

Resource Concerns

Structure and Composition

Soil

Water

Air

Plants

Degraded Plant Condition

Plant Pests

Plant Productivity and Health

Structure and Composition

Wildfire Hazard

Animals

Energy

Degraded Plant Condition - Structure and Composition

Plant communities have insufficient composition and structure to achieve ecological functions and management objectives. Inadequate structure and composition also includes degradation of wetland habitat, targeted ecosystems, or unique plant communities.

What is it?

A stand of plants and associated organisms (bacteria, fungi, animals) that share a defined area or environment lack the diversity, density, distribution patterns, and three-dimensional structure necessary to produce the preferred products or desired environmental outcomes.

Why is it important?

If landowners hope to achieve their production or environmental objectives, it is critical that they understand and work with the processes that affect structure and composition of plant communities. The interaction between plants, other organisms, and environmental factors such as soil, climate, and topography influence how a plant community functions to cycle nutrients, capture and release water, protect and build soil, nurture wildlife, or produce usable products.

What can be done about it?

Addressing inadequate structure and composition is a complex problem that varies with the natural plant community that is desired. All human activities have the potential to impact natural communities, whether it is land use changes, drainage activities, controlling fires, or the introduction of different animal and plant species. Activities can include removal of unwanted plants to provide more space for desired species to increase in number or size. Desired plants can be reintroduced that are missing from the community. Practices such as grazing, mowing, fertilization, and burning can be used to promote and/or repress growth of target plants to attain the desired structure and composition.

Structure and Composition at a Glance

Problems / Indicators - Inadequate structure and composition	
Causes	Solutions
<ul style="list-style-type: none"> Stress, disease and/or mismanagement reduces and/or eliminates key components of plant community Plant community is allowed to grow to late succession stage and fails to produce desired habitat for wildlife and/or insects that depend on early succession habitat Invasive species outcompete desired plants creating a monoculture Loss of fire regime 	<ul style="list-style-type: none"> Employ or modify use of cultural practices (e.g., grazing, burning, mowing) Treat or remove vegetation to reestablish desired habitat Control invasive species, reestablish desired plant community, and utilize integrated pest management techniques to maintain stand