

Exam II
(100 points)

- (15 pts) 1. The federal process of cost benefit analysis as specified by the P&G makes strong use of multiple "accounts." Select 2 of these accounts (name them). For each of these two, describe what types of things go into them and identify the role of the account in actual decision making. Why are multiple accounts such as these needed to conduct cost benefit analyses of major projects?
- (20 pts) 2. Invent a decreasing block rate billing structure that includes a meter charge. No justifications are needed for your numerical choices. Specify all the quantities needed for your system. Graphically show the selected volumetric marginal price. Either describe fully how a water bill is computed under your system or provide a complete equation for water billing. The description or equation should accurately cover all possible water use levels.
- (20 pts) 3. Two potential water traders – one a likely buyer and one a candidate seller – are at your office to discuss a deal you have designed. Both are literate in economics and will be able to grasp your tools, even if the tools are not standard. Using an appropriate graphical tool that recognizes their combined holdings of water rights and their individual holdings, explain to them their current position and each person's marginal water value. For a somewhat small proposed trade of your choosing, show (on the graphic) to the seller her potential loss in total water benefits and show to the buyer his potential gains in total water benefits. Explain.
- (20 pts) 4. Select a specific water conservation measure that might be adopted by some agent or public entity. The only requirements of your selection are that the measure should involve some cost(s), and it should generate water savings over multiple years. Describe the conservation measure. Describe the calculation of equivalent single price for this measure with precision and clarity. What specific information do you need to calculate this equivalent single price?
- (25 pts) 5. Identify and discuss an operating U.S. water market, indicating what is being traded (surface water, ground water, or both), where the market is located (state and basin), and how the externalities of trade are treated in this market and why. Identify a unique feature of this market, relative to other existing water markets and describe how/why this is unique.