



Who Owns the Water?

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"Who Owns the Water?"

By Mason Gaffney

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"Hold the waters in the hands of the people."

- John Wesley Powell

The approach of this paper is to state and dispel common fallacies that stand in the way of recognizing and implementing common rights to water.

1. "Water rights are real property"

Wrong. To begin, "right" is wrong. A right is something like free speech, possessed by everyone. Most state constitutions read that the water of a state belongs to the state (in trust for the people).¹ In California it is Water Code Section 102: "All water within the State is the property of the people of the State, ..." Private water interests are mostly licenses, in the 17 western states. A water license has about the same standing as the privilege of some airlines to occupy certain time slots; of a cab to work the streets of New York; of a broadcaster to use a frequency; or of a rancher to graze on Federal lands. It is subject to conditions, and to forfeiture.

You do not find water licenses recorded like title deeds to real property. You hardly ever find them on the property tax

¹There are complex intergovernmental issues at the boundaries among states. There are Federal properties, too, and dozens of issues and lawsuits between states and the U.S. Here we confine our attention to one state.

rolls.² A water license may be taxed indirectly through the value of taxable real property it serves.³ However, unused and misused water reservations, the major water problem of the day, do not much raise the value of any land. There is a tendency for owners and their lawyers to make permits seem solid and "real property" except when the subject is property taxation, at which point they evanesce. (The resulting double-talk has been deplored in Gaffney, 1962.)⁴

The upshot is that The Legislature has much latent power. In Oregon, a leading decision includes this: "It does not seem to me that water use in this country ever rose above the dignity of a mere privilege over which the state had complete control" (In re Hood River, 1924, 190-91).

5. "The cost of water is passed through to consumers in higher prices" *supply of flows wtr. is fixed, like land.*

Wrong. Prices are determined by supply and demand, not cost. If you sell in a national or world market, or even a competitive local market, you are a price-taker, not a maker.

²There are exceptions, too trivial to pursue here.

³The legal concept of "appurtenancy" is used to this end. Water rights are said to be "appurtenant" to the lands they serve, meaning they disappear into the land and are not listed separately for taxation. However when the owner wants to sell water separately from land, appurtenancy is no problem (Hutchins, 1956). Appurtenancy is a supple term that is used a) To give landowners preferential claims on water; b) To bolster the standing of water claims under color of real property; c) To protect water claims from taxation; and finally now d) To let surplus water claims be cashed out separately.

⁴Wells Hutchins' pamphlet on water law for California farmers reads in boldface headings "Water Rights are Real Estate," but the following text says no such thing (Hutchins, 1956b). His full-dress book of the same year even allows that the 1928 Amendment to the California Constitution limits water claims previously considered property, and these limits "apply to the use of all water under whatever right ..." (Hutchins, 1956a, p.19). "... the appropriator may take the surplus without giving compensation" (op. cit., p.18).

In addition, water is an unusual kind of input whose high price may actually increase production. When you pay more for water you often switch to higher-valued crops. You substitute capital and labor for water on the same land, and often raise yields per acre.⁵

With dearer water you use less by controlling it better, switching from primitive furrow irrigation to sprinklers, spitters and drip. This in turn lets you do new things like growing avocados on steep hillsides formerly barren, yielding more dollars of product for less water. These facts point to a portentous corollary: you can raise public revenue from water while thereby improving the water economy.

6. "You can't stop a landowner from pumping on his own land"

Wrong. In coastal areas, pumping is limited and/or taxed to stop salt water intrusion. Districts that replenish ground water charge pumpers.⁶ A partial solution to water problems would be a severance tax on withdrawals.⁷ A tax can be viewed as an

⁵Conversely, when water is cheap you substitute water for labor and capital. The effect of cheap water may be seen in the populations of Fresno, Kings and Tulare Counties, California. Their populations grew by 32% in the decade of dear water, 1940-50. Then they received an influx of cheap water from two Federally subsidized projects: Pine Flat Dam on the Kings River, and the Friant-Kern Canal of the Central Valley Project. For the next 26 years their populations stopped growing, and rural populations fell through outmigration (Ballard, p. 30).

⁶In 1959 the Orange County Water District, covering 180,000 acres, had been for years levying a "replenishment assessment" or charge on the production of ground water. The enabling legislation dates from 1933. In 1968-69 its pump tax rate was up to \$13.30 per acre-foot for urban use. Water Code Sections 60220 and 55335 enable water replenishment districts anywhere (Crooke; Birdleough and Wilkins, p.267-68; Weatherford, pp. 1035-36).

⁷Such a tax has been proposed by White, p.5; Boulding, p. 91; Charles Phelps et al., cit. Dennis, p.79; Brewer, pp. 240-42; Young and Martin; Billings; Gaffney 1969, 1973, 1977, 1988; and, indirectly, by van Schilfgaarde, p. 114. Colorado applies such a tax along the S. Platte River. It has "operated for several years, ... with little problem or controversy" (Young, Daubert, and Morel-Seytoux, p.790).

economic price charged by the owner of water (the state) for using its property. The rationale is like that for effluent charges on polluters.

Whether one chooses taxation or regulation, we must constrain pumping if any system of surface control is to work. While California rations and conserves surface water, landowners in the San Joaquin Valley just punch more wells into the aquifers and pump up free water the State keeps recharging at high cost. In the drought of 1976-77, 10,000 new wells were drilled in the San Joaquin Valley (Weatherford, p.1031). Thus we have The Great Water Treadmill: subsidized water supply followed by overdraft followed by State rescue projects followed by new overdrafts, etc. ad bankruptcy.⁸ Kern County landowners keep irrigating desert lands, overdrafting, and petitioning Sacramento for "emergency" aid. They even oppose metering city water, figuring that "if cities get slapped with meters, their wells are next." (News Services, 1991.)

7. "Economics is hostile to environmentalism"

Partly wrong, although some economists are guilty. Economics, properly pursued, deals with how best to meet human wants, including conserving amenities, environments and resource supply. Many economists still think only of maximizing GNP measured in the old-fashioned way developed to mobilize resources for war. Others write only of sustaining farm land values, slighting the cost to fish, wildlife, and the taxpayers (Knapp and Vaux, Jr., 1982)⁹. Buchanan and Tullock seem to rationalize such an attitude (Buchanan and Tullock, 1975).

Many others, however, are developing environmental and resource economics. Here are four common goals.

⁸Palm Springs and the Coachella Valley get water from the Colorado River Aqueduct and store it in their aquifer. The water would otherwise go to Los Angeles and environs, which would then need less from northern California (Warren, 1991). There is no constraint on pumping. There are 82 golf courses operating in the Coachella Valley, a Sonoran desert, and 50 more planned.

⁹These authors constrain their model with a paramount objective of protecting rents and prices of overlying farm land.

A. Economizing is conserving.

Rationalizing water use is inherently conserving. For example, if we put the Santa Ana River to its highest and best use, it would obviate heavy water imports, and the associated environmental damage. This river rises in an area of intense water shortage. There is no charge imposed on diverters at the source; Gage Canal Company customers (I am one) pay a small variable cost for the operating expenses of delivery, mostly by gravity. These plus an annual fixed charge come to some \$20/af. We diseconomize accordingly.

Meantime, the State is importing water here at a true social cost of about \$2,000 per acre foot, 100 times what we pay (Section #11, infra). If there were a market where we could sell, and a fortiori if there were a price charged us, at one-tenth of that amount we would release a great deal of water, averting imports.

B. Subsidy wastes both dollars and ecologies.

"You have no right to stop growth," says the hydro-imperialist. I agree, but neither have we any duty to subsidize growth. Water supply and flood control and navigation projects are heavily subsidized. Subsidy generates waste almost by definition, in the amount of the subsidy. It also creates scarcity of water where nature has given us plenty. On the lower Colorado River, every major user is subsidized, mostly by Congress. They pay nothing for water at the source, but are paid to withdraw it. Little wonder there is a shortage, and ecological damage.

Hydro-imperialism is the common enemy of Sierra Clubbers and economists. We need their political help: Congress responds better to organized ornithologists than model-churning economists. Sometimes the results are bizarre, but less so than the conventional results of porkbarrel politics.

D. Correct economic analysis presumes public trusts.

For years, economists would ask, say, canoers what they would pay to keep a river wild. They got modest numbers. Then someone thought to invert the question: what would the developer

have to pay the canoers to take their river away?¹⁰. One arguing ex parte the canoers stresses that canoers' WTA (Willingness to Accept) is the relevant dollar value, and it is much higher than their WTP (Willingness to Pay).

Following Coase, one must have faith that $WTP = WTA$ (Mitchell and Carson, 1981¹¹). It doesn't matter how you assign entitlements; resources end up allocated the same, no matter who starts with all the chips.¹² However, "received theory" has "been unable to explain ... the persistently observed differences between WTP and WTA measures" (Cummings et al., 1986 p.41).¹³ Could it be that "received theory" was received damaged?

It is common to hear "My home is not for sale at any price." One can take that attitude when she holds the entitlement. One never hears "I will pay any price." Coase's Theorem is a throwback to the old Manchester School, which prescribed "free trade in land" as the panacea for resource problems, brushing aside the offensive concentration of inherited entitlements.

Pollster-Coasians like Mitchell and Carson (1989) are hard pressed to reconcile people's answers with Coase, but they keep trying. One review faulted "the high rate of unusable responses." (Fischhoff, p.287.)¹⁴ Why "unusable"? Carson has written that he throws out WTA answers when they exceed WTP answers by more than 5% (Mitchell and Carson, 1981, 1988; see also Mitchell and

¹⁰The genii in question may have been Herfindahl and Kneese, 1965, rpt. 1974, p.287.

¹¹In the 1981 work they find the difference is only 1%. They cite this approvingly, 1989, pp. 32-33.

¹²For an example of the genre see Wahl, p.130.

¹³Hanemann (1991) has tried valiantly to torture "received theory" into fitting the facts. One can only admire his refusal to follow those who sweep unwanted facts out with the trash. I doubt, however, if received theory warrants the close attention he gives it. Rather, he shows how stilted and unwieldy this theory has become.

¹⁴Reviewer Fischhoff continued, "they still fall far short of the standards acceptable to research professionals."

Carson, 1989, pp. 32-34, 226¹⁵). Sometimes over 50% of the responses are "invalid."¹⁶ They don't fit the Coase model; they must be "methodological artifacts," "outliers," "protest responses," or "aberrations."

Consider aberrational aborigines with Treaty Rights to fish. Their WTP for those rights is minimal: the mere hypothesis they must pay implies they are impoverished and cannot pay. On the other hand, their WTA presumes they are in control. Ownership lets you be as unreasonable as you please.¹⁷ We notice mainly when it is someone else, especially someone different.

Indians are an extreme case, but short generations back we share the same dependence on traditional lands held in common.¹⁸

¹⁵Mitchell and Carson are like Proteus, hard to pin down as they change guises. One must splice together different passages. It comes to this, however. High-valued answers to WTA questions are an "artifact," and not "meaningful." "WTP and WTA should be within 5% of each other ..." pp. 22-23 (emphasis supplied). To say "I want an extremely large ... amount of compensation for agreeing to this" is a "protest answer." 50% or more of all answers are often "protest" answers. These answers are "outliers." p.34. "Outliers" may be removed, either outright or by using statistical devices that have the effect of discounting them. p.226.

¹⁶The case is something like that of NASA's Goddard Space Flight Center that missed detecting the ozone hole before Farman found it in 1985. "Their instruments had recorded the losses (of ozone), but the computer interpreting the results had been programmed to ignore readings that deviated so far from normal" (BW, 22 July 91, p.10).

¹⁷The core of conservative theory is undermined by survey findings that WTA>>WTP. Conservative theory relies on Pareto's notion that no policy may take from one rich landowner to help a thousand starving orphans because you can't compare their subjective feelings. This is the bulwark of inherited property against redistribution. We must begin with the status quo and allow only win-win changes. When, however, we acknowledge common birthrights the shoe is on the other foot. Now you can't pollute anyone's air or water because the victims own it. Conservative theorists, seriously threatened, are busy plugging the dike.

¹⁸Another large group to consider are the rural Hispanics of the southwest, who put a high value on preserving their communities. A survey in Taos and Questa, N.M., found 80.6% were

These traditions still live in the cultural subconscious, and affect current attitudes. They must find a place in formal micro modeling if it is to represent reality. If entitlement really doesn't matter, give it all to me. Otherwise let's get down to reality and bring distribution into economic analysis.

8. "Water conservation begins at home"

Wrong. Cutting domestic water use is tokenism. Most "domestic" water use is not in-house, but for lawns. Most water use is not urban, but for farms. Most farm use is not in job-making crops like berries, tomatoes or fruits, but for alfalfa, irrigated pasture and rice.¹⁹ Recent California "Water Bank" experience suggests how elastic farm demand is. In 1990, after five years of drought, the State bought surplus waters from "water farmers" on the Yuba River in the Northern Sierra and offered its free service as broker and wheeler to move it south to droughted growers. The "Bank" is still holding water it cannot sell at its cost.

10. "The market can solve all problems"

Wrong. Here are four reasons it cannot.

A. Some human rights are unalienable.

You may not pledge or sell a child. May we then collectively pledge them for national debts? Right or wrong, we surely have done so, enslaving their future to our past, until they rebel. To atone, I suggest we protect whatever birthrights we can leave future generations. Water belongs to the states, as trustees for all citizens. The states are trustees for the rights of every helpless child born to pay future taxes.

"Opposed and don't want to sell." Only 6.1% answered yes to "Would sell if price is right" (Brown and Ingram, p.79). We are talking about poor people and expensive water.

¹⁹Young and Martin (1967) demonstrated this long ago in Arizona, showing the average product of water to be 60 times higher in industry than in sorghum.

That may be a right of access, where feasible. Often, access must be limited to manage the resource efficiently. This has been the occasion to extinguish common rights, but it need not be so. We need merely replace the common right of access with a state duty to collect revenues to serve common needs.

A right of revenue means a state would charge people for withdrawing its water to use on private lands, instead of subsidizing them to do it, as now. It would "turn Negabucks into Megabucks" for the state treasuries and their trustors, at the same time promoting efficient use of water.

C. Markets require motivated sellers.

In 1961 I saw great promise in ridding water of legal barriers to alienability, making it merchantable (Gaffney 1961, 1962). Now, I startle and blush as "new resource economists" get totally carried away and make a panacea of the pink-slip²⁰. Give out negotiable titles, they say, declare a free market, and watch the magic work (Anderson, 1983).²¹

RAND Corporation has thrown its prestige behind water marketing. California Assemblyman Richard Katz carried a statute in 1982 to remove some legal barriers to selling or leasing water permits²². The Environmental Defense Fund has converted itself into a water brokerage. In 1986 a new Katz bill let water transferors use conveyance facilities of public agencies²³. Water marketing is all the rage.

The results are meager and disappointing, considering the pent-up needs.²⁴ Few deals have gone down,²⁵ drought. Dauntless Assemblyman Katz is moving a third time to remove legal obstacles to water sales (Ellis, 1991b; Ellis, 1991c). The latest move lets individuals sell, bypassing the water districts that supply

²⁰Pink slip is California-speak for salable title to an automobile.

²¹Nancy Moore of RAND Corporation is partial to the pink-slip metaphor, but she and her former co-author Charles Phelps both seem temperate in their claims. By telephone interviews, Phelps is sensitive to the distributive issues raised here. Moore, an engineer, may or may not be, it's hard to be sure.

²²AB 3491. The statute lets water districts act as brokers for individuals, and mandates state agencies to encourage and provide technical help. The State Department of Water Resources has set up a Water Transfers Committee to monitor and help.

²³AB 2746.

²⁴For \$180/year one can keep current with Water Market Update, Santa Fe.

them²⁶. This won't work well: it jeopardizes the distribution systems of water districts, which have survived by serving compact blocks of land to minimize conveyance costs (Gaffney, 1969).

Actually, water claims have been legally alienable, after a fashion, for many years²⁷. "Water banking," too, has been around a long time²⁸. Something else is obviously wrong, and it is this: the sellers are unmotivated. Water flows are perpetual, demand keeps growing, there is no cash drain and no hurry. The broker's delight, the motivated seller, is a family moving, or anyone with surplus land subject to debt and property taxes. Farm water districts are the broker's despair. Water permits are free of debt (banks don't lend on precarious tenures), and generally free of property tax.

²⁶Procedures for severing water from specific lands are still so clumsy and uncertain that MWD plans to rely mainly on buying lands outright and idling them, to get their waters (Warren, 1991). This extreme "meat-axe" procedure dates back to 1907: it is how Los Angeles got its Owens Valley waters (Kahrl, 1982; Ostrom).

²⁷California Water Code Sections 1700-05 spell out procedures. Citing a 1942 case, Wells Hutchins wrote "The appropriative right is ... separable and alienable from the land to which it became initially appurtenant; ..." (Wright v. Best, 1942, cited in Hutchins, 1977, Vol. III, p.191.) 51 years ago in 1940 the Madera I.D. sold its water "filings" on the San Joaquin River to the U.S. Bureau of Reclamation for the Central Valley Project (Downey, p.6).

²⁸Irrigation Districts along the Friant-Kern Canal were selling surplus Federal water in the 1950s, with Federal blessing (Maass, 1952). Water filings by the Feds were granted by the State not to certain lands, but "for the use and benefit of said Central Valley Project," to further a "general or coordinated plan ..." (California Farm Bureau, pp. 58, 60). Such pooling and banking was inherent in the ambitious "Marshall Plan," the comprehensive Statewide plan of the 1920s that devolved into the present Central Valley Project. In the 1977 drought there was active banking along the California Aqueduct (ironically, from south to north, and from urban to farm use) (Angelides and Bardach, p.17; Robie, p.49). In 1977 Congress authorized the U.S.B.R. to broker water sales (Robie, p.49; Wahl, pp. 136-38).

The real estate market works, such as it does, because hundreds of thousands of deeds are recorded every year. The water market has only dozens. To get this market working we need some constructive use of property taxation or the equivalent.²⁹

D. "Rent-seeking" perverts the market.

The prior appropriation doctrine for establishing water claims is the locus classicus of "rent-seeking": distorting present investment to secure future rents. The motive is to divert, develop and half-use water before its economic time, to lay claim to its future. In 1949 the California Supreme Court triggered a "race to the pump house" (Krieger and Banks, 62) when it proclaimed the doctrine of "mutual prescription" for groundwater basins (City of Pasadena v. City of Alhambra, 1949). This "encouraged defensive ground water overdrafting by pumpers in other basins who anticipated ground water adjudication" (Gleason, 709). Claims to water are constantly being made, expanded and firmed up; any giveaway process violates the virtues of the market. The rule for prior appropriators and adverse possessors is "Waste today, want not tomorrow."³⁰

As we segue toward a market system speculators are moving in to acquire permits from present holders. The speculators visualize commercializing and moving the water, using political influence and legislation to modify the water permits. This is new, more sophisticated rent-seeking, blended with old-fashioned

²⁹A water license is not real property, but a privilege. California's tax limit applies only to "real property." This raises the interesting possibility that a tax based on water licenses would be exempt from California's tax limit.

³⁰"... farmers or cities first divert and use water by crude systems. Conservation measures often are delayed until the pinch is on." (Patterson, 1991) In 1962, The Orange County Water District sued every upstream diverter on the Santa Ana. In the 1969 judgement, "each water agency's allotment is based on historical use." (Patterson, 1991.) With that in mind, Riverside Mayor Davison boasted that "Riverside's water use doubled during my term of office" (1941-48). He deemed it an achievement. It minds one of the University Chancellor who boasted his greatest achievement was creating four new Vice-Chancellorships and several Associate Deanships.

land speculation. It is raising great anxiety (Gottlieb, 1988, pp.261-80), and causing many to reject water marketing.

There is a better way. A policy of taxing water withdrawals (as advocated herein), based on the opportunity cost of water, will do the job without giving away the benefits.

13. "Common rights lead to the tragedy of the commons"

Half wrong, and misleading. "Tragedy of the commons" has become part of the culture, but analytically and economically it does not hit the nail on the head. Overdrafting aquifers is a tragedy, all would agree. Aquifers are not a commons, however: their use is restricted to overlying landowners, on overlying lands. The tragedy of overdraft could also be ascribed to landowners' unconstrained assertion of private property rights.

Overuse per se is the tragedy. Blaming it on common rights is biased. Asserting common rights need not imply open access and unrestricted use. It is often the opposite. Here are five examples of asserting common rights by restricting use: 1, constraining water use by taxing withdrawals; 2, constraining hunters and fishers by imposing bag limits; 3, constraining pollution of common waters by imposing effluent charges; 4, protecting watersheds by regulating timber harvest practices; 5, protecting swimmers and small boaters by limiting size and power of boats.

Economists like to believe they are "value-free." If so, they will replace the "tragedy of the commons" with "the tragedy of overuse." Overuse will often be ascribed to suppressing common rights, not upholding them.

14. "Water trades are win-win deals"

Partly wrong. Most water deals are "win-win-lose". The consistent loser is the general taxpaying public. Every sale of licenses helps legitimize private seizure of common property. Besides the common water, there are subsidies attached. In December, 1988, the U.S. Interior Department issued a water marketing policy to let recipients of subsidized water from its

projects sell the water and keep the profit. The "innocent purchaser" would seem now to have secured a right to be subsidized in perpetuity. That is the overt position of Wahl, of Angelides and Bardach, and of the Environmental Defense Fund.

The idea of water marketing is to get government out of the way of the market. Wahl et al. would deal government in forever. Every subsidy and giveaway becomes a property right.³¹ That means the taxpayers are bound forever to incur costs of \$60/af or more to store and deliver water for \$3.50/af to landowners who can resell it for \$400 per acre foot.³² This is the contradictory outcome of rent-sanctification.

Such thinking sends a message to future rent-seekers. Once get a subsidy or giveaway and you have a right to get it forever, and call it "property." The motive to agitate for new subsidies would be magnified; the state would be rushed to bankruptcy.

"Win-win" has a loud constructive ring, but cannot drown out a basic fiscal truth: no one taps the Treasury or grabs the public domain without hurting everyone else. Those who take public property in the name of the free market are not promoting the market, but exploiting its good name for private gain.

What we need is a "win-win-win" deal. We can have water marketing and common rights: make water permits transferable, but make permittees and contractors pay for what they get. Obviously, contractors getting subsidized water from Federal and State projects should pay the full cost of project services. It is growing equally obvious that the basic privilege of withdrawing rent-bearing water, surface or ground, should be subject to a

³¹Compounding the offense, Wahl wrote this at exactly the time that 40-year contracts on CVP waters were expiring and were up for review. The whole point of those contracts, and the strife in 1948 on, was that they were not to be perpetual. Wahl would give away what even Congress and a compromising Commissioner of Reclamation had not given away.

³²This is the main theme of the otherwise scholarly and useful study of Wahl, 1989. He begins with it on p.3, repeats the point several times, and ends with it on p.295.

user charge.³³ With growing demand and scarcity this is the heavy issue. This way Smith wins, Jones wins, and the public wins (win-win-win).³⁴

³³Severance taxes, property taxes, and gains taxes, in combinations of your choice, should do nicely.

³⁴U.S. Senator Bill Bradley was promoting a bill that would, as of May 31, 1991, include a gains tax of 25% on transfers. (Ellis, 1991.) What happens to the bill is another question.

17. "A super-district like the Metropolitan Water District of Southern California will rationalize the system."

Wrong in practise, although promising in potential. The trouble with sprawling districts is their propensity to cross-subsidize. MWD is dominated by land speculators, and milks the center for the fringes.

This is the fault of anti-democracy. MWD Directors are not elected but appointed. The appointing bodies are elected, but many come from water districts where the franchise is based on the assessed value of land owned: one-dollar, one-vote.³⁵ Representatives from landowner districts remain the same from election to election, gaining seniority to dominate the 50-person Board and its ruling committees (Goodall et al., 1978, pp. 97-98. Bradley and Morales, 1981.) Thus a handful of speculative landowners, some living in other countries, have more control than millions of city residents. Cross-subsidy to benefit the controlling parties is the MWD way of life. Many economists have criticized MWD's refusal to consider a cost-justified rate structure.³⁶

The MWD ideal is good; the practise is faulty, owing to landowner domination and exploitation of a public institution borrowing sovereign powers from the State. The remedies are the same as those advanced by Progressives like Hiram Johnson (R) and Woodrow Wilson (D): democratic control with professional leadership. That seems long ago and irrelevant, but I see hope. What destroyed Progressivism was The Cold War, which really began in 1919 with The Palmer Raids and is only now ending. This seems a good time to revive Progressivism. Aren't economists the natural professional leaders?

³⁵This is done through the California Water District Act (Water Code Sections 34000 et seq.) The original water districts in California were "Wright Act" Irrigation Districts. Products of the populist-Georgist era, they were and are controlled by popular vote. Large landowners put through the later Water District Act to fend off popular control.

³⁶MWD has built up a surplus, or "rate stabilization fund," that it uses to avoid peak-load pricing. It also taps the fund for "interest-free" expansion capital (Krieger, 1991).

18. "A severance tax on water withdrawals would destroy incentives and hurt the economy"

Wrong. Let's pull together and review what we've said about this. When you pay for water, you often shift to higher-valued crops. You substitute capital and labor for water, raising yields. Thus, we can tax water withdrawals while improving the water economy (item 5).

We must control pumping to prevent overdraft, if any system of surface control is to work. A tax is an economic price charged by the owner of water, the state, to control the use of its property (item 6).

Common rights may be asserted as open access, where that is feasible; or rights of revenue, where efficient management calls for closing access. Not only would the tax-price promote efficient use, it would turn "Negabucks into Megabucks" for state treasuries and their trustors, the people (item 10,A).

Water markets do not work because sellers are not motivated by any cash drain, and selling prices rise indefinitely. To overcome this resistance, we need to subject water licenses to property taxes (or the equivalent) based on their opportunity cost values (item 10,C). This is what makes the land market work.

Taxes on water would let water markets work without granting unearned increments to speculators in water rights (item 10, D; item 14).

Taxing water withdrawals is a practical way to express common rights to water under conditions when it is not practical to allow open access (item 13).

That's what economists call "opportunity cost." The true social cost of withdrawing water is the cost imposed on others by preempting it from them. It is the same as what FERC today calls "avoided cost," i.e. the cost of providing a substitute for what is taken. FERC (Federal Energy Regulatory Commission) has made good use of this concept, making electric utilities buy co-generated power from independent sellers at a price equal to "avoided cost."³⁷

That's not the half of avoided cost, however, because State water is heavily subsidized in a dozen ways. Its wholesale price of \$210 is way below the high cost of bringing it down here. State water comes from the Feather River, 600 miles north of us, and is pumped over the Tehachapi Mountains. Its true social cost is more like \$2,000 per acre-foot, give or take a few hundred.³⁸ \$2,000 is ten times what they charge for it, and 100 times what I pay for my local water.

THE TRAGEDY IS OVERUSE, NOT COMMON RIGHTS

Asserting common rights need not imply open access and unrestricted use. It is often the opposite. Here are five examples of asserting common rights by restricting use:

- 1, constraining water use by taxing withdrawals;
- 2, constraining hunters and fishers by imposing bag limits;
- 3, constraining pollution of common waters by imposing effluent charges;

³⁷The concept of "avoided cost" harks back to Henry George. He wrote that the value of a thing is not the past labor that went into it, but the future labor avoided by owning it (Science of Political Economy, p.249).

³⁸No one ever could figure it out to the dollar, so cooked are the books. A major effort was made by Alan Post, 1982; a minor one by Mason Gaffney, 1982.

4, protecting watersheds by regulating timber harvest practices;

5, protecting swimmers and small boaters by limiting size and power of boats.

Our leading economists like to believe they are "value-free." When they truly become so, they will replace the "tragedy of the commons" with "the tragedy of overuse." The latter phrase is free of class and race bias. Overuse will often be ascribed to suppressing common rights, not upholding them.

WATER MARKETING AS A SMOKESCREEN FOR PREDATION

Every sale or trade of existing licenses creates another "innocent purchaser" to legitimize and sanctify the seizure of common property by powerful individuals and the "public" water districts they control. "... markets reflect and reinforce the existing distribution of water rights and wealth. ... " (Saliba and Bush, p.252).

It is not just common water that is thus traded away; it is subsidies attached to the water: same idea, but more obvious. In December, 1988, the U.S. Interior Department issued a water marketing policy to let recipients of subsidized water from its projects sell the water and keep the profit. The "innocent purchaser" would seem now to have secured a right to be subsidized in perpetuity: he paid for it, didn't he?

The swindle is so obvious you'd think no one had the brass to support it with a straight face. "Because I was robbed yesterday, ... is it ... any reason ... that the robber has acquired a vested right to rob me?" (George, 1879, p.365). Once you deny George's point and buy into the premise that usage creates property, nothing is too absurd, transparent or outrageous to follow. The policy follows the prescription published by The Institute for Contemporary Studies: "the water bank concept protects farmers from losing water they now have,

and from paying more money for it" (Angelides and Bardach, p.33).³⁹

The uncontrollable urge to give away the store is no longer limited, however, to Colleges of Agriculture or brand-labelled right-wing think tanks. "The policy was hailed by the Environmental Defense Fund, ..." (Levin, 1988). Resources for the Future chimes in, in the wooden postures of scholarly neutrality, "... federally subsidized water supplies have become property rights ... the most effective way to confront the issue of inefficient usage is to recognize those rights Rather than attempting to reduce the subsidies embodied in existing contracts, federal policymakers should seek to make the current property interests in federally supplied water more secure and to allow voluntary market trading of the resource among water users" (Wahl, pp. 3, 5).⁴⁰

So this is where it leads, this promising talk about getting government out of the way of the market. To get it out, these writers would make government subsidies the permanent foundation of their system! They would make every boondoggle, every giveaway ever engineered through corrupt Congressmen and supple administrators into a property right.⁴¹ They would bind taxpayers forever to incur costs of \$60/af or more to deliver water for

³⁹It is to be feared that water researchers with the RAND Corporation may lean this way. (Phelps, Moore and Quinn, 1982; Moore and Quinn, 1984; Moore, 1991). Telephone interviews with Moore and Phelps, July 29-30 1991, indicate their position is not dogmatic, and they are sensitive to the distributive issues raised herein. How sensitive remains to be seen.

⁴⁰Wahl is silent on the standing of those who have been getting water for excess lands in violation of Federal law. His clear implication, however, is in their favor on all points. This is no small matter. For example, Southern Pacific Land Co. owns 81,200 acres in the Westlands Water District alone (Villarejo and Redmond, p.46). Boswell has 24,000 acres. Both these firms have larger holdings elsewhere getting more subsidized water.

⁴¹Compounding the offense, Wahl wrote this at exactly the time that 40-year contracts on CVP waters were expiring and up for review. The whole point of those contracts, and the strife in 1948 on, and the Ivanhoe decision, was that subsidies were not to be perpetual. Congress has waffled since then, but there is no need to encourage them.

\$3.50/af to landowners who can resell it for \$400/af.⁴² Consistently, we may infer they would bind taxpayers also to subsidize farm price supports and export subsidies, maintain tariffs, cross-subsidize low farm power rates, finance cow-college R&D tailored to big landowners, etc. ad inf. This is the self-contradictory outcome of fundamentalistic rent-worship: the receipt of any state giveaway becomes a sacred cow the taxpayers are obliged to continue feeding and grooming in perpetuity.

Call it hypocritical, call it self-delusory, call it insane, call it anything, but don't overlook the message sent to future rent-seekers. In the name of the market, Angelides and Bardach and Wahl and the leaders of EDF are announcing to the world this policy: "once get your hand in the public treasury, you have established by prior appropriation a right to steal forever, and call it 'property'." Hirshleifer, Milliman and DeHaven, who helped start ideas of water marketing 30 years ago, were not out to sanctify subsidies, nor do I believe they would abide it now.⁴³ Their objective was to obviate monumental new development projects, not foster more. They would see clearly two points: a) the motive to agitate for new subsidies would be multiplied; b) the state would be rushed to bankruptcy.

THE IVANHOE DECISION, 1958

Let us not leave this topic seeming cynical. In 1958 the U.S. Supreme Court, under California's former Governor Earl Warren (R), stunningly reversed the trial and appellate courts, and a divided California Supreme Court, and unanimously ruled that the U.S. Bureau of Reclamation held water in its own right, not in trust for landowners of the contracting districts. If

⁴²This is the main policy pushed in the otherwise scholarly and useful study of Wahl, 1989. He premises it on pp. 3,5, repeats the point several times, and concludes with it on p.295.

⁴³One may hope that the Rand Corporation will replicate the commendable consistency which I impute (I hope correctly) to Hirshleifer et al. Inauspiciously, Phelps et al. (p.38) show a propensity to vest the subsidies and carry on. However, I nurture a hope that these reasonable people will one day face the issue head on, and take a larger, "systems analysis" view.

there was any implied or constructive trust, it was on another principle: "The project was designed to benefit people, not land" (Ivanhoe v. McCracken, 357 U.S. 275, 1958, 296-97). The 9(e) contracts were valid (op cit, 299-300).⁴⁴

Thanks to that decision it is possible to market federal water today (Graham, 172-90).⁴⁵ The California Supreme Court, shot down, had to eat humble pie and admit their misuse of the trust doctrine. "(I)t was established that the title of the U.S. was or can be made unlimited" (53 Cal. 2d at 716, cit. Graham 101).

Arguably, it is also the Ivanhoe decision that makes it possible to market State water. In the Burns-Porter Act of 1959, the State's answer to Ivanhoe, the State elected to use utility-type contracts on the 9(e) model (Graham, 188-90).⁴⁶

⁴⁴Paul Taylor deserved and got credit for anticipating and contributing to the Ivanhoe decision (Taylor 1955, 1957). I will always remember the sight of him hours after the decision, high-stepping along Piedmont Avenue in Berkeley, vindicated at last, bursting with triumph, levitating, as it seemed, above the sidewalk. If ever a man entered heaven on earth, Taylor did that day. Yet ironically his main passion, the 160-acre limitation, continues to be frustrated and subverted in implementation on Federal projects (Villarejo and Redmond, 1988). The State bypassed it completely, proceeding immediately with the westside California Water Project, in the Burns-Porter act of 1959. Edmund G. Brown, the Attorney General who had won Ivanhoe, as Governor Brown turned coat and engineered the CWP sans acreage limitation. What endured was the utility-type contract which the state adopted and uses (Graham, 188-90). Thus, Taylor's battle for acreage limitation ended up saving the legal basis for water marketing.

⁴⁵Graham was a lawyer, at times an adjunct Professor at Boalt. Phelps et al., p.38, do not see it his way. They apparently believe the trust theory still stands, outside the Federal CVP. They cite no legal opinion, however, and lacking that I am staying with Graham, subject to the uncertainty always felt about future court opinions and decisions.

⁴⁶This does not stop the State contractors from pressing extravagant claims about their contract "rights" to waters never yet delivered, and perhaps never deliverable. Legislators routinely leave many loose ends for some future court to resolve.

It is not to despair; rather, let us learn the right lesson for future guidance. Do not look to Private Property to give us free markets. The white hats were a handful of idealistic populist battlers who persevered against ridicule, misunderstanding, indifference, the press, the landed/monied establishment, and daunting odds. We've always suspected democracy depends on such die-hards; "New Resource Economists" need to learn free markets depend on them, too.

WHY WATER APPROPRIATION LAW DID NOT BEGIN IN THE GOLD RUSH

Placer mining claims were narrowly limited in space and time. They were just "ten feet square" in the good locations (Robinson, p.137), which were ant-heaps, but without the community spirit. One claimed only as much land as he could work himself, and guard constantly. Chinese squatters were driven away, perhaps killed. It was a nasty, brutish life, fit for the wretched and the reckless. Water claims, in contrast, are limited only by one's lands.

As to time, placer mining claims expired when the mines ran out, usually soon. The idea was to get in and out fast. Water diverted to wash gold would be needed only temporarily. Under these conditions it was plausible for the California Supreme Court in 1855 to invoke a natural rights doctrine, ruling that prior appropriation was fixed by "a universal sense of necessity and propriety."⁴⁷ Water was for immediate use, not future rent-taking. John Locke would have approved. Henry George did approve: "... it was by common consent declared that this gold-bearing land should remain common property, of which no one might take more than he could reasonably use, or hold for a longer time than he continued to use it" (George, 1879, p.286, my emphasis).

Water, however, flows on forever, yielding rents that grow and grow. Rent-seekers didn't go for the gold, which was toil, strife and hardship, soon exhausting both men and land. True rent-seekers went for the water, and inexhaustible lands to use it on. Long-term rent-taking is not fixed by "a universal sense

⁴⁷Irwin v. Phillips, 5 Cal. 140, 146 (1855).

of necessity and propriety," but is thoroughly anti-Lockean. It was born in the minds of rent-takers and their apologists, not in the creeks of the Mother Lode country.

How about beneficial use, and "due diligence"? These requirements are laxly enforced, but just to double-bar the gate, State filings have been exempted from due diligence. The State thus reserved waters for its State Water Plan. This Plan, finally authorized and financed in 1960, is specifically designed to carry water for the primary benefit of a minuscule handful of the Lords of Creation owning all the land on the west side of the San Joaquin Valley and Tulare Lake Basin. Any resemblance between this and squatters' rights is only in the peculiar Australian sense.⁴⁸

WHY UNDERPRICED WATER IS WORSE THAN WASTED

The effect of cheap water may be seen in Fresno, Kings and Tulare Counties, California. Their populations grew by 32% in a decade of dear water, 1940-50. Then they received an influx of cheap water from two Federally subsidized projects: Pine Flat Dam on the Kings River, and the Friant-Kern Canal of the Central Valley Project. What happened then?

For the next 30 years their populations stopped growing and even fell through outmigration (Ballard, p. 30). In Tulare County, 1974, wages and salaries accounted for only 50% of income payments (California Statistical Abstract, cit. Ballard, p.28). Farms receiving the Federal water subsidy average 7.2 times larger than other California irrigated farms (calculated by Villarejo, 1986, p.20). By 1980 California's Central Valley contained six of the ten American cities with the highest proportion of people on welfare (Metropolitan Area Fact Book, 1984, cit. Villarejo, 1986, p.109). Two of them are Visalia and Fresno.⁴⁹ Cheap water has not converted the Great Valley into a

⁴⁸Most readers know that in Australia "squatter" means a large land monopolist.

⁴⁹This is a shift from the dream of "Water, Wealth, Contentment and Health" that was promised and delivered to the people of Modesto from 1887 to 1950 or so, when they were struggling and paying to develop their waters. Modesto today is

beehive, any more than cheap power has converted the Tennessee Valley. Arguably, it has degraded life in the Great Valley.

With dearer water, on the other hand, you use less by controlling it better, switching from primitive furrow irrigation to sprinklers, spitters and drip. This in turn lets you do new things like growing avocados on steep hillsides formerly barren, yielding more dollars of product for less water (and in this case on waste land).

You cannot afford to dump high-priced water on barley, or alfalfa, or rice, or irrigated pasture, or any other of these domesticated phreatophytes that guzzle up most of our underpriced water today.⁵⁰ A number of fairways and cemeteries would also give way to higher-valued uses.⁵¹

The above facts point to a fascinating, consequential corollary: you can tax water withdrawals without wrecking the water economy. On the contrary, such taxes (carefully crafted to be constructive) can encourage conservation, getting more bins for the bucket, so to speak, and opening more opportunities for useful labor. Americans are raised on anti-tax slogans masquerading as economic analysis, always presuming taxes destroy good incentives and wreck the economy. Here is a kind of tax that raises revenue while strengthening the economy. This corollary is

fat and secure - and a third member of the ten highest-welfare cities.

Modesto has delivered water without variable charge from an early date. However, in its earlier days it levied steep land assessments to pay for ambitious dams and canal systems. It was these that kept the landowners hopping. Now the bonds are retired, land yields a surplus that attracts absentee buyers with a lesser propensity to husband land intensively.

⁵⁰Dean's Committee, 1968, p.48.

⁵¹Such common sense is pretty well obscured by the clumsy, affected apparatus of "production possibility curves" and "frontiers" that micro-economists stylize and imprison their thinking with today; ditto for "Cobb-Douglas functions." Wearing those blinders, economists generally presume that higher input prices must lead to lower output. However, it is a three-factor world. The "product" of cheap water to many farmers is not the increase of yields, but the drop of costs other than water.

too good to drop, and is highlighted later.

WHY INITIAL ENTITLEMENTS MATTER

It is entirely believable they mean it when they say they will not sell "at any price." They may be unreasonable, but that's the point: ownership lets you be as unreasonable as you please.⁵² We notice mainly when it is someone else, especially someone different.⁵³

⁵²This explains why conservative theorists feel threatened by survey findings that WTA >> WTP. Their criterion for acceptable policy changes is based on Pareto's clever notion that you mustn't deprive one rich landowner, even to help a thousand starving orphans, because you can't compare their subjective feelings. This originated as a bulwark of inherited property against redistribution, and has become standard with private-property economists. When, however, we acknowledge common birthrights to a clean environment, the shoe is on the other foot. Now you can't pollute anyone's air or water because the victims own it. They own Prroppitty, and can be as unreasonable as John Jacob Astor. This explains the busy-ness of theorists seeking to plug the dike.

⁵³Another large group to consider are the rural Hispanics of the southwest, who put a high value on preserving their communities. A survey in Taos and Questa, N.M., found 80.6% were "Opposed and don't want to sell." Only 6.1% answered yes to "Would sell if price is right" (Brown and Ingram, p.79). We are talking here about very poor people and very expensive water.