

Reclaiming Flooded Soils

Freshwater flooding

- ◆ Freshwater flooding from rivers, overflowing sewage and septic systems, and other sources can affect soil fertility and soil properties and harm the environment.
- ◆ Remove any debris that prevents floodwater from draining away.
- ◆ Wait until the floodwater has receded or soaked into the soil before beginning recovery efforts.
- ◆ If dead plant debris is no more than about 1 inch deep, till it into the soil. If debris is deeper than 4 inches, remove it mechanically or with a prescribed burn.
- ◆ Before conducting a burn, be sure there is no hazardous flood debris in the area (such as propane tanks, pressurized-gas cylinders, refrigerators, air conditioners, petroleum containers, or tires).
- ◆ Before tilling debris or removing it mechanically, know where all underground and aboveground utilities and pipelines are located. Call toll free 1-800-344-8377.
- ◆ If a flood has left soil sediment on top of the original soil, till deeply to incorporate it if the sediment is less than 8 inches deep. If it is deeper, ask your county Extension agent about other options.
- ◆ Once the soil is dry, have it tested by submitting a sample to the Texas AgriLife Extension Service Soil, Water and Forage Testing Laboratory. Submittal forms and instructions are online at <http://soiltesting.tamu.edu> and at your county Extension office.
- ◆ If floodwater covered a storage shed, garage, machine shop, sewage treatment system, or livestock feeding area, the soil may be con-

taminated by microbes, pesticides, hydrocarbons, or heavy metals. Special tests must be done to determine this. To find a laboratory that does such tests, contact the National Pesticide Information Center 1-800-858-7378, <http://npic.orst.edu/tech.htm>.

Saltwater flooding

- ◆ After saltwater flooding from tidal surges, the soil salinity level will be reduced only when rain or irrigation leach the salt out of the upper soil profile or carry it away in overland flow. Clear field edges, ditches, and drainages of debris so water drains easily.
- ◆ Till dead plant material into the soil or remove it with a prescribed burn.
- ◆ Have your soil tested for salinity level. Immediately after the tidal water drains away, collect samples from the top 3 inches of the soil at 10 to 15 locations. Mix these subsamples together to make one sample and submit it to the Texas AgriLife Extension Service Soil, Water and Forage Testing Laboratory. Forms and instructions are online at <http://soiltesting.tamu.edu> and at your county Extension office.
- ◆ Also have your soil tested for fertility, as the floodwater may have leached out nitrogen and other nutrients. For a fertility test, take samples at a depth of 6 inches.
- ◆ Do not replant until the salinity level is appropriate. This depends on the soil type and the amount of salt that has accumulated. A great deal of rain may be needed to reduce salt levels to the point that an area can be replanted.

