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Two Decades of Water Law and Policy Reform: A Retrospective and Agenda for the Future (Summer Conference, June 13-15)

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Agricultural Water Use Efficiency

Gordon McCurry

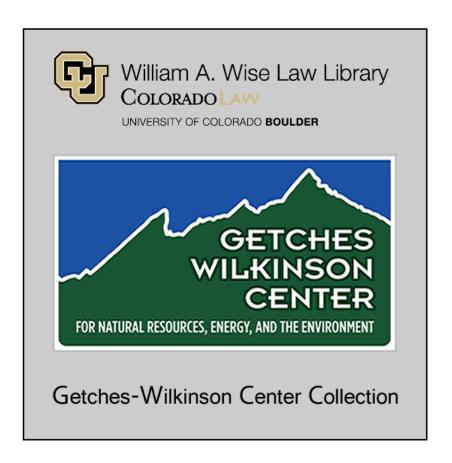
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Gordon McCurry, *Agricultural Water Use Efficiency*, in Two Decades of Water Law and Policy Reform: A RETROSPECTIVE AND AGENDA FOR THE FUTURE (Natural Res. Law Ctr., Univ. of Colo. Sch. of Law, 2001).

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Agricultural Water Use Efficiency

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

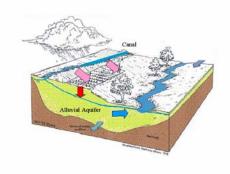
Natural Resources Law Center University of Colorado School of Law Boulder, Colorado

Outline of Comments

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

Hydrology in an Irrigated Watershed

Hydrology in an Irrigated Watershed



Irrigation Efficiency and Return Flow

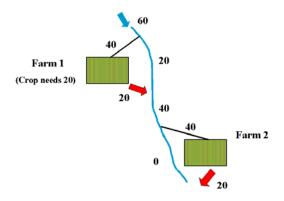
- Irrigation Efficiencies
- Typical Efficiencies:

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

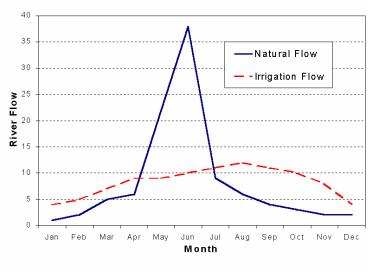
Diversions & Streamflow: (50) Efficiency)

Diversions & Streamflow: (50 % Efficiency)



Stream Flow Hydrographs





Effects of Increasing Irrigation Efficiency

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