



South Platte River Basin Data Browser

NOTICE: This site was made by the Center for Applied Spatial Ecology at New Mexico State University, Las Cruces, N.M in conjunction with the U.S. Environmental Protection Agency. It is currently hosted on a server at New Mexico State University and not by the U.S. EPA.

Overview

The South Platte River Basin Data browser was developed by the New Mexico Cooperative Fish and Wildlife Research Unit (New Mexico State University, Las Cruces, NM) in conjunction with EPA Region 8 (Denver, CO) and the EPA Office of Research and Development (Landscape Ecology Branch, Las Vegas, NV).



Recommended Citation

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The common goal among the developers of the South Platte River Basin Data Browser is to improve decision-making relative to environmental management through the development of applied research. The focus of the research has been to design an integrated system of landscape metrics, spatial statistics, and various process models that can operate at multiple scales. The process has operated simultaneously along two lines of direction,

- 1) A basic research component to develop and test landscape indicators and assessment protocols, and
- 2) An implementation component to demonstrate the application of landscape analysis protocols to ecological and hydrological assessments via geographic initiatives.

Acquisition of primary spatial data and database development are initial features of any landscape assessment project. They provide contemporary land cover and the ancillary datasets necessary to establish reference condition and develop alternative future scenarios that serve as input variables for various hydrological, habitat, and economic models. The purpose of this data browser is to provide a long term record keeping (archiving) system with easy public access to an array of spatial data for the entire South Platte River Basin (Colorado, Wyoming, and Nebraska).

The South Platte River Basin originates in Park County, CO, southwest of Denver in the South Park grassland basin by the confluence of South Fork and Middle Fork at an elevation of 2674 m; it encompasses an area of approximately 62,580 km². The South Platte joins the North Platte River in Western Nebraska to form the Platte River at an elevation of 846 m. The South Platte River Basin drains much of the eastern flank of the Rocky Mountains in a populated region known as the Colorado Front Range and Eastern Plains. The river serves as the principal source of municipal and agricultural irrigation water for eastern Colorado.

Data

The most important features developed by the New Mexico Cooperative Fish and Wildlife Research Unit for this database are:

- 1) Digital land cover maps (and all associated metadata files)
- 2) Integrated Climate and Land-Use Scenarios (ICLUS)

Additionally available are hydrology, elevation, terrestrial wildlife habitat models, satellite imagery and political boundary datasets as described in more detail below.

All data provided have been compressed using Winzip 9.0.

Data Description

All GIS Data are in the following projection:

Projected Coordinate System: NAD_1983_Albers
 Projection: Albers
 Linear Unit: Meter
 Raster Pixel Resolution: 30 m*
 Vector Resolution: See metadata files for native resolution

*DRG's and DOQQ's which were kept in their native high resolution format. ICLUS is also offered in its native 100m format.

Categories

Land Cover: There are 3 available land cover datasets: USGS National Gap Land Cover Ecological System Thematic Level 3, USGS National Gap Land Cover Thematic Level 1, and the original USGS National Land Cover Dataset. Level 3 and Level 1 were derived from the [U.S. Geological Survey National GAP Analysis Project](#) land cover map. The National GAP Analysis project used Landsat 7 Enhanced Thematic Mapper in order to create a classified vegetation dataset at the ecological systems level (Level 3). Level 3 for the South Platte Watershed was collapsed into a coarser categorization (Level 1), using the same classification guidelines as the original National Land Cover Dataset. The original USGS [National Land Cover Dataset](#) has also been provided for comparison.

Integrated Climate and Land-Use Scenarios (ICLUS): In 2009, the U.S. EPA released the [Land-Use Scenarios: National-Scale Housing-Density Scenarios Consistent with Climate Change Storylines](#) final report. From this project raster datasets were created to project land use changes over ten year increments to the year 2100 based on the 2000 census data and the four storylines and one base case from the [Intergovernmental Panel on Climate Change \(IPCC\) Special Report on Emissions Scenarios \(SRES\)](#). This creates a total of 55 datasets over the conterminous United States, which we have provided here for the South Platte Watershed in both the native 100 m resolution and a 30 m resolution.

Geology/Elevation: Eight geospatial geology and elevation datasets are available to download, including soils, and seamless Digital Elevation Model data and their derivatives.

Hydrology: We have provided 13 hydrology datasets, derived from the [National Hydrography Dataset Plus](#), as well as from the seamless elevation dataset also provided within this website. In addition, precipitation data for the watershed averaged from 1971-2000 are also available.

Habitat Models: Habitat models are provided from the [Southwest Regional Gap Analysis Project](#) (SWReGAP, 2007). These deductive models were created through known habitat relationships of terrestrial vertebrates throughout the various parts of its life history. They provide a prediction of habitat distribution, and hence, known and probable coverage of a species' geographic range.

Ancillary: Seventy datasets are available, which include 24 DRGs and 32 DOQQs, as well as population, demographic and land ownership datasets.

Disclaimer:

Users are advised that the majority of coverages within the database have been provided by a number of other agencies. Verification of the quality and use of any data supplied via this product are the responsibility of the user.

For a complete list of these datasets and the way in which they were created, please see the [Summary Report](#).