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 <u>All Kinds</u> (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?

<u>All landowners:</u> Control erosion and minimize off-site sediment delivery at your sites.

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

<u>Developers:</u> Ensure that your newly developed sites do not create sediment and turbidity problems

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

<u>Local governments:</u> Ensure that your regulations are sound and effectively followed

<u>All Alabama citizens:</u> 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

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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
(USDA is an equal opportunity provider and employer.)

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Let's Look at 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 that need to be addressed.

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

Accelerated erosion, sediment, and turbidity.

These natural process of erosion is accelerated by human disturbance of the land. The resulting sediment and turbidity are harmful to aquatic life in streams, reservoirs, estuaries and bays of Alabama.

Water-caused erosion produces sediments that enter local waterways and starts a journey downstream, maybe to Mobile Bay or other bays in the Gulf of Mexico.

Erosion occurring in Georgia, Mississippi, and Alabama contributed to the sediment plume at right 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.

Black Crappie

Largemouth Bass

Redear Bream

Striped Bass

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.