology and techniques of the National Cooperative Soil Survey (NCSS). SRI staff assist parks with identifying needs for soil mapping, so that park objectives are met through appropriate data collection and map scale.

### Products

#### Products of the Soil Resources Inventory include:

- Geospatial soils data meeting Soil Survey Geographic (SSURGO) standards
- Soil attributes, properties and interpretations exported from the National Soil Information System (NASIS) in a MS Access format
- Soil survey manuscript in both hardcopy and digital format
- Metadata following the Soil Survey Geographic Data Standard

### Status

Working in partnership with the Natural Resources Conservation Service (NRCS), the SRI has completed mapping in 217 park units. Mapping is in progress in an additional 26 units. The NRCS will continue to support soil mapping until the project is completed. Special strategies are being developed in cooperation with the NRCS and private contractors to utilize advanced soil mapping technologies to handle the large-area mapping for parks in Alaska, Arizona, California, Florida, Montana, New Mexico, Utah, and Washington.



A typical soil profile of Bazal mucky loam from San Juan Island National Historical Park. These are poorly drained soils forming in glacial outwash material over dense glaciomarine deposits and have a seasonal high water table. Numerals on tape are in centimeters. Photo by Pete Biggam.

### More Information

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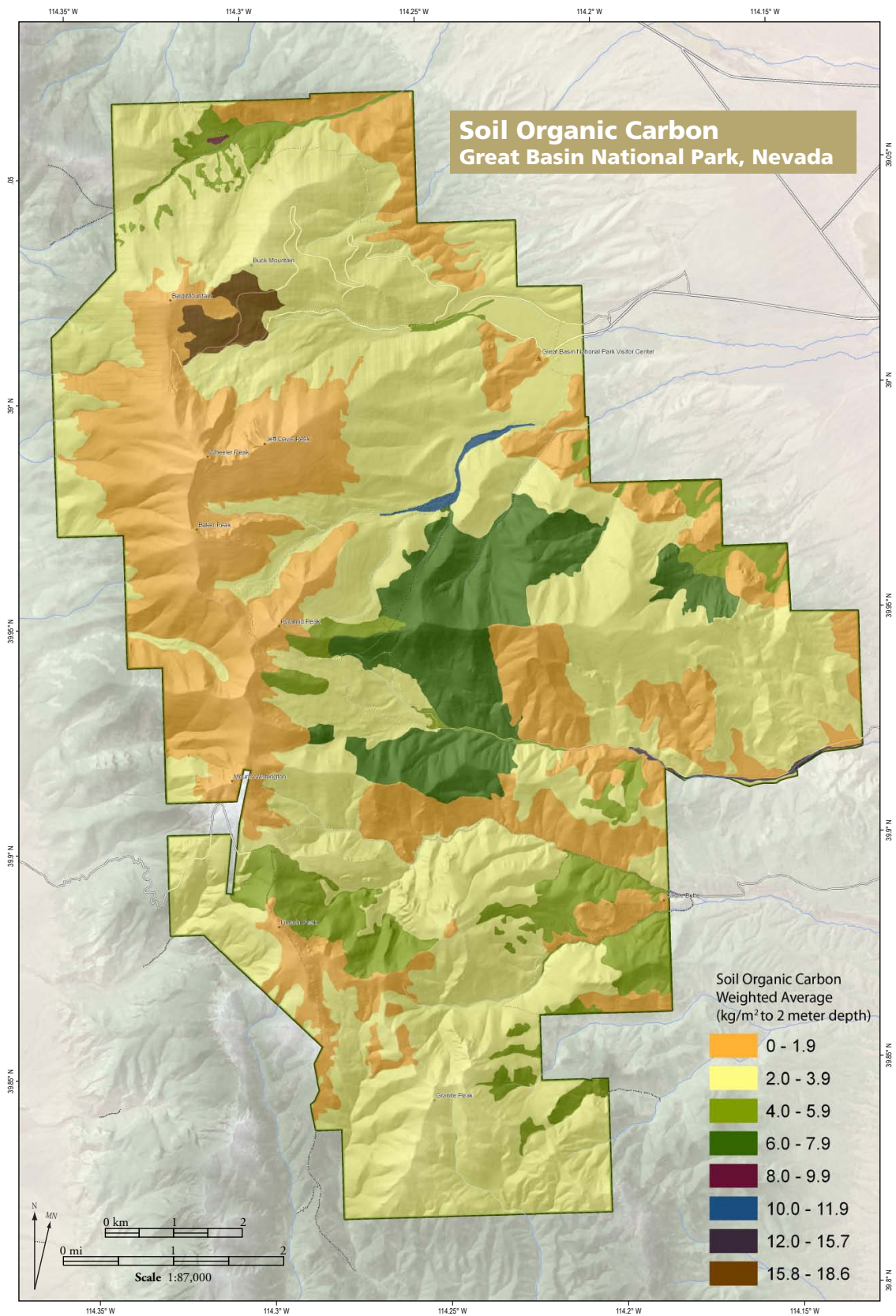
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Soil organic carbon at Great Basin National Park. SRI and NPS staff have recently begun addressing soil organic carbon as a portion of the soil inventory. A variety of issues from habitat management to climate change rely on a keen understanding of organic and inorganic carbon in soil. The map at right represents a November 2009 assessment of soil organic carbon at Great Basin National Park in Nevada.