

US Watersheds

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World Watersheds



- The *Watershed* is one of the earliest concepts to evolve from American policies for planning and managing water resources.

- The identity of a *Watershed* is directly related to the management problems of concern, from large scale flooding along major rivers to sediment control in small reservoirs.

Goals of Community Projects and Watersheds

- 1) Provide the most efficient and economical solutions for all wastewater management challenges.
- 2) To employ holistic approaches with a very long-term environmentally responsible vision.
- 3) Provide assistance to local health jurisdictions regarding local watershed issues.
- 4) Create affiliations with local universities to evolve watershed management technology and know-how.

5) Enhancement of property values.

6) To contribute to the growth of community participation in the Water Quality Trading and Nutrient Reduction Credit markets.

7) To ensure that the projects be part of the overall evolving strategies for community watershed best management practices, significantly enhancing short and long-term objectives of local, regional, state and national stakeholders.

Watersheds, Hydrologic Units, Hydrologic Unit Codes, Watershed Approach, and Rapid Watershed Assessments

Watershed: A geographic area of land, water and biota within the confines of a drainage divide. Watershed boundaries define the aerial extent of surface water drainage to a point. Watershed boundaries always follow the highest ridgeline around the stream channels and meet at the bottom or lowest point of the land where water flows out of the watershed. The boundary between watersheds is defined as the topographic dividing line from which water flows in two different directions. However, the scale at which the landscape is examined is relevant for identifying and defining watersheds. A watershed may be small and represent a single tributary within a larger system, or be quite large and cover thousands of miles (i.e. Mississippi River Watershed).

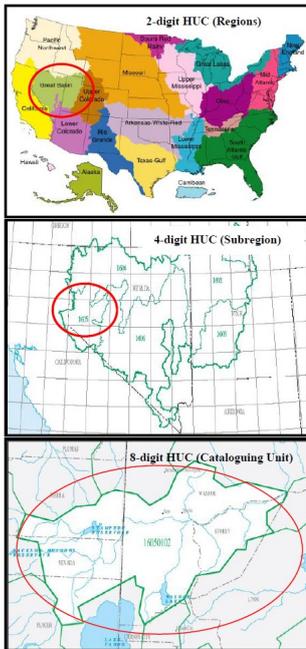
Hydrologic Unit: Watersheds in the United States and the Caribbean were delineated by the U.S. Geological Survey using a national standard hierarchical system based on surface hydrologic features and are classified into four types of hydrologic units: first-field (region), second-field (sub-region), third-field (accounting unit), and fourth-field (cataloguing unit). A fifth-field of classification (watershed) and sixth-field (sub-watershed) are currently under development. The United States and Caribbean are divided into 21 regions, 221 subregions, 378 accounting units, and 2,264 cataloguing units.

A hydrologic unit can accept surface water directly from upstream drainage areas, and indirectly from associated surface areas such as remnant, non-contributing, and diversions to form a

drainage area with single or multiple outlet points. Hydrologic units are only synonymous with classic watersheds when their boundaries include all the source area contributing surface water to a single defined outlet point.

Hydrologic Unit Code: Each hydrologic unit is identified by a unique hydrologic unit code (HUC) consisting of two to twelve digits based on the six levels of classification:

- 2-digit HUC first-level (region)
- 4-digit HUC second-level (subregion)
- 6-digit HUC third-level (accounting unit)
- 8-digit HUC fourth-level (cataloguing unit)
- 10-digit HUC fifth-level (watershed)
- 12-digit HUC sixth-level (subwatershed)



The first four levels (2- to 8-digit HUC) have been completed and certified for the entire United States. NRCS is presently developing a national system that will delineate, number (HUC), and name hydrologic units on the smaller scales (fifth-level and six-level).

Watershed Approach: A framework to guide watershed management that:

1. uses locally-led watershed assessments to determine existing and reference conditions
2. incorporates assessment results into resource management planning

3. fosters collaboration with all landowners in the watershed.

A locally-led, watershed approach will examine the natural resource conditions and needs, set goals, identify programs and other resources to solve those needs, develop proposals and recommendations, implement solutions, and measure their success. The watershed approach is a comprehensive interrelated approach to watershed and natural resources management. It examines and recognizes the needs of all resources—soil, water, air, plants, animals, and people—in relation to local social, cultural, and economic factors. The watershed approach has typically been focused on an 8-digit hydrologic unit basis. However, more large-scale regional efforts (i.e. Chesapeake Bay watershed, Klamath Basin) or smaller-scale efforts are also appropriate.

Rapid Watershed Assessments: The NRCS Rapid Watershed Assessments (RWA) process provides a general picture of resource concerns for a broad area, an estimate of the conservation needs, and an estimate of funding needs as well as potential sources of funding. They are the product of a process that evaluates resource conditions and needs on typically an 8-digit hydrologic unit basis. RWA may also be completed on smaller hydrologic units, where appropriate, depending on local conditions and resource concerns.

In the context of Rapid Watershed Assessments the term “watershed” and “hydrologic unit” area are used synonymously. However, hydrologic units are truly only synonymous with the classic watershed definition when their boundaries include all the source area contributing surface water to a single defined outlet point. For the intended uses of individual RWAs, this distinction is relatively unimportant. However, in terms of water quality monitoring, total maximum daily load analysis, analysis of regional and national water quality patterns, and other research on land/water relationships, it could be significant because the area contributing to the downstream point in many hydrologic units extends far beyond the unit boundaries. When completing a rapid watershed assessment, make note of any contributing areas outside the hydrologic unit area boundary that may impact resource concerns.
