

A certain reservoir project can be completed instantaneously at a cost of \$100 million. It will produce real annual net benefits of \$6.27 million indefinitely.

- a. Given a planning horizon of 40 years, verify that the Internal Rate of Return for the project is 6%, which just happens to be the real social rate of discount. That is, compute the net present value of the project over 40 years using a discount rate of 6%.
- b. One way that planners can be more socially attentive to events in the distant future is to adjust the discount rate. The text, citing Cropper and Laibson, suggests employing a social discount rate that is 2% lower than the private rate. What net present value is realized over 40 years by the reservoir project above, assuming a discount rate of 4%?
- c. Another way to emphasize future conditions is to explicitly consider a longer planning horizon. Assuming 6% discounting, what are the net present benefits for the reservoir project using an infinite planning horizon?