



## Section 11: Glossary of Watershed Terms

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<b>BMP</b>	Best management practices. Tested practices that have been found to be effective and efficient when applied to specific situations.
<b>BOD (biochemical oxygen demand)</b>	Used as an index of the quantity of oxygen-demanding substances (i.e. organic matter subject to decay) in the water. These substances include septic tank effluents, oil and grease, manure, etc.
<b>Biodiversity</b>	Refers to the number of species (plants and animals) that exist within a given ecosystem
<b>Ecosystem</b>	A term referring to all the plants and animals and their interactions with water, land, air, and each other in a given area
<b>Groundwater</b>	Water that sits or runs under ground, usually in aquifers that are tapped through wells for drinking water and irrigation
<b>HUC (Hydrologic Unit Code)</b>	A national coding system developed by the United States Geologic Survey (USGS) and extended by USDA Natural Resource Conservation Service (NRCS) to uniquely identify all watersheds. The code divides the country into regions (major river basins such as the Missouri), subregions and progressively smaller units. Larger numbers indicate smaller watersheds. For instance, the South Skunk River Basin is an 8-digit HUC no. 07080105. The units referred to as “watersheds” for most water protection projects in Iowa are typically 11-digit HUCs (less than 100,000 acres in size or 62.5-390.6 square miles). Sub-watersheds are 14-digit HUCs (15-62.5 square miles).
<b>Invertebrates</b>	An organism without a backbone (e.g. snails, worms, clams, aquatic insects). The number and kinds of invertebrates in a water body are indicators of the degree of pollution present.
<b>NPSP (Non point source pollution)</b>	Water pollution that originates from multiple sources, which alone can be relatively insignificant, but when added together constitute a significant threat to water quality. Multiple sources include runoff from field crops, construction sites, and parking lots as well as spills from livestock production facilities.
<b>PSP (Point source pollution)</b>	Water pollution that originates from one particular source (for example, the drainage pipe from a factory or a community’s sewage treatment facility)
<b>Sediment</b>	Fine particles of soil which are carried into the water when stream banks erode and heavy rains or snowmelts create soil erosion during runoff.

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<b>Sub-watersheds</b>	Watersheds of tributaries that flow into a larger river
<b>Surface water</b>	Water which is present above the soil surface
<b>Tributaries</b>	Smaller feeder streams or rivers which flow into a larger mainstem river
<b>TSS (Total suspended solids)</b>	A measure of the amount of solids found in the water, such as mud, silt or other elements. An excessive amount of these elements may result from soil erosion. Excessive TSS may indicate poor water quality through hindering stream flow and because the solids may carry pollutants such as nitrogen, phosphorous, or pesticides.
<b>Turbidity</b>	A measure of the amount of material suspended in the water. The more transparent or clear a water body is the lower the turbidity level.
<b>Vertebrates</b>	Organisms with a backbone (e.g. fish, birds, amphibians). The presence or absence of certain vertebrates (such as types of fish) is used as an indicator of water quality.
<b>Watershed</b>	The geographic region within which water drains into a particular river, stream, or body of water. That area may include wilderness, farms, suburban, urban, commercial, or industrial areas.
<b>Wetlands</b>	Transitional areas between the land and water systems that have a high water table at or near the surface (or a shallow covering of water) and hydric soils and hydrophytic plants

## **Watershed Government Agencies and Programs**

<b>CWA (Clean Water Act)</b>	Passed in 1974, the Clean Water Act mandates that the U.S. Environmental Protection Agency (EPA), in collaboration with state environmental agencies, develop a systematic approach to remediating polluted waterways from point source pollution and the protecting of America waterways from non point source pollution
<b>District Conservationist</b>	A USDA Natural Resource Conservation Service (NRCS) employee who manages staff and programs of each Soil and Water Conservation District and USDA Service Center to provide information and technical assistance to farmers on conservation of natural resources
<b>EPA (The United States Environmental Protection Agency)</b>	Responsible for management and regulation of U.S. water quality, air quality, and species protection
<b>IDALS/DSC (Iowa Department of Agriculture and Land Stewardship/Division of Soil Conservation)</b>	The Iowa state government department charged with providing technical and financial assistance to farmers and land owners in a variety of areas including watershed management, wetland conservation, and soil and water conservation—specifically through the Division of Soil Conservation

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**Iowa DNR  
(Iowa Department of  
Natural Resources)**

The Iowa state department charged with management and regulation of water quality, air quality, conservation, and protection of species habitat

**RC&D  
(Resources Conservation  
and Development)**

Development organization, often a non-profit, with administrative and financial support from NRCS that works in a multi-county area to promote natural resource conservation and development

**Section 319 Program**

An Environmental Protection Agency (EPA) program administered by the Iowa Department of Natural Resources (IDNR) that provides funds for a wide variety of non point source pollution water quality and monitoring efforts.

**SWCD  
(Soil and Water  
Conservation District)**

Coextensive with counties, SWCD provides local leadership on conservation issues through the election of locally elected officials who are mandated to facilitate worthy conservation efforts in the county. The district is the entity that manages expenditure of all conservation and water quality funding allocated through state and federal agencies.

**TMDL  
(Total Maximum  
Daily Load)**

An evaluation system for water quality designated under the Clean Water Act to estimate watershed pollution levels. This evaluation involves determining the maximum pollutant load that a water system will tolerate to maintain ecological integrity, the current pollutant load in that watershed, and modeling the causes and impacts of types of remedial actions in that watershed. The Iowa Department of Natural Resources (DNR) is responsible for submitting to EPA a list of impaired waterways. These waterways are required to have TMDL plans to achieve targeted TMDL levels.

**USDA-NRCS  
(Natural Resources  
Conservation Service)**

An office of the US Department of Agriculture that works with other governmental and non-governmental agencies to conserve and sustain natural resources. NRCS provides funding for a District Conservationist, as well as support for other conservation efforts in each county, including partial support for the Soil and Water Conservation District and administrative support for RC&Ds.

**USGS  
(The United States  
Geologic Survey)**

Provides basic information about surface and ground water quality. Each state has a USGS office that is partly responsible for monitoring water quality and flow rates.

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## Federal and State Programs to Support Watershed Management

### **CREP (Conservation Reserve Enhancement Program)**

Provides \$1.5 million in state funds to work with private landowners to restore or construct wetlands where they intercept tile runoff from agricultural lands. Wetlands should be designed to provide maximum water quality benefits through removal of nitrates and other pollutants from runoff water. Additional benefits are expected in habitat protection. The program uses state funds to leverage USDA funds to establish long-term contracts or easements with landowners.

### **CREP (Conservation Reserve Program)**

This federal program offers annual rental payments, incentive payments for certain activities, and cost-share assistance to establish approved cover on eligible critical areas. The length of the contract is 10 and 15 years. At least 50% of the establishment cost is paid as well as an annual rental rate based on the productivity of the soil.

### **EQIP (Environmental Quality Incentives Program)**

This federal program applies to lands with significant natural resource problems prioritized by local work groups, and to statewide resource concerns for lands not in Conservation Priority Areas. Up to 75% of the cost of conservation practices may be covered. The program offers 5- to 10-year contracts.

### **FIP (Forestry Incentive Program)**

This program is administered by USDA-NRCS. It provides financial assistance for up to 65% of the cost of tree planting and timber stand improvement on private forest stands of less than 1,000 acres. Payments are limited to \$10,000 per year. The contracts are for 10 to 30 years.

### **Floodplain Easements**

The goal of this USDA easement program is to protect high-risk lands subject to repeated flood damage. It is a part of the Emergency Watershed Protection program. The easements are permanent. Some harvesting of timber or hay may be allowed. Up to 100% of restoration costs may be paid.

### **Iowa Water Quality Program (IDALS)**

This \$11.2 million dollar state initiative enacted in 2000, matches federal funds for water resource programs including conservation efforts and water quality monitoring. Areas covered include: septic systems, soil conservation, buffer initiatives, water quality monitoring, water quality planning, standards, and assessment, conservation, TMDL, floodplain education, review of NPDES permits, integrated livestock and farm demonstration program, and water monitoring and environmental restoration volunteer activities. The program is also funding efforts by the state to provide watershed data locally through geographic information systems (GIS).

### **NPDES (National Pollution Discharge Elimination System)**

This initiative provides resources for the review and issuance of permits for all wastewater treatment facilities or effluent in waters of Iowa (such as city sewage plants, industrial effluents, or livestock). The permit program is set in federal law as part of the Clean Water Act. It is administered through the state DNR. The Iowa Water Quality Initiative has allocated funds to enable the DNR to “acquire professional assistance to staff to reduce the backlog of expired NPDES permits.”

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**REAP  
(Iowa Resource  
Enhancement and  
Protection Account)**

The result of Iowa legislation passed in 1989, REAP is financed by individuals who purchase a REAP license plate when they register their vehicles. Twenty percent is allocated for soil and water enhancement and made available as grants from IDALS-Division of Soil Conservation to Soil and Water Conservation Districts (SWCD). Another 20 percent is directly allocated to county conservation boards.

**WHIP  
(Wildlife Habitat  
Incentive Program)**

This wildlife habitat improvement restoration program is administered by USDA-NRCS. The contract is for 5 to 10 years. The Program offers landowners up to 75% cost-sharing for wildlife habitat improvement projects.

**WPF  
(Iowa Water  
Protection Fund)**

Iowa water quality initiative that funds local SWCS non point source pollution related water quality projects including watershed development grants. Administered by Iowa Department of Agriculture and Land Stewardship (IDALS). Financed by the Iowa license plate REAP program.

**WRP  
(Wetland Reserve  
Program)**

This federal program targets critical wetland areas in need of restoration and protection. The contract can be for permanent or temporary easements. Easement payments are disbursed over 5 to 30 years, and the payment depends on soil type and crop history, location, etc. Permanent easements are included. Restoration costs of up to 100% is possible for permanent easements, with cost sharing of 50%- 75% for 30-year easements.

**WSPF  
(Iowa Watershed  
Protection Fund)**

Iowa water quality initiative that funds local SWCS natural resource protection projects including water quality and erosion control. Administered by Iowa Department of Agriculture and Land Stewardship (IDALS). Financed by the state legislature yearly.

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