

Sediment Sources



Question: Why do we have off-site sediment and muddy water (turbidity) problems? The answers are in the pictures below and to the right.

Farms With Eroding Fields



Disturbed Forests With Ineffective BMPs



Abandoned Dirt Pits, Abandoned Surface Mines and Access Roads That Need Stabilization



Abandoned Fields in the Urban/Agricultural/Forest Interface and Linear Construction



Construction Sites of All Kinds (subdivisions, commercial, schools and roads)



Dirt Roads



A problem situation may have been left out, but you should get the picture . . .

Sediment and muddy water (turbidity) come from the land that needs stewardship of our soil and water.

Alabama is blessed with abundant rainfall, creeks, rivers, lakes and reservoirs. Erosion problems should be addressed!
What Can You Do?

All landowners: Control erosion and minimize off-site sediment delivery at your sites

Planner and designers of construction sites: Develop plans that use sound technology to minimize erosion and sediment delivery

Developers: Ensure that your newly developed sites do not create sediment and turbidity problems

Contractors: Install and maintain best management practices (BMPs) according to the stormwater pollution prevention plan

Local governments: Ensure that your regulations are sound and effectively followed

All Alabama citizens: Support local and state programs of soil and water conservation

Visit the website of the Alabama Soil and Water Conservation Committee for links to partnership participants: www.swcc.alabama.gov

This brochure was developed under the leadership of the AL Soil & Water Conservation Committee with support of the Erosion and Sediment Control Steering Committee (member representatives below):

- AL Association of Conservation Districts
- AL Department of Environmental Management
- AL Department of Transportation
- AL Soil & Water Conservation Society
- Associated General Contractors of AL
- Home Builders Association of AL
- USDA-Natural Resources Conservation Service

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Let's Look at Sediment!



Sediment

Sediment

Sediment!

Why All The Fuss?

We often hear... "Sediment is the nation's biggest pollutant in our streams, lakes and water courses."

Sediment impacts the environment! It costs land owners and local and county governments countless dollars.

This brochure has two purposes.

- Help readers gain a better understanding of the problems associated with sediment
- Stimulate stewardship of our land and water resources

Sediment is the soil particles that are detached during the erosion process. These particles are deposited somewhere down the slope. Likely locations for sediment deposits include ditches, ponds, lakes, creeks, and rivers. Some sediment reaches the Gulf of Mexico.

And there is more to the story. While some soil particles are deposited, other smaller soil particles can remain in the water for a long time. This water is "turbid" and damages the aquatic environment.

The impacts of sediment and turbidity can be seen in the pictures to the right.

Pictures on the back of this brochure show sites that may deliver sediment and turbid water and create problems to our waterways and the aquatic environment.

In addition to the purposes stated above, this brochure also illustrates why sediment and turbidity are considered non-point pollutants. These pollutants come from many sites and collectively create problems.

As a concerned Alabamian - review this brochure closely, and then pass it on to someone else for their benefit.

Erosion and Sediment Transport. These are natural processes, but can be greatly increased by human disturbance of land. Excess erosion and sedimentation are harmful to aquatic life in streams, reservoirs, estuaries and bays in Alabama.



Water-caused erosion produces sediments that enters local creeks and starts a journey downstream, maybe to Mobile Bay. Erosion occurring in Georgia, Mississippi, and Alabama communities contributed to this sediment plume that spans from the Mobile Delta through Mobile Bay out into the Gulf of Mexico.



Environmental Problems

Smothers Stream Bottoms and Clouds the Water. Sediment degrades aquatic habitat and turbidity restricts light and plant growth. This disrupts the food chain and impairs fish and aquatic insect populations.



Caddisfly



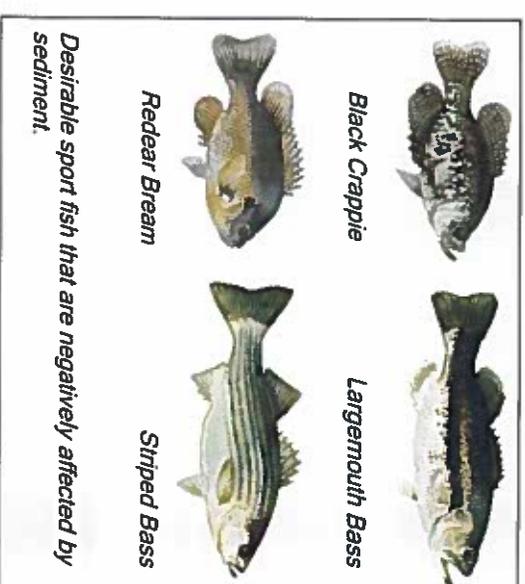
Darter



Mayfly

These aquatic insects and fish are important food sources for many sport fish found in Alabama.

Reduces Populations of Sensitive Sport Fish. Suspended sediment reduces visibility and damage fish gills, affecting the ability of fish to feed and breathe. Pollution sensitive sport fish, such as bass and bream are often replaced with more pollution tolerant and less popular carp and suckers.



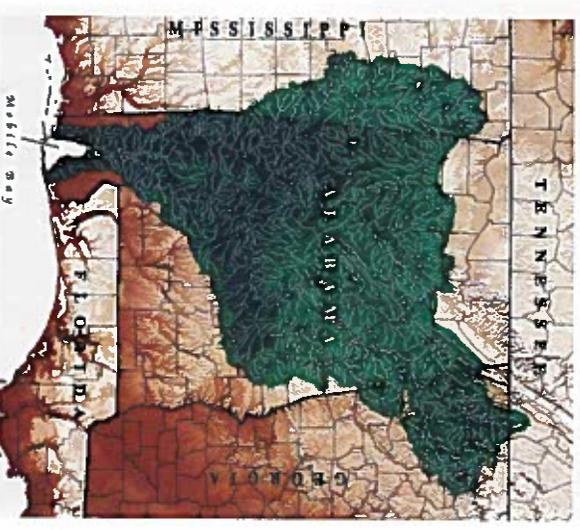
Desirable sport fish that are negatively affected by sediment.

Transports Harmful Levels of Pollutants. Sediment carries pathogens, nutrients and toxic materials such as heavy metals and chemicals into our waterways. These pollutants affect drinking water and surface water quality, contribute to increased water treatment costs, fish consumption advisories, and expand oxygen depleted "anoxic zones" commonly called "dead zones" in the Gulf of Mexico.



Pollutants accumulate in fish tissue and are hazardous to other organisms when consumed.

Sediment Impacts our Waterways.



Dredge removing sediment from the Alabama River

