

**THE CHALLENGE OF
ALLOCATION:
LESSONS FROM THE ALLOCATION OF
NON-FISHERY RESOURCES**

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Other Allocated Resources

- ▣ Water
 - Groundwater
- ▣ Electromagnetic Spectrum
- ▣ Public Timber
- ▣ Oil & Gas
 - Private
 - OCS
- ▣ Grazing
 - Federal public lands
 - State trust lands
- ▣ Pollution Allowances
 - SO₂
 - Carbon



Lessons

- ▣ Allocation decisions are seldom easy
 - Particularly where there are existing users
- ▣ Five factors determine most allocation schemes:
 1. Political viability
 2. Equity
 3. Efficiency (maximizing economic wealth)
 4. Public revenue
 5. Future flexibility
- ▣ There are no commonly accepted rules of equity
 - Example: family chores
- ▣ Two allocation approaches are dominant:
 1. Historic use – where there has been prior use
 2. Auctions – for “virgin” allocations
- ▣ Markets often help ease the allocation decision
 - Efficiency + flexibility

Grazing Rights

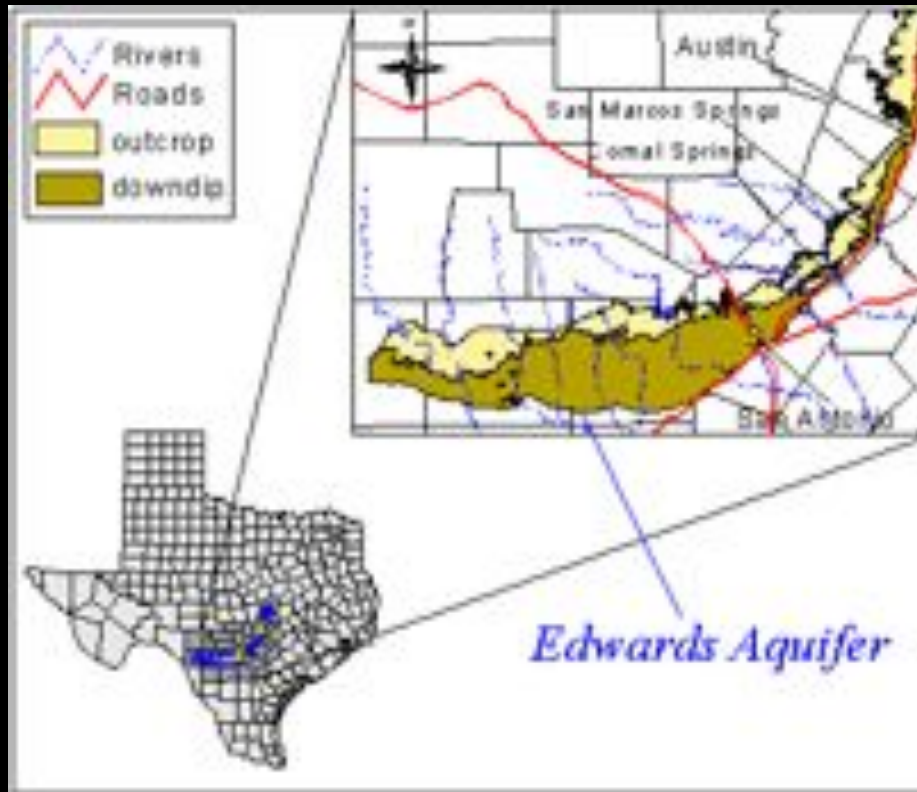
- ▣ U.S. Taylor Grazing Act of 1934
 - Grazing districts
 - Can issue use permits
 - ▣ “Reasonable fees”
 - Permit allocation
 - ▣ Ownership of adjacent lands
 - ▣ Past range use
 - 10-year term
 - ▣ Preferential right to renew
 - ▣ New holder must pay value of prior improvements
- ▣ State Trust Lands
 - Auctions
 - ▣ Enviro purchase controversy



Private Oil & Gas

- ▣ Law: Rule of Capture
- ▣ Regulation: Correlative Rights
 - Acreage
 - “Pooling”
- ▣ “Unitization”
 - Voluntary
 - “Compulsory”
 - ▣ Super majority
 - ▣ Regulatory review

Edwards Aquifer, Texas



- ▣ 1990
 - “Rule of capture”
 - Increasing use:
 - ▣ Urban
 - ▣ Ag – no metering
 - Significant overdrafting
 - Environmental impacts
- ▣ Lawsuit forced Texas to act
 - Reduce total pumping over time
 - Address emergency droughts

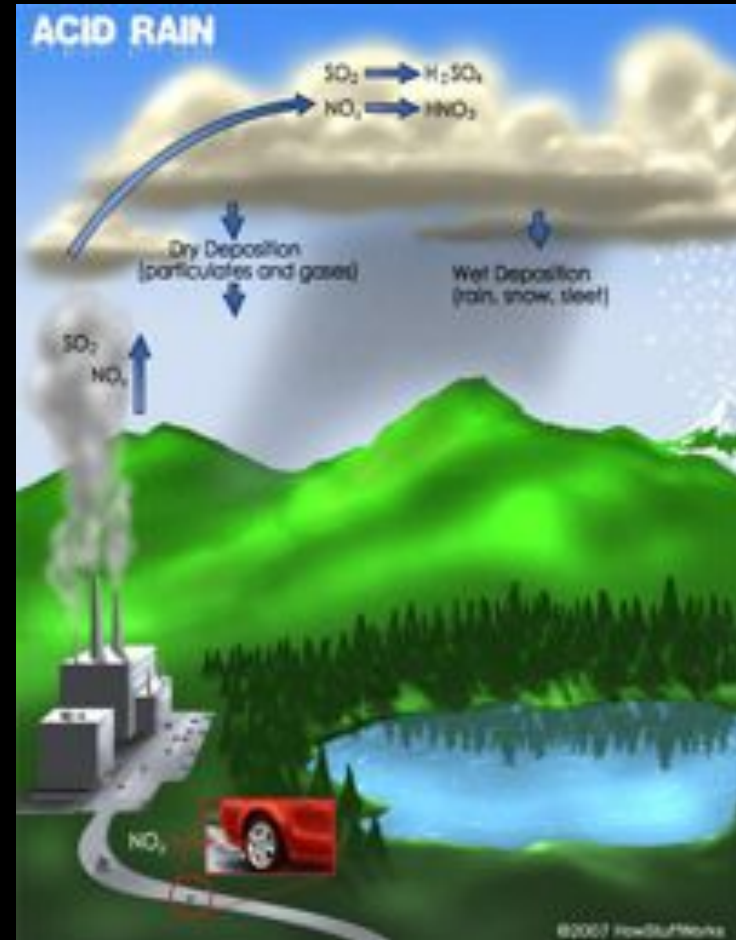
Edwards Aquifer Act

- ▣ **Assigned GW rights**
 - **Cities: metered use**
 - **Farmers: larger of**
 - ▣ 2 acre-feet/acre
 - ▣ Actual average use over 3 years
 - **Excluded small uses (domestic & livestock)**
- ▣ **Provided for market in GW rights**
- ▣ **Established priorities for emergency droughts:**
 1. **Municipal, domestic, & livestock**
 2. **Industrial & crop irrigation**



1990 Clean Air Act Amendments: Acid Rain Program

- ▣ Acid rain
 - Midwest coal-burning power plants
- ▣ Goals:
 - Reduce SO_2 emissions by 10 million tons
 - 50% reduction
 - Reduce NO_x emissions by 2 million tons



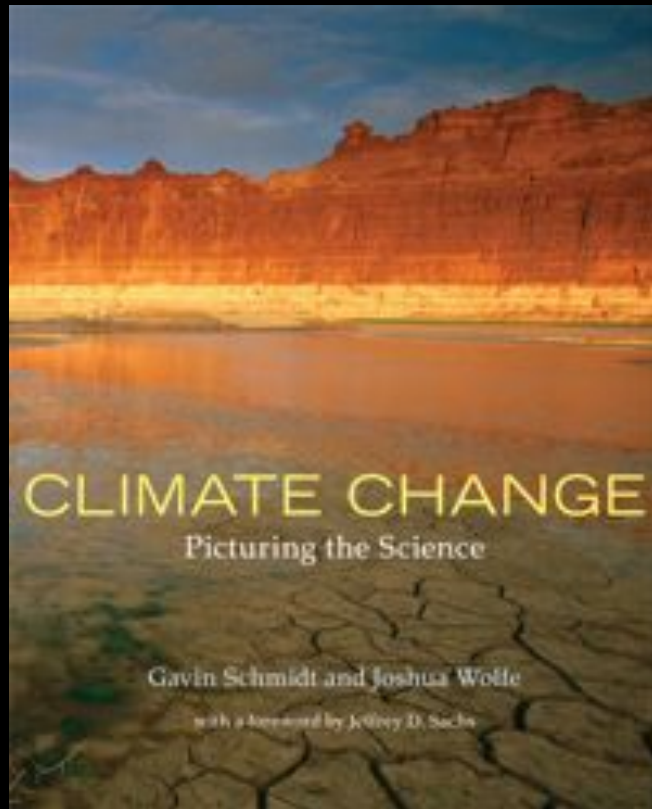
Three Sources of Allowances



1. Initial allocation
 - Historic formula
 - Emissions (output)
 - Fuel consumption (input)
 - “Bonus allowances”
 - Clean-coal technology
 - Conservation
 - Renewable energy
 - “Losing regions”
2. Market
3. Annual auctions
 - New entrants

Climate Change Mitigation Greenhouse Gas Reductions

- ▣ Kyoto Protocol
 - Voluntary reductions



- ▣ California AB32
 - Economic & Allocation Advisory Committee
 - ▣ 16 members
 - Economists (11)
 - California PUC
 - Business (2)
- ▣ Options
 - Fixed allocation
 - Updated allocation
 - Auction
- ▣ Considerations
 - Efficiency
 - Fairness
 - Environmental effectiveness
 - Simplicity and transparency
- ▣ “Cap and Trade”

Waxman-Markey

- ▣ Cap and trade
- ▣ Dual allocation system
 - Set allocation
 - ▣ Industry (20%)
 - Industry formula
 - ▣ Transition assistance – e.g.,
 - Energy-intensive industries
 - ▣ Energy policy – e.g.,
 - States with renewable energy
 - ▣ Other public policies – e.g.,
 - Worker assistance
 - Auctions
 - ▣ Revenue
 - ▣ Strategic reserve for cost containment
- ▣ “Offsets”



Allocation Systems

▣ Formula Allocations

- Historic use is virtually always the starting point
 - ▣ Input vs. output
 - ▣ Default assumptions (e.g., Edwards Aquifer)
- Public policy adjustments or add-ons
- Public reserves (for new entrants or cost mitigation)

▣ Auctions

- “Virgin” allocations
- Revenue priority (e.g., state trust lands)

Flexibility Mechanisms

- ▣ Limited terms
 - Preferential renewal right?
- ▣ Updated allocations
- ▣ Auctions of reserved allocations
- ▣ Markets

Uses of Markets

- ▣ Achieve efficiency
 - Avoids potential tradeoff with equity
- ▣ Provide flexibility

Questions & Thoughts?

