

The Water Giveaway: A Critique of Federal Water Policy*

Mason Gaffney, 1973

The many wasteful policies and procedures in federal water resources programs have been much analyzed by economists and other scholars. Agency benefit-cost practices have been found wanting. Benefit estimates have been biased upward and cost estimates downward. Environmental effects of projects, often adverse, are not weighted enough. I generally endorse the thrust of these criticisms and will not repeat them here. Rather, I will discuss a few equally significant questions which have been neglected.

WASTEFUL PRACTICES AND THEIR CONSEQUENCES

Giving Away Public Resources

Public water policy has been dominated by a giveaway psychology. Dam sites, water rights, and *de facto* licenses to pollute water have gone free of any but occasional nominal charges to individuals, corporations, and municipalities. It is as though the Interior Department gave Texaco the rights to offshore oil gratis, and then paid for their drilling rigs to help develop the country.

Economists have rightly condemned the use of sub-market interest rates in appraising federal works. The use of zero-interest for all costs that ingenuity can allocate to “irrigation” benefits of a project is an outstanding outrage. The use of zero rent on public sites and waters is equally outstanding.

The resulting damages are several:

1. The pressure to put resources to their best use is abated. When valuable land and water inputs are entered at zero value, any of several projects can show super-unitary benefit-cost ratios and appear economical. When these resources are appraised at their highest and best use, and their value entered as a cost, only one use plan for a given resource is economical: the best. It has a ratio of one: all others fall below. (It is not, incidentally, the same project whose ratio is highest when no rent is charged. Rather, it is the project yielding the greatest excess of benefits over costs, i.e., net benefits or surplus.)

That is just elementary economics, one of the first things we teach freshmen. But analysts of public projects often overlook it, perhaps trying to accommodate themselves to the giveaway tradition. The result is often to fail to scan all alternatives for a site or stream. For example, a recreational use might be highest for Canyon X, but if a power company gets it before the Park Service does and can show a ratio of 1.01, it's gone.

2. The pressure to develop water prematurely, preemptively, is paramount. The prospect of future rents has a present value long before there are any present rents. Enjoyment of those future rents goes to him who establishes his claim, usually by first possession and use. It takes little imagination to foresee the results, which one observes everywhere. Scores of state and federal

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agencies, municipalities, corporations, and individuals race for one resource after another, not because they need it now, but to keep those greedy other fellows from hoarding it.

Congressmen will recognize the same uneconomic motivation at work in the scrambles for broadcast licenses, air routes, quotas, trucking routes, pipeline routes, bank charters, and other valuable resources and monopolies it gives away without competitive bidding.

At least four congressional policies reinforce the overwhelming pressure toward premature capture and development of water.

One is an income tax matter. The premature developer of a resource may lose money for years while it is submarginal. These losses are currently expensable, i.e., shared by the Treasury each year. Actually they should not be, for they are a long-term investment designed to capture the resource while it rises in value. Now if Congress had accepted the advice of eminent public finance economists such as Joseph Pechman, William Vickrey, and Richard Musgrave, and moved to a "comprehensive income tax base" (often called a "Haig-Simons" definition of income) as Canada's Carter Commission has recommended there, and subjected the capital gains accrual of resource value to the same effective tax rates as ordinary income, it would be all right to expense those early losses. But Congress has not done so. So the taxpayer can expense early operating losses which he invests to capture a resource, while he pays no tax on the resource appreciation which he captures.

Looking at this in terms of "tax expenditures," the United States is not only giving away water resources, it is advancing some half of the private investment required to capture the resource with little hope of ever getting its principal back. The best it could do through future taxes is recover its own principal with interest. The private investor's interest is tax-free.

A second reinforcing policy is racing for farm production quotas. During the Korean War, for example, cotton quotas were eased. The availability of water let California expand cotton acreage and establish histories of production. After the war when quotas were re-imposed, California was in. More accurately, those landowners were "in" who had access to uncommitted land and water at the crucial time.

A third reinforcing policy is that old devil, "logrolling." Whenever there is a giveaway, naturally everyone wants some. Since a Congress cannot very well commit its successor to honor cloakroom bargains, everyone wants some right now. A concrete start is the most convincing commitment Congress can give. And so we have chronically too many starts and too few completions. The economist would say, rank your projects and give priority to those that generate the most surplus of benefits over costs (present-value basis). The exigencies of vote-marshaling interfere with such priorities, and say, "start something everywhere at once."

A fourth reinforcing policy is in the public regulation of utilities. Rates are reckoned so as to allow a specified return on the "rate base," or invested capital less depreciation. Every utility seeks to magnify its rate base. One way is to invest in submarginal waters. Regulatory policy lets utilities recoup the losses by charging higher rates in their rich, surplus-yielding territory.

Of course Congress has only limited influence on state regulation, but it has greater influence on federal commissions, and potentially could dominate most power utility regulation because of interstate ties and the use of federal property.

3. A third damage from giveaways is distributional. The successful early preemptors of submarginal waters are those with the greatest waiting power. That is, they are the wealthy. But

regardless of who they were before, they become wealthy and powerful once they have nailed down the resource, and it rises in value. They become a privileged class.

4. Water is misallocated. Some submarginal projects remain submarginal, but they do not lose control of their water. Some allocations, that once were economical, become obsolescent and stop yielding surpluses; but they keep their water. Water is very hard to transfer, once allocated, because the beneficiaries generally have no clear title they can convey — after all, they never bought one. The federal owner is not charging them any rent, so they hang on without cost to themselves.

5. Water is underpriced and wasted. Underpricing results not merely from the water giveaway, of course, but from that plus other subsidies like zero interest. The wastes that ensue are more than meet the eye. It is often assumed that cheap water encourages intensive farming, but the reverse is true. If California farmers had to pay \$20 an acre-foot for water they would feed the world. It takes intensive farming to pay such prices, and this may be observed in areas of dear water. As one moves from south to north in California, for example, the humidity rises and the agriculture declines. Cheap water favors sloppy, extensive farming, with water being substituted for labor and farm capital.

This in turn affects project costs. To achieve a given output, when water is cheap, more water must be delivered per acre, and more acres served. Distribution being the costliest element of water supply systems, this magnifies costs.

Dear water from federal projects would encourage economy not just of water but of land. The Bureau of Reclamation does not sell direct to individuals, but wholesales water to irrigation districts. These pass on the cost to their land-owners, but not entirely as user charges. They also levy land taxes, and these encourage early, compact, and intensive use of land under the ditch.

Imbalance, Deferred Impact, and the Unknown

Considering the several subsidies involved, capital obviously flows more easily into water projects than into ordinary private investments like barns, fences, or machines. Thus public investment tends to get ahead of matching private land development. This adds to the waiting period during which the public investment is sterile.

The balance is partly redressed, but on the whole probably worsened, by the impact of federal taxes on land developers.

The favored treatment of capital gains makes it very attractive simply to hold land while federally financed flood control or water supply enhance its value. The result is “irrigation sprawl” or simply agricultural sprawl in flood-protected areas. Land speculation jeopardized land development long before income tax accounting, became a major factor; now the holdout motives are redoubled. Federal subsidies also mean that local property taxes are minimized, and those that do come are deductible, i.e., shared by the Treasury.

On the one hand, capital investments in “water conservation” are expensible. Expensing of capital investments is tantamount to complete tax exemption or more, because the most the Treasury can recover is interest on its own investment. This, coupled with SCS [Soil Conservation Service] subsidies, has certainly caused enormous capital to be invested on private land.

Some of this capital must complement public works and help redress the balance. On the

other hand, some of it no doubt is completely substitutional. Indeed, the assessments paid to irrigation districts, through which public water must be distributed, are not deductible, so tax shelter is denied to the most complementary of all local water investments.

Regardless of the balance between public and private works, there is clearly a bias toward water-related capital. Here we are flying blind. No one seems to know how much capital has been invested in farm water systems. There is a remarkable gap between \$13 billion of net farm income estimated by the Commerce Department and U.S.D.A. and \$2.5 billion dollars reported to the Internal Revenue Service, which no one can explain, except that the discrepancies are on the cost side. Expensing of capital investments is certainly involved. Big capital items that may be expensed are breeding stock, soil conservation, and water conservation. The enhanced land value that results from the last two is virtually tax-exempt income for anyone with a good lawyer.

So Congress is continuing to subsidize a particular kind of capital outlay without much knowledge of how much has been sunk already. It is reasonable to infer that water-related capital has now gotten far ahead of its complements, and further subsidy is undesirable.

Slow Payout

Premature investments, and submarket interest rates, and logrolling and waiting for capital gains, all imply a long wait between investment and payout.

From a certain narrow political view this has attractions. Many constituents are enriched by unrealized, untaxed capital gains. And since production increase is at a minimum, prices are sustained, letting more and more land be enhanced elsewhere.

When we look at some other burning issues, the picture changes. One is inflation. Investments whose output is small or deferred are inflationary, creating demand without supply.

Another is poverty. Investments which lie on the land passively for decades before turning over are complementary to land but not to labor. just as water which is recycled rapidly can do more work and complement more inputs than water which is recycled slowly, so capital turning over fast employs more men, and relieves more poverty, than the same capital turning over slowly. Every time capital turns over and is reinvested it employs men, and feeds their families. Federal policy tends to freeze capital in massive monuments from which it is seldom recovered fast. Federal works are capital-intensive; they create a minimum of jobs per thousand (or in this case million) dollars sunk.

When the Bureau of Reclamation began business in 1902 it had something called a "revolving fund." It was to recover this each 10 years and reinvest it, so the same capital would by now have been used several times. It was a splendid idea, but that the fund has yet to complete the first revolution. This, I am afraid, symbolizes the whole dreary tale of dragging, lagging results and payouts from federal water enterprises.

Regressive Distribution

The prime beneficiaries of federal water and flood control projects are landowners. The holdings are often very large, the benefits narrowly focused on a small number. No one at all familiar with the Tulare Basin, the West Side of the San Joaquin Valley, or the Mississippi Delta will question this for a moment. These are extreme cases, where some ownerships exceed 100,000 (sic) acres receiving benefits, and more elsewhere. Obviously in other service areas

ownerships may be smaller but still represent large fortunes.

The costs are borne by the federal taxpayer. Until recently, “everyone knew” that the federal income tax was highly progressive. This year, thank goodness, the truth has dawned and everyone knows that the federal income tax has devolved into a payroll tax, with high exemptions on property income.

The income of the wealthy beneficiaries of water service may be very lightly taxed. A recent U.S.D.A. study shows that of the largest 66,000 farms in the United States two-thirds reported net losses from farming! These, incidentally, are those large farms which “everyone knows” are more efficient. As to their accrual of land value, that is virtually exempt from income tax in practice. I ask leave to submit an appendix on the many routes by which land income escapes taxation.

IS REFORM POSSIBLE?

Water institutions have proven peculiarly refractory to reformers. Ten years ago I had a go at them, and soon felt like the melodious Paul Simon whose “words like silent raindrops fell, and echoed in a well of silence.” Lest this seem like a personal Cassandra complex, I and others have found a warm welcome in tax reform; but, other critics of water policy have been equally unavailing. Few policies, indeed, have been so exposed and pilloried by so many economists, and so little defended, with so little result.

Nothing improves. On the contrary, wilder and wilder plans are seriously discussed in these very halls. That “great land-locked” Tulsa is soon by your hand to become an ocean port, and I do not doubt the Corps of Engineers would carry the channel to the summit of Pike’s Peak should you authorize it.

The line-up of vested interests opposing reform is formidable. Water law is a WPA for lawyers. Every project is a WPA for civil engineers, who have been defined by Boulding as men who can tell you the best way to do something that should not be done at all. Many projects are WPAs for marginal mountain counties who sell their votes for local dams. Every project is a consumer of cement. Every project extends the job security of bureaucrats, whose motto might be “Pour cement or perish.” And above all the beneficiary landowners are constantly lobbying, and playing on the hysteria so easily aroused in matters regarding water. It may not be irrelevant that water and land are symbols of motherhood.

Who, then, will speak for mankind? Is there any hope of a breakthrough? I believe I see several counter-forces developing.

One is the universities. For years, their influence was thrown the other way under the sway of Keynesian doctrines that endorsed all public spending. Today they are dropping that and analyzing choices among alternatives. Since one major alternative is the university itself...need I go on? Governor Reagan dramatized the point recently by offering to trade a university for a new water source.

Another is the acute capital shortage of our times. High interest rates are the market’s way of signaling the shortage of housing, inventories, gymnasiums, equipment, urban sewers, and a hundred other capital items we have failed to replace and expanded while freezing our treasure into cement yielding 3 percent or nothing, and quite irrecoverable for years (wouldn’t it be nice to have it back now at 10 percent?). Fun is fun, but many of these shortages are reaching crisis proportions and cannot be ignored.

A third is the youth rebellion with all it implies. The effective rebels of course are not the louts, but the working leaders like Nader and Yannacone who have learned how to mobilize idealism and move mountains.

Fourth is the wilderness conservation movement, spearheaded by the redoubtable Sierra Club and its new, taxable lobbying incarnation. They may be True Believers. But if we must choose - and we must-between them and the excesses they fight, they are clearly the better choice. And so I think there is some hope of reform.

POLICY RECOMMENDATIONS

Congress obviously suffers from certain problems of internal organization. I will not presume to comment on these before men who know them better than I. Rather I will tell you what if I were king I should try to accomplish. Congress needs a superior substitute for logrolling. Trading votes is essentially the way one region pays another for a share of the common wealth—basically a reasonable concept. A problem is that often the only coin in which payment can be made is another water project, when a hospital is needed more; or a project of any kind, when reduced taxes are needed more. Another problem is that all jurisdictions have equal bargaining strength, while capital is much more productive in some than others.

So how else may the beneficiaries of public works compensate other Americans? By paying *more taxes*. It's surprisingly simple. The whole wretched, corrupting business of lobbying for and horse-trading federal largesse, which seems so intractable that many observers and citizens lose hope in Congress and lean more and more towards a strong executive—this whole business has a solution. Lincoln Steffens observed that the troublemaker in Eden was not Eve, nor yet the Serpent; it was the Apple! Taxing the beneficiaries of federal works should serve wondrously to dehydrate the apples of discord on Capitol Hill.

The beneficiaries of public water works are surprisingly easy to identify. The works service certain defined lands. The landowners gain. Other local beneficiaries are subject to competition from immigrants. Land cannot immigrate; it appreciates instead.

But federal income taxation virtually exempts land appreciation. If you work for a living you pay the full tax rate on ordinary income. If you improve land under federal works and match the federal enterprise with private enterprise, your land income is mostly "ordinary" and taxed at full rates. But if you can influence public officials to improve your land while you do nothing, your income is almost all your own.

And so it pays landowners to commit great effort to drumming for federal aid. This has always been a problem, but has worsened in our times because of the cumulative perversion of the federal income tax into a payroll tax. Another problem is the declining role of the property tax, which used to socialize a good share of land value increments. The latter long decline is in a short-run reversal. The former is in the hand of Congress. As you labor in the vineyard of tax reform, you have an opportunity to prune the apple tree of discord with the same strokes.

Congress should charge market prices or rents for federal property. It should encourage the states to do likewise with state property, as a condition of federal aid. No state should get away with giving away its valuable resources to local influentials and then pleading poverty in Washington. Congress should assert federal property rights aggressively when they are paramount, and convey them unequivocally and explicitly when it releases them, not to the end of grabbing everything in sight but of creating a certain and workable tenure system.

It should certainly not do this in one stroke, without detailed analysis. Hydrology and water law are complicated. It should immediately commission a group to return recommendations for clarifying federal water rights. The difference between this and previous and ongoing efforts would be the posture of the United States as a great landlord seeking to maximize income from its domain. Economic analysis will show this is also the way to maximize general welfare.

The benefits are the converse of the problems cited under the section entitled "Giving Away Public Resources." There is more pressure to put resources to the highest use. Premature preemptive appropriation is stopped. Distribution is better. Allocation is better. Waste is reduced.

An important added gain from asserting public property rights is to solve the "pollution conundrum" of who should pay whom for doing or not doing what. To some people it is self-evident that polluters are no better than louts who would nuisance on the public streets, and should control themselves at their own cost and be grateful if they are not jailed for past obscenities. To others it is equally clear that people who want a clean environment should pay polluters not to pollute. The latter school is waxing mighty in the learned journals. Although I have never understood how they would limit the number of those who must be paid not to pollute, they have managed to lend respectability to those who would love to be paid a good price to relinquish the waste-removing capacity of the common water which they have appropriated in the past.

Assertion of public ownership resolves the conundrum. Neither beneficiary of water pays the other. Rather, both pay the government: the ones an effluent charge for unavoidable waste disposal; the others a variety of user or standby charges, depending on their terms of access to the water.

As part of this effort, Congress should assume great responsibility to use its unique powers in resolving interstate water conflicts. It should abandon such economic monstrosities as the Colorado River Compact, which rigidly divides water among political states regardless of demand, and find a formula that recognizes productivity and requires repayment.

Another function uniquely tractable to federal powers is that of pooling, and integrating local projects. Power pooling is a fact over wide areas. Pooling of water supply, storage, power generation and flood control are much more limited. Conjunctive use of surface and ground storage is barely begun. The obstacles of law, institutions, and local vested interests are formidable. The federal might is often the most potent available engine of reform.

Congress should move toward full-funding of a few projects at once, and away from yearly appropriations for more projects than available funds can complete in a reasonable time. A "reasonable time" depends on the interest rate. Money doubles in a number of years equal to 72 divided by the interest rate. At 7.2 percent, for example, money doubles every 10 years, and quadruples every 20. If a construction job is stretched out to 20 years the early costs are quadrupled by the delay. Obviously, the delays we learned to accept at low interest rates are no longer reasonable.

Once the logrolling logjams are broken by tax reform and beneficiary charges, endless possibilities open up for rationalizing the timing of works, and ranking projects by priority. This requires use of a reawakening subdiscipline of economics known as "capital theory." Congress should commission expert studies on this topic to develop criteria for priorities.

Now, some development is postmature. Probably more is premature. In general, priority

should go to projects yielding the greatest surplus per dollar of cost, as of now, on a present-value basis.

But this needs to be tempered by holding off on sites that are ripening very fast to still higher uses. Capital theory needs to teach us how to make this trade-off.

Congress should scratch “regional development” as a benefit from any project. All projects are regional. The concept is either meaningless, or else a thin cover for vote-swapping, maintenance of obsolete congressional districts, and sinking the nation’s dwindling treasure into submarginal projects.

Congressmen who are tempted to go on piling concrete into every narrow gorge with a strident lobby could do worse than to review the history of a previous boom in water works, the canal boom that busted in 1836. They went wild, simply wild over regional development. Some states have outlawed state bond issues ever since.

Another pressure to resist is that of designating the Corps of Engineers and the S.C.S. as “antipoverty” agencies. A dollar invested in any hamburger stand does more to fight poverty than ten spent by the corps, which has demonstrated beyond misunderstanding its eagerness to serve the very, very, very rich by servicing their lands, free. It is an “arrangement” of long standing, a scarlet affair beside which the novel of the same name pales into dull gray.

Not only does the hamburger stand employ more people per dollar of capital, it feeds them as well, and it does both things many times a year as each dollar turns over and over. If we aim to deploy our capital to fight poverty we need channel more of it into small, labor-using businesses that produce useful goods. The Corps of Engineers does not recover its capital outlays for decades, if ever, either directly or from increased tax collections. Each new project requires new capital, so that over the years the sum of capital invested for every job created is greater than in any private industry except tombstones. Monumental engineering works are the tombstones of civilizations. Pharoah had his pyramids; Caesar had his aqueducts; and Uncle Sam...may profit by their example.