ECOLOGY AND SUSTAINABLE LANDSCAPING

Ecological landscaping at ORNL uses sustainable practices to improve habitat, protect water quality, minimize erosion, and enhance native wildlife. Using local plant species highlights the lab's uniqueness, strengthens its relationship with its natural surroundings, and demonstrates its dedication to conserving and showcasing the environment. In 2018, an inventory of tree species on the ORNL campus was conducted to provide data for use in studies of the economic and environmental benefits of urban trees. This inventory will be beneficial in support of the creation of a self-guided campus tree tour, which will help educate staff and visitors on the many benefits of the urban ecosystem on the ORNL Campus.

Over the years, ORNL has greatly reduced mowed turf areas by incorporating native plant beds, planting fields of native grasses, and allowing the beauty of the surrounding Oak Ridge Reservation (ORR) to provide a beautiful backdrop to the campus. Minimizing turf reduces the need for frequent mowing and maintenance, and thus reduces fuel consumption, pollution, and emissions associated with mowing. Native landscaping is not only aesthetically appealing, but name tags near plants also educate laboratory staff and guests by helping them identify the regional vegetation. Educational signs around campus explain the benefits of sustainable landscaping with native species.

"Creating a Federal Strategy to Promote the Health of Honey Bees and Other Pollinators", was issued with the goals of reducing honey bee colony losses, increasing the monarch butterfly population, and increasing pollinator habitat acreage for all pollinators on Federal land. The native plants used in ORNL's sustainable landscaping include many host plants for butterflies and nectar sources for all pollinators. Multiple new landscaping projects are focused on the inclusion of more areas beneficial to our local pollinators. The ORNL Natural Resources Management Team is also participating in the Monarch Watch program in which monarchs are tagged with an individual identification number and then released to track migration patterns and success.

"Incorporating Natural Infrastructure Ecosystem Services into Federal Decision Making", is an executive memorandum issued to integrate the consideration of ecosystem services benefits into Federal decision making. Sustainable landscaping policy on the ORNL campus provides many of the ecosystem services listed in the memorandum including improved water quality, increased wildlife habitat, enhanced climate resilience, storm mitigation, pollutant buffering, and ecosystem resilience as well as aesthetic values, and recreation. Recent projects have included stream riparian buffer zone enhancement and increased native grassland areas on campus.