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(Continued from Feb.-March 2017 GroundSwell. This paper was presented at a conference on "Political, Institutional and Fiscal Alternatives to Accelerate Nonpoint Pollution Programs" on December 9, 1987. The Symposium was held at Marquette University, Milwaukee, WI, and led by Prof. Vladimir Novotny and sponsored by the Engineering Dept.)

THE CASE OF FORESTRY

The inadequacy of surrogate pollution taxation is exemplified by forestry. The main purposes of watershed protection have long been to regulate water flows, to reduce flooding and erosion, and sustain flows during droughts. Minimizing pesticide runoff is a worthy additional purpose, but not the sole one.

Francisco Goya left hanging in The Prado two paintings of his beloved, La Maja Desnuda and La Maja Vestida. Some prefer the earthy Desnuda. When it comes to Mother Earth, however, she looks better Vestida in virgin verdure or some renewable replacement raiments. Gaia theorists, indeed, regard the biosphere as an integral part of the whole terrestrial organism.

However you regard it, removing it is hazardous and damaging to the children of Earth. Denuded land is the source of almost all forest runoff problems. Erosion results from a combination of logging roads (too many, too long, on land too steep); clearcutting; and slow replanting.

Slow replanting is the central problem. It slows the supply of second-growth timber, and thus creates pressure to invade submarginal areas. Foresters should harvest the low, flat, warm lands early and often because: a) Regeneration is economical there, it pays for itself where trees grow fast; b) Regeneration is fastest there, minimizing the exposure period of bare land; c) Logging roads may be shorter and less erosive there, because nearer to markets and on level land; d) The temporary loss of scenic beauty is less severe; e) The exposed bare land is less steep; f) Logging is cheaper and less destructive; selective logging is more feasible; g) Fire control is easier; h) Younger stands are more vigorous and naturally resistant to pests.

The last point bears underscoring here. It points to how good forest management can minimize pest damage without heavy reliance on toxics. The spruce budworm, for example, wreaks damage mainly on trees weakened by age. To protect those older trees, whole forests, millions of acres in the northeast are sprayed, with tragic treadmill results.

The tussock-moth, over which so much organochlorine has been shed in the fir forests, damages trees

mainly on poor growing sites. Trees on good sites withstand defoliation, green up, and grow with renewed vigor. The moral: stay off the poor sites. The method: utilize the good sites fully.

Why aren't the good sites harvested early, replanted quickly, and utilized fully? One major reason lies in the tax system.

a. Replanting cost is not expensable for income tax, it must be capitalized, hence not written off until decades later when timber is harvested. Timber taxation was not neglected, you may be sure, by Oregon Senator Packwood who shepherded through our most recent tax reform; but timber lobbies have deliberately traded this off to keep what they prize more, the capital gains treatment of timber sales.

b. Most states have substituted the yield tax for the property tax. The result is a bias against early harvesting. When you look at the whole system it also pushes cutting pressure out to marginal lands. But a yield tax at a high rate wholly destroys any incentive to restock marginal lands, once cut: it makes them subeconomic to replant.

c. Some states have virtually eliminated the land value part of the property tax on timber, removing an incentive to early reforestation. A tax based on land value continues at a steady level during the sterile downtime of land between harvest and replanting, thus pricking holders in the most compelling way to restock, while not taxing them at all for actually restocking. On marginal land the tax base is zero (it being based on land value) so it does not cause abandonment, nor make replanting any less economic than it already is.

d. When timber is standing the value added by growth is partly unrecognized as taxable income. Timber has been a "capital asset" for income tax purposes since 1944. Not only is much of the gain unrecognized as income, but any tax is deferred until harvest. After timber is felled, value-added in the mills and markets is "ordinary" income and bears the full fury of the tax rates.

When timber is standing there is no property tax, so it need only grow fast enough to pay interest on its value. After it is cut it must yield a rate of return high enough to cover a property tax, too, not just on its stumpage value but also on the value-added by harvesting, hauling, milling, shipping, storing, merchandising, and constructing. (continued on page 8)

NON POINT POLLUTION (from page 7)

Thus the dual result of income and property taxes is to defer harvest, increasing the volume of old, disease-prone timber standing on good land, and pushing logging pressure out to marginal lands. Many marginal lands are non-regenerable. Logging there is simply mining, leaving La Tierra Desnuda and open to the elements indefinitely.

Forestry on public lands, ironically, manifests similar biases, from a different set of incentives. William Hyde, Marion Clawson and others have documented the pattern: undermanagement of superior sites accompanied by premature invasion of steep, remote sites as the Forest Service internalizes all its profits from timber sales to build more roads (and its empire).

Both private and public forestry generate specialists with information monopolies which they use to obscure these issues and divert us with others.

An optimal solution would constructively combine and synthesize two apparently contrary concepts of land stewardship.

THESIS: Concept A says "Conserve for the future."

ANTITHESIS: Concept B says "Stewardship means highest and best use." Landholders are responsible to use land now, in order to employ others (generate incomes), to produce goods (combat inflation), and pay taxes (avoid deficits).

SYNTHESIS: Concept AB says do both, but in different places. Use the good lands intensively, grow timber early and often, thus relieve human pressure and help conserve the vulnerable, erosive lands.

Until this is done, will optimal taxes on aerial sprays do much good? Some good, no doubt. But the main problems are deeper rooted and call for bolder measures.

That is my basic message. Forestry suffers from cutting sprawl, quite analogous to urban sprawl. The center is neglected, so the action moves to submarginal fringes and damages what's left of the center. Let us now look at two more cases, urban sprawl itself, and agricultural sprawl, where the source of problems is analogous, and the implied solutions the same.

THE CASE OF URBAN SETTLEMENT

The central problem here is urban sprawl; the solution is compactness. More land urbanized means more urban

runoff. But more people on given land may even mean less runoff per acre, e.g. at the threshold where sewerage can economically replace a collection of septic tanks and leach lines. It certainly means less runoff per capita. It means better control of any given runoff.

A compact, synergistic city is resource-saving; sprawl is resource-wasting, using up more land, capital, materials, fuels, and air/water quality to substitute for direct human contacts and cooperation. Here are some items that sprawl maximizes or worsens:

-- the number of car-miles for any given level of urban linkage, with smog generated in proportion. (The unforgettable demonstration of the last came in 1967 when Mayor Henry Maier closed all Milwaukee gas stations for a week, because of arson and riot threats. As a by-product Milwaukeeans saw, for the first and last times, what clean air really looks like -- glorious!)

-- paved areas, with salt and roadside litter both spread in proportion.

-- "and sudden death." Auto accidents, the ultimate "negative externality," kill some 40,000 Americans per year, maim many times more, and intimidate everyone.

-- grading and denuding new lands, generally upstream and more sloping. Three-quarters of the pollutant loadings in the Menominee River come from urban non-point sources. Developing urban areas cover only 2.6% of the watershed, but contribute 37% of the suspended solids and 48% of the phosphorous. (Bauman et al. 1980, cited in Falk, 1985, p. P-II-B-2)

-- number of homes on septic tanks.

-- diversion of sewer funds from treating sewage to collecting it.

-- larger lots and lawns, longer driveways.

-- inhabited areas without good fire protection, with more grass and brush exposed to humans.

-- private wells puncturing aquifer caps.

-- settlement and industry beyond gutters and storm drains.

-- withering of mass transit.

-- longer, wider utility rights-of-way, with higher voltage and pressure and hazard.

-- filling wetlands

-- occupying floodplains, so more flood control reservoirs are needed.

-- automobile dependency creates its own treadmill effect. The car itself is the major consumer of urban space, space which must in turn be traversed, using still more car-miles. Pedestrians and cyclists (continued on page 9)

NON POINT POLLUTION (from page 8)

are maimed and intimidated into becoming motorists. Mass transit withers away. The market does not lead us to optimal outcomes in such a world -- this world.

Suburbs abate their own problems by pick-pocketing central cities, e.g. by getting sewers they could not pay for themselves. Milwaukee Metropolitan is as good an example as any. Systemwide that is a dubious gain, when the central infrastructure goes to ruins. The titles of some seminal works on this subject tell the story quite well: America in Ruins (Choate and Walters, 1981); The Costs of Sprawl (Downs); "Cost-push of Urban Sprawl" (Schechter); "The City as a Distorted Price System" (Thompson).

Solutions to urban sprawl will involve at least these three courses:

a) Marginal-cost pricing of city services, with a spatial or locational component. Example: a water-rate surcharge rising with pressure zones. Cheap city services in the center, encouraging infill and centralization.

b) Renewal-oriented tax policy, especially in central cities. (Milwaukee needs this the worst way, having lost population and capital for many years now.) Renewal-oriented property taxation means to impose higher tax rates on land than buildings (Breckenfeld). Former Mayor Dan Hoan favored this policy (Hoan, pp. 26-27), and what Hoan favored, Hoan did.

Renewal-oriented property assessment accomplishes the same end by apportioning a higher share of assessed value to land, and less to buildings. During Hoan's tenure the City Assessor accomplished it by using the "building-residual" method of apportionment. He drew up, reproduced, and publicly distributed land value maps, on which every parcel was valued at its highest and best use, as determined by comparable sales in the neighborhood. This approach approximately triples the assessed value of land, as compared to current Milwaukee practice.

c) Renewal-oriented spending and service policy. One guide to this is "tiered" zoning and planning, firm and consistent. Attorney Robert Freilich, the "father of growth control," has shown how to make this work in Ramapo, San Diego, and we hope soon in Riverside. When Dan Hoan was Mayor of Milwaukee, 1916-36, he oriented spending this way reflexively (Hoan, Chaps. 2,8), to serve the existing city rather than to expand it. Milwaukee was a city that worked -- then.

One may prefer other measures. More should be said about constraining the space demands of cars and trucks. But the point is that whatever measures one wants, they will have to cut much deeper than taxing pesticides and fertilizers. We are talking about major, radical readjustments of urban, tax and utility policies.

THE CASE OF AGRICULTURE

Farming manifests the same problem as forests and cities. Public policy suppresses full use of the best lands while subsidizing use and abuse of marginal lands. As we said of urban sprawl, the more land in use, the more runoff. Here are some elements that cause "agricultural sprawl."

a) Urban sprawl takes the best land out of farming. Cities deserve the best land and get it, but urban sprawl inflates urban demand several times over. In the best light the demand is premature. Much of it is just wrong, now and forever.

Shock waves from exploding cities fan out through the entire hierarchy of farm land uses, but not as neatly as force travels through a row of steel balls in the lab. At each margin of supersession there is a transfer of chaos plus an increment. Citrus invades deciduous, deciduous sprawls out among vines and vegetables, these move into cotton, cotton pushes on alfalfa which displaces small grains which take over pasture which invades the forests, and at each margin there is a new contribution of sprawl, chaos or entropy, a loss of concentration and focus and good economic spatial organization of farm activities.

b) Land retirement programs, under whatever label (there's been a new variation on the theme every few years since 1933) put good land on ice to support prices. Under the resulting "price umbrella," marginal land enters production. This is classic cartel behavior.

c) Surpluses are destroyed at home, or dumped (sold below cost) abroad, under Federal subsidy.

d) Some crops associated with high erosion receive strong support or protection: wheat, corn, cotton and sugarbeets, for example.

e) SCS funds are not allocated by need, but per Senator. Aldo Leopold observed of SCS, "In our attempt to make conservation easy, we have made it trivial" (Leopold, p. 210). It is worse: we have made it a pork barrel, like rivers and harbors and missile contracts. So instead of cover-cropping problem lands we use SCS funds on lands that scarcely need them, reducing their output and increasing the pressure to till marginal lands.

f) We raise a farmer's property tax assessment for installing a truly conserving device like a Harvestore -- it is so visible. Yet it turns hay into silage. (continued on page 10)

NON POINT POLLUTION (from page 9)

The other farmer who stores corn silage in an open bunker pays few taxes while losing 1/3 to 1/2 of the product of an erosive culture.

Meantime we subsidize new and submarginal lands in dozens of ways. But on the farm as in the city, the more land, the more runoff. I have cited the Feds for the Westlands Water District draining into Kesterson Refuge, and the Wellton-Mohawk Project draining into the Colorado River.

The State of California is as bad. The whole arid southwest quarter of the Great Central Valley is being brought into cultivation using subsidized water from the California Water Project's Westside Canal. Promoters there have discovered another treadmill effect, the "groundwater treadmill" of local-depletion-and-state-rescue, a treadmill that seems good for any number of cycles. But salt runoff has reached such a pass that the next rescue requirement will be a "brine line" to the sea, a line whose outlet is as sought-for as a nuclear waste dump.

South of the Tehachapis the MWD has its own variation, the Mulholland cycle. MWD frightens city voters with drought forecasts, secures entitlements to excess water, and dumps it on surrounding deserts to enrich land speculators there. While waiting for urban sprawl to reach them they farm with the mindset of short-term tenants, caring nothing for soil conservation or permanent farm improvements.

Mulholland began the game in 1913, storing Owens Valley water in the San Fernando Valley (remember Chinatown with Faye Dunaway and Jack Nicholson?) It was too good not to replay; there have been several Sons of Chinatown. MWD is now watering an "avocado crescent" 200 miles north-south, with groves on slopes up to 45 degrees.

Will pesticide taxation control those problems? Rather, toxic runoff is just another of several reasons why we must face up to radical review of our political-economic treadmills, driven as they are by what TIME Magazine has called The Great American System of Public Works for Private Profit.

THE COMMON THEME FROM FOREST, CITY AND FARM

Market failure, public programs and perverse incentives in the land market create a gross bias towards spreading out too much. This aggravates otherwise fairly tractable runoff problems. The more Tierra Desnuda, the more runoff.

This perversion does not occur by accident. Spread and sprawl in forestry, cities and agriculture are common results of the dominant force driving American politics, the quest for unearned increments to land value.

Thorstein Veblen in his final testament, Absentee Ownership, noted that American farmers

...have always, ... wanted something more than their ... share of the soil; not because they were driven by a felt need of doing more than their fair share of work ..., but with a view to ... getting a little something for nothing in allowing their holdings to be turned to account (Veblen, pp. 138-40).

To enhance those values they will now invoke any complaisant higher power, and since God already did His bit by donating the Earth, they turn to Government.

But the profile of land values is like a volcanic island. To raise the top and the slopes and the shores we must also raise the shallows above sea level, where they shed the waters and come into use.

Rising population is one factor pushing up the profile of values, but not the strongest one. Increased demand per capita is the main factor. These demands include all the spurious demands described above, like the demand of government for land to "bank" and hold idle, and the demand of speculators "with a view to getting a little something for nothing."

Veblen went on to say that farm technology adapts to the Procrustean bed of absentee ownership: rather than leading, technology lags changes wrought by the ownership pattern. Thus it is not "society" or "efficiency" alone that mandate inorganic monocultural chemical farming, but also the peculiar needs of absentee owners holding more land than they can work themselves or with their families. Logic of, by and for this minority is set up as logic for all.

If this be true, or (more likely) partly true, it must be admitted that most academics go along and get along with this dominant minority. Organic farming, biological controls, appropriate technology, IPM, and other countervailing logics had to come from screwballs outside the system, plus a few martyrs and kamikazes inside it, dominated as it is by accommodating "regular fellows," "good old boys," noncontroversial administrators who "understand local needs" and "work with community leaders," and complaisant faculty who enjoy "credibility." Are we part of the problem? Let everyone debate that with his own conscience, and be fair enough to lose a few points. (continued on p.16)

NON POINT POLLUTION (from page 10)

SOLUTIONS

The solution is land stewardship, a new-old ethic to supplant the cowboy ethic in which western man has wallowed over several centuries of territorial expansion.

To reprise from the section on forestry, we must synthesize two concepts of land stewardship. Concept A says "save for the future"; Concept B says put land to full use right now, to serve and employ people. Concept AB says do both, but each in the right place. Use the good land, use it well and fully, employ the workers, serve everyone's needs. Congregate and cooperate on central, low, flat, fertile ground, as efficient markets and efficient public policies would dictate anyway. Leave the marginal land in peace.

But as we tiptoe into this new era let us not sell stewardship by making it too easy and trivial, lest we repeat the sorry history of SCS. We are all trained to be trivial, to make few ripples and no waves. We are conditioned by higher education, and disciplined by employers to accept and believe the basic premises of the system and contribute our mite, if any, only to reinforce or patch or adorn it. Hence the fascination of schemes like effluent charges and their analogues like excise taxes on surrogates. If those ripples look like waves to us, it shows how much we have to grow to deserve our ancestors.

Excise taxes have their place, true, but the problems at hand

are much vaster and deeper than little measures reach. Solutions call for basic reconstruction and reorientation more drastic than most of us dare contemplate. But let's try: it might even be fun. Dan Hoan had fun making Milwaukee work; he is as good a model as we need.

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