1014-39-204      **V. L. Kocic\*** (`vkocic@gmail.edu`), Mathematics Department, Xavier University of Louisiana, 1 Drexel Dr., New Orleans, LA 70125. *Dynamics of the Discrete Model of West Nile-Like Epidemics.*

The system of non-autonomous nonlinear difference equations models the spread of the West Nile Encephalitis. The disease is transmitted by mosquitoes to both birds and humans; mosquitoes can be infected only from birds; infected birds and infected humans can recover, while infected mosquitoes can not recover. The system of difference equations models the effects of the West Nile-Like Virus on populations of birds, humans, and mosquitoes. Originally introduced by Thomas and Urena, the model was later modified and generalized by Darensburg and Kocic. It includes the effects of spraying to reduce the population of mosquitoes as a main tool for control of the epidemics. In this paper we the study the dynamics of the model, when the spraying function (actually the kill rate of mosquitoes) is a step function of mosquito population size that is the spraying is conducted only when mosquito population reaches or exceeds some threshold level. (Received August 18, 2005)