

# APPENDICES

## Glossary

**ADEM** – The state regulatory agency (Alabama Department of Environmental Management) which administers and enforces the Alabama Water Pollution Control Act.

**Approaches** – The entry and exit of a road or skid trail through a stream crossing.

**Aquatic ecosystem** – An interacting community of plants and animals (i.e., insects, crayfish, fish and amphibians) requiring an abundance of water during some part of their life cycle.

**Backblade** – To pull dirt by dropping a dozer blade into the soil and operating the tractor in reverse.

**Back slope** – The soil profile in the side of a hill that is exposed from cut and fill type road construction.

**Banks** – The sides of a channel which holds or carries water.

**Bed** – The bottom of a stream.

**Bedding** – A mechanical site preparation technique where top soil is mounded into rows. Trees planted on top of the row will be well drained and will benefit from a concentration of nutrients and organic matter during initial stages of growth.

**Biological integrity of waters of the state** – The ability of a body of water to support the natural level of diverse plants and animals that would normally occur without man-made disturbance or manipulation of the landscape.

**Broad based dip** – An alteration of a road grade to intercept water from the surface and dispel it to the side without seriously interfering with vehicular traffic.

**Canopy** – The upper leafy branches of dominant and codominant trees and shrubs which intercept sunlight and shade the ground.

**Chemical integrity of waters of the state** – The natural range of nutrient and pH levels which would normally occur in waters passing through an undisturbed site.

**Compaction** – The result of all air and moisture holding spaces being squeezed out from between soil particles by operation of heavy equipment during unfavorable ground conditions. All soils are generally more easily compacted when wet. Compacted soil is less productive and more erodible.

**Contour** – An imaginary line on the surface of the earth connecting points of the same elevation.

**Corps of Engineers** – The federal regulatory agency, a branch of the U.S. Army, which administers and enforces the Section 404 permitting program of the Clean Water Act.

**Critical shading of water** – Shading when water receives the greatest protection from overheating and ultraviolet exposure caused by solar radiation.

**Cross drain** – A pipe, ditch or channel which safely conveys water from one side of the road to the other.

**Crown** – The top of a tree consisting of trunk and expanding branches.

**Culverts** – Usually metal or plastic pipe but can be a constructed wooden trough.

**Cut and fill** – Earthen material which is dug out of a hill and placed down slope to provide a relatively level road bed.

**Deck** – An area cleared to provide a site for loading logs onto a transport vehicle.

**Decking** – Rough or unfinished lumber used to provide a stable surface for roads, stream crossings or landings.

**Definable bank** – The bounds of a water body at or below its normal flow level which is usually devoid of terrestrial plants and accumulations of light organic debris.

**Deposition** – The act of depositing or putting into.

**Destabilize (the soil)** – To expose and/or loosen soil thus making it more susceptible to erosion.

**Direct seeding** – Artificially placing seed by hand, land machine or aircraft onto a germination surface.

**Disking** – Breaking up plants (above and below ground portions), organic matter and soil in preparation to improve the ground for replanting and to reduce plant competition.

**Diversion device** – A structure to intercept and re-route water from a road surface.

**Drainage device** – Same as diversion device.

**Dredge** – Earthen material that is dug from a channel or removed from the bottom of a water body, often to improve drainage.

**Ephemeral streams** – Low places in the landscape that only flow shortly after significant rainfall. Does not have a well defined channel.

**EPA** – The U.S. Environmental Protection Agency. The federal agency created and mandated by the U.S. Congress to administer and enforce the Clean Water Act upon waters of the United States.

**Erosion** – The dislodging and carrying away of soil particles by wind or water.

**Fell** – To cut or knock down standing trees or other vegetation.

**Fill** – To raise the elevation of a surface by depositing dredged or excavated material onto it.

**Filtration strip** – A strip of land where vegetation, mulch, or fabric is maintained or placed to intercept and prevent upland sediment and other pollutants from flowing into water.

**Firebreaks** – Natural or artificially constructed barriers to the spread of fire.

**Floodplain** – Areas adjacent to bodies of water that are most prone to flooding when the water overflows its banks.

**Forest floor** – Accumulations of organic debris and low vegetation on the ground beneath a stand of trees.

**Forest resource managers** – This group includes foresters, wildlife biologists, recreational planners and other developers.

**Fragile area** – Areas that are easily altered physically, biologically, or chemically, and are difficult or slow to recover.

**Grade** – The steepness of rise or fall of a road surface.

**Ground cover** – Low growing vegetation such as grass, forbs, vines, or shrubs.

**Ground water** – Water stored and/or flowing out of sight under the surface of the ground.

**Hand planting** – Re-establishing vegetation by planting seed or seedlings into prepared planting holes in the ground.

**Harvests** – Gathering merchantable portions of trees for commercial or domestic use.

**Herbicide** – a natural or synthetic chemical pesticide applied specifically to control competition from undesirable plant species.

**High flow** – The increased volume and speed of water that exceeds a stream's normal rate of flow.

**High water mark** – Physical evidence of past flooding such as discoloration of the lower portions of vegetation or debris suspended in branches off the ground.

**Implementation** – The carrying out of instructions contained in a management plan, harvest plan or reforestation plan (written or verbal).

**Impoundments** – An accumulation of water into pools or ponds formed by blocking the natural drainage.

**Inslope** – Sloping of a road surface so drainage is toward a ditch between the road and hill.

**Intermittent bodies of water** – Contain water within well defined channels during part of the year.

**Label restrictions** – Explicit instructions from the manufacturer with approval from federal and state authorities on when, where, and how a particular pesticide may be applied. Instructions also usually include worker and environmental safety precautions.

**Landing** - A site where logs are sorted and loaded onto trucks for hauling to handling or processing facilities.

**Litter Layer** – The natural buildup of dead leaves, branches and stems of dead trees and other forest vegetation which accumulate on the ground and then decay with time.

**Log decks** – Same as landings.

**Mechanical planter** – A tree planting machine pulled by a tractor and manned by a person who places trees into the ground.

**Mechanical site preparation** – Use of heavy machinery such as bulldozers with special attachments that clear debris or incorporate it into the soil to improve planting, sprouting, growth and or survival conditions for new forest trees.

**Minimum residual cover** - The fewest number of trees necessary to provide shade, natural recruitment of organic material, and soil holding capability for protection of the biological integrity of aquatic ecosystems.

**Mulch** – A coarse material used to protect soil from rainfall impact and erosion and to improve germination and growth of vegetation. Examples are hay, straw, bark and geotextile fabric.

**Natural barrier** – Areas that are devoid of fuel or food to support a spreading fire or insect or disease epidemic.

**Natural drainage** – Perennial, intermittent and ephemeral stream courses in a watershed that collect and expel runoff water.

**Natural regeneration** – Young trees that originate from seed or sprouts of trees that do or did grow on the site.

**Nonpoint source** – Water pollution which is not traceable to any discrete or identifiable facility but comes from a broad treatment area.

**Normal passage of water and/or aquatic animals** – Movement of water or animals which has not been obstructed or inhibited as the result of man-made activity.

**Nutrients** – Substances that nourish such as nitrogen, potassium and phosphorus in fertilizer. Excess nutrients can destabilize aquatic ecosystems.

**Organic debris** – Refuse such as tree tops, limbs or severely damaged tree stems which are left following road construction, logging, or site preparation.

**Organic matter** – Dead plant parts or animals. While natural recruitment of organic matter is part of the energy and nutrient cycles of an aquatic ecosystem, decay of excess amounts in water depletes oxygen needed by fish and other aquatic animals. Tops and other debris can sometimes block and divert the flow of streams causing additional erosion.

**Partial cut** – A selective timber harvest method where particular trees are usually designated to remain in the stand and the rest are removed in a thinning harvest.

**Perennial bodies of water** – Contain water within well defined channels virtually year round under normal climate conditions.

**Permanent road** – A road constructed, used and maintained beyond the time period of a single operation such as a timber sale.

**Pesticide** - See herbicide for specific application.

**Physical integrity of waters of the state** – The retention of water in its natural condition without alteration of stream course, depth, clarity or freedom of obstructions that might occur as the direct result of man-made activity.

**Plowed fire control line** – A man-made fire break constructed by a heavy piece of equipment such as a small bulldozer pushing or pulling a heavy duty plow designed for cutting through the forest floor and root mat to clear combustible material and expose mineral soil.

**Pollutants** – Man-induced elements such as sediment, organic debris, increased temperature, nutrients, chemicals, trash and soil degradation which exceed a water's natural ability to neutralize before changes in the physical, chemical or biological integrity of waters of the state occur.

**Portable bridge** – a stream crossing device that is preassembled, installed across a channel and

removed following completion of an activity with minimum adverse impact to water quality.

**Portable logging mats** – Temporary road or stream crossing surface constructed of rough cut lumber nailed or bolted together. These are usually expected to be removed and reused following completion of a particular operation.

**Prescribed burning** – Preplanned fire that is deliberately set in a time and manner when prescribed conditions will allow accomplishment of specific objectives and is under control until it burns out or is extinguished.

**Puddling** – The destruction of root systems and soil structure by the tearing and churning action of heavy equipment operating in saturated soils. Puddled soils are more susceptible to erosion than undisturbed soils.

**Reforestation** – The restocking of a forest stand through natural regeneration or artificially planted seed or seedlings.

**Regeneration** – A young stand of a forest.

**Regeneration cut** – Either partial harvests where selected trees are left to provide adequate seed or silvicultural clearcuts where all merchantable and non-merchantable tree stems are removed or felled to encourage sprouting of desirable tree species.

**Riprap** – Large stones which are arranged over loose soil to protect it from erosion.

**Rutting** – Impression left in the ground after soil is compacted by the wheels or tracks of heavy equipment operating in soft earth. Deep rutting can disrupt surface and subsurface hydrology on flat lands and cause soil erosion on steep lands by concentrating surface runoff.

**Sediment** – Accumulations of loose soil particles. Excessive amounts of sediment can pollute water needed for aquatic ecosystems, drinking, wildlife, outdoor recreation, and industrial use.

**Shearing and raking** – A site preparation technique that uses a large tractor equipped with a special cutting blade to cut down trees just above the ground surface and a second tractor equipped with a specialized raking blade that pushes the felled trees and other debris into piles or windrows.

**Side bank** – Same as back slope.

**Silviculture** – The care and cultivation of forest trees; forestry.

**Site preparation** – Use of machines, herbicides, fire or combinations thereof to dispose of slash, improve planting conditions and provide initial control of competing vegetation.

**Skid** – To drag logs with a specialized tractor to a landing.

**Skid trails** – Paths where logs have been dragged.

**Slash** – Unmerchantable debris such as brush or tree stems, tops, branches or leaves that are left following a commercial timber harvest operation.

**Slough** – An open water inlet from a larger body of water.

**Soil stabilizing materials** – Silt fencing, straw blankets, geotextile fabric, geoweb, etc., applied to protect soil from erosion.

**Soil type** – Consistent characteristics of an identifiable soil such as particle sizes, moisture holding capacity, plasticity and ease of compaction.

**Span** – A structural beam designed to hold other bridge components and traffic above a stream or channel.

**Steep gradient** – A high rate of ascent or descent on a road.

**Stringent** – Tightly regulated or controlled.

**Surface water** – Exposed water above the ground surface.

**Temperature** – The degree of hotness or coldness of an environment. Removal of vegetative shade from banks of streams and shores will directly raise water temperature and indirectly result in lower dissolved oxygen levels. These influences place some fish and other organisms under stress.

**Temporary access roads** – Roads not expected to be maintained much longer than the activity for which they were installed to support.

**Timber purchasers** – Agents who locate commercial stands of timber and negotiate terms of purchase on either their own behalf or on the behalf of timber brokerage or forest product companies.

**Topography** – The lay of the land.

**Tops** – The upper (usually referring to unmerchantable) portions of trees.

**Trash** – Unnaturally occurring, man-made refuse or discarded substances. Openly discarded trash and petroleum wastes may be carried into waters of the state by storm runoff and is unsightly.

**Understory vegetation** – Small trees, shrubs or other plants which grow beneath the canopy of more dominant trees.

**Upland runoff** – Surface drainage water which flows from higher elevations of a landscape into the natural drainage system of a watershed.

**Vendors** – Contractors who provide tree harvesting, site preparation, tree planting or other forestry services for a fee.

**Washouts** – Clearing of natural or man made obstructions of drainage systems during high stream flows.

**Water bar** – A long mound of dirt constructed to prevent soil erosion and water pollution by diverting drainage from a road or skid trail into a filter strip.

**Water bodies** – Branches, creeks, rivers, ponds, lakes, bays, etc.

**Water diversions** – Structures or devices which change the direction of drainage flow.

**Water quality impairment** – The reduction of water quality below established water quality standards.

**Waters of the State** – Include every watercourse, stream, river, wetland, pond, lake, coastal, ground or surface water, wholly or partially in the state, natural or artificial which is not entirely confined and retained on the property of a single landowner.

**Waters of the United States (U.S.)** – Include all waters such as lakes, rivers, streams (including intermittent streams), mudflats, sandflats, wetlands and sloughs which are susceptible to use in interstate or foreign commerce, recreation, fish and shellfish production and industrial use; impoundments of waters just described; tributaries of waters just described (other than waters that are themselves wetlands).

**Wildfire** – Fires burning without the control of a responsible person.

**Windrows** – Long piles of accumulated debris.

**Wing ditch** – A secondary “turn out” ditch that diverts drainage water from primary roadside ditches, to be filtered out into the surrounding area.