Peter J. Wilcoxen
PPA 990 Natural Resource Economics

The Maxwell School
Syracuse University

Exercise 1

Use a Java-capable web browser to play the fishery simulation game `herrings` available from the class web page. The `herrings` page itself explains the basic rules and objectives of the game. Please do the following:

(a) Using the equations on the game page, derive an expression for the level of effort that would maximize sustainable profits on the fishery in the absence of stochastic shocks (that is, if the *shock* variable discussed on the web page is always 0).

(b) Now determine the numerical values of the model's parameters. Use the game itself to collect data, and then set up and run an appropriate regression. Please provide a printout of the regression results with your answer.

(c) Determine how important it is to get the level of effort right by calculating the range of effort values that yield at least 90% of the profit at the optimum. In other words, how close to you have to be to the optimum to get at least 90% of the optimum profit? You may assume *shock*=0 for this question.