

TPWD Guidelines for Revegetation of Disturbed Landscapes

Establishing plant cover onto disturbed landscapes should occur as a result of careful consideration of the management objectives, existing site characteristics, and the ecological factors affecting the area. In general, selecting native plant species which mimic naturally occurring plant communities in similar habitat situations will create landscapes which meet the developer's goals and have value for wildlife while preventing loss of soil resources. (Keeping the soil in place is fundamental to any vegetation management scheme.)

The following management goals will generally create or improve habitat for wildlife and are compatible with agricultural production and rural residential situations:

- **Ecosystem Functioning** (climax plant communities known to occur historically, e.g., Water Tupelo-Cypress swamp or Little bluestem-Indiangrass grassland)
- **Increased Biodiversity** (i.e., incorporation of tree and shrub communities within a grassland landscape or mixed edge associations for game and nongame species)
- **Plant Communities for Specific Habitat Needs** (may be needed for specialist/endangered wildlife)

Information concerning species components of native plant communities within a given locality can be obtained from Soil Conservation Service *Range Site Descriptions* and county *Soil Surveys*, investigation of undisturbed sites within the local area, and historical botanical and ecological reports for the local area. Remember that many of our historical climax plant communities developed under a regime of natural processes which are no longer functioning because of the influence of man (e.g., fire). Climax plant communities may be difficult to establish and maintain without continued manipulation to simulate these natural processes.

If "tailored" plant associations (non-climax) are being developed to maximize certain objectives, then the following criteria and notes can be used to develop a species list which will provide for wildlife habitat value while providing soil erosion protection:

- Selected plants should be native and adapted for the same local climatic and ecological region, topography, and soil conditions.
- Selected plants should be compatible.
- The association should cover as much area as possible (overlapping canopies).
- The association should form at least 2 canopy layers above the soil surface.
- Selected plants should include a mixture of physical and habitat forms, e.g., deciduous, evergreen, tree, shrub, vine, forb, grass.
- The association should provide annual, all-season fruits.

- The association should provide areas of adequate cover for the species being managed for.
- A ground cover should be established quickly to prevent solid erosion.
- Selected plants should include species which improve fertility (i.e., nitrogen-fixing species).
- In as much as they can be found suitable with slope, soil characteristics, aspect, source of moisture and wind direction, plants should be arranged in irregular groups rather than uniform rows so that the association will produce a more natural form.
- Native plants are adapted to the local environment and will persist through periods of environmental stress. Most exotic plants cannot similarly persist and are also overrated as wildlife food and cover. However, a few exotic species can establish themselves by out-competing native plants. They then become serious persistent pests, difficult if not impossible to control or eradicate. Exotic species should, therefore, be omitted from permanent revegetation plans.
- Weedy, invader native species can be problematic as they have great capacity for dispersal and are adapted to disturbed solid sites. Selecting species associated with climax or near climax plant communities may be slightly more difficult to establish but be more useful as wildlife habitat.

Landscape planning and erosion control assistance can be obtained from several natural resource agencies. For instance, the Soil Conservation Service (SCS) maintains standards and specifications for revegetation within each county of the state. These standards include information concerning site and seedbed preparation, litter requirements to reduce erosion, solid moisture and temperature requirements for germination and growth, seeding and planting methods, weed control, fertilizer rates and nutrient requirements, etc. The Texas Forest Service and the U.S. Forest Service can also provide assistance in revegetation of forest and shrubland landscapes. Texas Parks & Wildlife Department, U.S. Fish & Wildlife Service, and the U.S. Corps of Engineers can provide additional assistance in development of vegetation for use by fish and wildlife (i.e., habitat).