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Jerome Goddard II* (jgoddard@aum.edu) and R. Shivaji. Diffusive logistic equation with negative density dependent emigration on the boundary.

The structure of positive steady state solutions of a diffusive logistic population model with negative density dependent emigration on the boundary is examined. In particular, a class of nonlinear boundary conditions that depends both on the population density and the diffusion coefficient is used to model the effects of negative density dependent emigration on the boundary. We focus on the effects of constant yield harvesting on the structure of positive steady state solutions. In this presentation, we discuss existence results established via the well-known sub-super solution method. (Received August 19, 2013)