

Ground Facts

January marks the beginning of the fourth year that the University of Tennessee, Knoxville has partnered with Saturn Corporation. The Land Use Team feels that public outreach is an integral part of the success of the Land Use Project and has dedicated the December issue of "Ground Facts" to highlighting the past and future challenges of the Saturn Land Use Project. The map below shows locations of the project activities; on the back, the corresponding letter will give greater details about these activities (i.e. reasons, issues). We hope that this will help team members and visitors in understanding the ecological and environmental goals of the Saturn/UT Land Use Project. It is of great importance that we note that the success of our progress has relied on the support of Facilities Maintenance, Premier, and the Farm Operations.

MAP OF SITE

A Saturn Sanctuary

The Saturn Sanctuary is an 80-acre tract of land consisting of two springs, a small marsh, a stream, and a well-developed forest community. In fact, the sanctuary has more plant and animal species than any other area on the Saturn site. This area will act as a hub from which these species can spread to other biological communities. Semi-annual mowing of existing open fields within the sanctuary has been adjusted to widen natural habitat corridors along streams and draws. This is a major objective over the entire Saturn site. Stream-side habitat is important for wildlife, stream quality, and native plants.

B Erosion Site

The erosion site is one of the first projects that the Land Use Team began. Rock-lined channels were built into the eroded slope to divert water-run-off. Native plant species, such as sumac and Virginia pine, were planted; wildflower seeds were scattered throughout the area, too. This area is showing minimal run-off effects, less erosion, a good stand of wildflowers, and an overall positive management outcome. It is also saving on maintenance costs.

C No-Mow Zones

The no-mow areas presently consist of approximately 17 acres. They are located along the Saturn Parkway, close to the ponds on the west-side of the plant, and at the North Gate Entrance. These areas have been set aside from the regular mowing schedules of to allow for ecological benefits and cost savings. Future plans with these areas include reestablishing these areas with native prairie grasses, controlling exotic pest plants, and expanding to include native species to accelerate the conversion process.

D Native Landscaping

Native species landscaping can be seen in many areas across the Saturn site, but the majority of these plantings are located at the team member entrances. These areas were originally planted in 1997 and have had supplemental plantings and mulch over the years. Nuts and seeds have also been worked into the soil to aid in eventual habitat development. The biggest challenge with these areas is keeping them properly maintained, especially during the summer months. Also, some of the small seedlings are difficult to distinguish from weeds without proper training. Small interpretive signs area being placed at these areas to help team members identify some of the plants and principles associated with native landscaping.

E BOP (North Entrances)

The north entrances have not faired well. A special effort is being put forth this winter to help spruce up this area. Over 500 bare-root plants (Virginia pine, Eastern red cedar, and smooth sumac) were planted along with a number of Virginia pine and Washington hawthorn seedlings (approximately 5-6'tall trees). Some of the areas that consist mainly of mulch and no vegetation will be returned to turf for easier summer maintenance. Thousands of nuts and berries were planted in the mulch to hasten Mother Nature in growing denser forested areas.

F Farm Pond

The Farm Pond, located on the east side of US 31, now has a vegetation buffer separating the pond from the cultivated field. The buffer is approximately 50' wide. This fits the stream corridor improvement program. It connects two segments of a narrow stream side corridor and also will provide a filter for agricultural run-off. Various bare-root seedlings, such as witch hazel and osier dogwood, were planted to add quality to the weedy buffer. Continuous monitoring is scheduled.

G Johnson Branch/Excel

This area is of great importance to the Saturn site ecologically. The stream, Johnson Branch, is home to the redband darter, a species deemed by the State in need of management. Improvement of stream-side corridors is necessary for this species to survive as well as for improving water quality. Other wildlife will benefit because wider stream corridors and a dense understory allow for easier mobility, greater habitat, and more food choices. Along the Excel course, 20 to 30' wide buffers are intermixed with open views of the stream. This allows wildlife and stream benefits while retaining appropriate aesthetic values for Excel participants. Maintenance costs aer reduced and stream bands are less susceptible to erosion.

H Constructed Mini-Wetland

This area is located at the base of the steep rock cliff in a perpetually wet area. The area was rid of exotic grasses and planted with vegetation typically found in wet areas (e.g. cattails). More planting will resume this winter. This area will also be signed. In the process, a grounds maintenance problem is being solved.

Ground Facts is a monthly update on the application of new ideas to reduce grounds maintenance costs, improve aesthetics, and increase environmental benefits at the Saturn stie. Work is sponsored by Facilities Maintenance at Saturn and the University of Tennessee in a partnership agreement. For questions or comments, please contact Karen Lorino at (931) 486-5029; email KareELo@aol.com or Dr. Jack Ranney at (865) 974-3938;email jwranney@utk.edu.