



# WATER RESOURCES MANAGEMENT

BENEFIT-COST ANALYSIS

# INTRODUCTION

- Theory of the Firm
- Value of B/C approach

# THEORY OF THE FIRM

- Firm is a technical unit that produces commodities; in water resources that commodity could be:
  - Raw water (drinking, irrigation, product)
  - Head (for power generation, navigation)
  - Heat exchange (cooling water)
  - Dilution-Attenuation-Factor (waste assimilation)

# FIRM BEHAVIOR

- Allocation of resources for production
- Determine level of production
- Respond to changes in price for inputs and outputs

# PRODUCTION FUNCTION

- A relationship between outputs and inputs
- For example,  $y$  could be pounds of corn,  $x_1$  irrigation water volume,  $x_2$  fertilizer application