

## MANAGEMENT OF WATERS/WETLANDS BUFFERS IN URBANIZING LANDSCAPES: DO BIG PASSIVE BUFFERS REALLY MAKE SENSE?

Lee, L.C.; Hanson, J.M.; Largen, D.B.

lyndon.lee@wspgroup.com

In 2005 the City of Mount Vernon, Washington faced competing statutory mandates: accommodate a rapidly increasing human population and achieve no-net-loss of natural environmental systems, including waters and wetlands. The prevailing Washington State "Critical Areas Ordinance" (CAO) model, prioritizes on-site mitigation and relies on large passive buffers as the primary tool to protect waters/wetlands and faunal habitats at all scales. The problem: large passive buffers applied to urban settings have not stemmed the loss of natural systems' functions, have disproportionately constrained scarce urban lands, and have created a host of non-conforming land uses. The City wanted a better CAO model. Scientists and planners for the City of Mount Vernon and WSP Environment & Energy developed a set of optional alternative CAO provisions that allow a reduction of standard buffer widths in conjunction with required restoration of degraded on-site ecosystem and buffer conditions, an upgrade of on-site storm water facilities, and a monetary contribution to a City-wide critical area management fund, which is administered by the City's Storm Drainage Utility. An inventory and characterization of conditions in each of the City's seven stream sub-basins was conducted and over 100 acres of City owned waters/wetland habitats were identified for restoration. Monies collected from the CAO program are used solely for restoration of the City-owned sites, with the priority of expending funds within the same stream basin in which a project's impact occurs. The goal of no-net-loss of waters/wetland area and functioning is thus achieved at the landscape scale of a drainage sub-basin rather than just at a specific impact site.

## STRUCTURE AND SPATIAL DISTRIBUTION OF *TRICHILIA ELEGANS* A. JUSS. (MELIACEAE) IN A SEMIDECIDUOUS FOREST IN THE NHECOLÂNDIA PANTANAL, BRAZIL

Lehn, C.R.; Salis, S.M.; Mattos, P.P.

crlehn@gmail.com

SP. 16952

*Trichilia elegans* A. Juss. is a species with wide distribution, ranging from Venezuela to Uruguay and is usually associated with seasonal forests. The first studies with Pantanal flora date from the beginning of last century. However, studies considering structure and spatial distribution of tree species are very rare. The aim of this work was to identify the diametric and spatial patterns of *T. elegans* in a semideciduous Forest. The data were collected in 50 permanent plots with 200 m<sup>2</sup> each. All the young and adult individuals of the plots were included. To identify the pattern of spatial distribution, the Morisita Index (MI) and the variance/mean ratio (R) were used. The linear correlation coefficient was used to verify the correlation between juvenile and adult populations. From 296 individuals sampled, 218 were juveniles and 78 were adults. *Trichilia elegans* presented gregarious distribution, but the juveniles (MI= 2.32; R= 5.49) were more gregarious than the adults (MI= 1.88; R= 2.05). There was a high correlation between the densities of adults and juveniles (linear correlation coefficient,  $r = 0.60$ ). The diametric distribution was analyzed by the Liocourt "q" Coefficient showing more individuals in the smaller size classes (DBH 0-3 cm). The adult individuals presented DBH varying from 3 to 17 cm. The constant values in the coefficient indicate that the population is stable and presents regeneration potential in the studied area.

Structure and spatial

2008

SP - 16952



56514 - 1