

Exam I
(100 points)

- (10 pts) 1. Given here is fully defining information for natural water demand by two separate agents, A and B:

$$w_A = 10 - 2p \quad \text{and} \quad mb_B = 4 - w_B.$$

What is total natural water demand if these two agents use water nonrivally from the same source?

- (10 pts) 2. Currently, daily water use in College Station (CS) is 12 million gallons, and the average agent is paying \$3 per thousand gallons. If the price elasticity of demand is -0.4 , what is a good estimate of the City's daily water demand function? What units do the variables of your function utilize?
- (16 pts) 3. Without using any examples, define the term "externality". In what important way are externalities a general social problem and what policy mechanisms might be employed to deal with this problem (again, no examples please)?
- (20 pts) 4. What is the dynamic efficiency criterion and what technical condition(s) does(do) it recommend be achieved? What important policy tool is also suggested by these mathematics and how would it operate?
- (20 pts) 5. Identify and discuss two (and only two) reasons to think that the social discount rate (SDR) might be different than the private discount rate (PDR). For each reason, which rate is higher and why?
- (24 pts) 6. For three different property forms,
- name the form;
 - name and explain an actual water institution representing a good example of the property form;
 - fully explain why your example is fitting in relation to how the property form is defined.