Agricultural Water Use Efficiency

Gordon McCurry

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Dr. Gordon McCurry
Camp Dresser & McKee

TWO DECADES OF WATER LAW AND POLICY REFORM:
A RETROSPECTIVE AND AGENDA FOR THE FUTURE

June 13-15, 2001

Natural Resources Law Center
University of Colorado School of Law
Boulder, Colorado
Outline of Comments

• Hydrology of an Irrigated Watershed
• Irrigation Efficiency and Return Flow
• Effects of Increasing Irrigation Efficiency

Hydrology in an Irrigated Watershed

Irrigation Efficiency and Return Flow

• Irrigation Efficiencies
• Typical Efficiencies:
  o Furrow: 40 – 60%
  o Sprinkler: 70 – 80%
  o Drip: 85 – 95%

• Excess that percolates to water table and migrates in aquifer back to river
Effects of Increasing Irrigation Efficiency

- Lower percolation, recharge & return flow
- Less water in river in late season
- Fewer junior water rights receive water
  - More late-season calls on river by seniors
- Need for additional reservoirs, recharge projects
  - Cost, riparian impacts