Forest chemicals include herbicides, insecticides and fertilizers. Broadcast use of herbicides and, to a lesser degree fertilizers, is common in Alabama. Broadcast use of forestry insecticides is rare other than in tree nurseries, although spot and individual tree applications are occasionally used. Herbicides are also applied as spot and individual tree treatments.

Practices to avoid contamination by forest chemicals are simple: avoid direct application to water surfaces, prevent accidental movement by wind to water surfaces and adjacent areas, and prevent surface water movement from treated areas to streams during storms.

All three of these principles are affected by maintenance of well-protected Streamside Management Zones. No aerial or soil applied chemicals should be used in an SMZ or applied directly to water surfaces. Avoid flood-prone areas, particularly with soil-active herbicides. This prevents direct application of chemicals to water and reduces probability of movement to the stream by aerial drift or surface water flow. Leave vegetation and organic cover of SMZs to absorb and break down or tie up many chemicals before they reach a stream.

Use aerial applications only when wind is quite low or absent, and danger of drift is minimal. This frequently requires that application be early or late in the day when the wind is usually low. For aircraft applications particularly, use drift control spray nozzles and spray adjuvant for reducing drift.

Use good erosion control practices on all areas where aerial or soil chemical treatments are applied. As much as possible, avoid placing herbicides on large areas of bare soil. These practices will minimize surface water flow and possible washing of the chemicals to streams.

Herbicides may be injected directly in the trees even within an SMZ. There appears to be little danger of such treatment adversely affecting streams.

Do not, however, clean storage tanks or application equipment in or near streams or other water bodies, and do not dispose of any materials or containers in streams.

With all labeled forest chemicals, follow label directions carefully. Chemical labels specify desirable application methods, rates and precautions – follow them. For the proper herbicide or mix for a site, consult with a pesticide applicator certified by the State of Alabama.

SAFETY IN HANDLING CHEMICALS: Chemicals by their very nature are poisonous to man, livestock, pets, wildlife and fish. A poisonous or toxic compound becomes dangerous when it is improperly or carelessly used; however, all of these compounds may be used safely when used at concentrations, rates and with methods for application for which they are recommended.

Most accidents occur when the following rules are ignored:

- Improper identity of the pest and what chemical to use.
- Failure to apply the recommended material at the right time and in the right way.
- Failure to store chemicals in their original labeled containers out of the reach of children, pets and livestock.
- Improper disposal of empty containers.

GENERAL PRECAUTIONS WHEN USING CHEMICALS:

- Read and follow precautions on the label.
- Avoid ingesting or inhaling chemicals.
- Avoid contact of chemicals with the skin.
- Wash hands frequently, especially before eating, drinking or smoking.
- If concentrated chemicals are spilled on the skin and/or clothing, remove clothing at once and wash skin with soap and water.
- Do not wear the same clothes more than one day when applying chemicals; change clothes daily.
- Mix chemicals in an open area with adequate ventilation; never mix in an enclosed area.
- Never use equipment with leaking hoses or connections, and wash spray equipment daily to avoid hazardous accumulations.
- Do not use your mouth to siphon, to blow out nozzles or clogged lines, etc., on equipment.
- When applying recommended chemicals in the home, in farm buildings, on lawns, or to ornamental plants, do not contaminate food, feed, or water supplies.
- Do not allow small children to play in treated areas until the chemicals have been removed by washing.
- When highly toxic materials are applied to ornamental plants, do not cut flowers or handle plants for 5 days after application.
- Use only recommended materials at recommended rates.
- Discard any chemical container without a label or with a damaged label. Do not guess at the contents.
- Always store unused portion of chemicals properly before leaving the area.
- When equipment is not in use, keep it in an area where children and livestock cannot get to it.
- Never use the arms to stir or to reach into a container of chemicals to retrieve tools or other accidentally dropped items.

