

Cleveland, Polly Roberts  
n.d. Post - 1972  
published

Polly ROBERTS  
did summary of Under Calif report

FARMLAND TAX BREAKS: HOW NOT TO STOP URBAN SPRAWL

Conservationists, battling that asphalt amoeba known as urban sprawl, have allied themselves with those sprawled upon; farmers. New housing developments, the farmers complain, unfairly drive their taxes sky high, forcing them to sell out. Since developers prefer nice flat land -- just the best land for agriculture -- they will pave over the country's food supply. And, of course, the lengthening tentacles of ticky tacky engulf precious open space.

So conservationists have swallowed the farmers' panacea: lower taxes for farmers. Tax breaks, say the farmers, will let them go on farming the old homestead, perserving prime agricultural land and public open space. Maryland saw the light in 1956; since then 27 states have enacted laws giving tax relief to farmland, while at least four more have considered and so far rejected them.

Well, better luck next time. Farmland tax breaks in the name of conservation don't conserve anything -- except speculators' profits at public expense. Meanwhile, the heavier tax load inspires non-farm tax payers to heap imprecations on the name of conservation. If high taxes caused sprawl, there wouldn't be sprawl without high taxes, but of course there is. In fact, the public feeds the urban amoeba a stupendous subsidy. Conservationists cannot hope to save much open space until they put the amoeba on a diet.

Dr. Thomas Hady of the US Department of Agriculture's Economic Research Service divides farmland tax relief laws into three rough categories: "preferential assessment" for farmland, that is, pure tax relief with no strings attached; "deferred taxation" under which part or most of back taxes come due when the land is developed; and "restrictive agreements" under which the land owner agrees to certain restrictions in return for tax relief.

Preferential Assessment

Arkansas  
Colorado  
Connecticut  
Delaware  
Florida  
Idaho  
Indiana  
Iowa  
Maryland  
New Mexico  
South Dakota

Deferred Taxation

Alaska  
Kentucky  
Maine  
Minnesota  
New York  
New Jersey  
Oregon  
Rhode Island  
Texas  
Utah  
Virginia

Restrictive Agreements

California  
Hawaii  
Pennsylvania  
Vermont  
Washington

Laws Rejected So Far

Illinois  
Massachusetts  
Nebraska  
Nevada

## Maryland and California: An Overview

The 1956 Maryland "preferential assessment" legislation, although billed as an "open space" act, granted tax relief to farmland with no strings attached. The fascinated scrutiny of U.S. Department of Agriculture economists next door in Washington, D.C., has turned up no evidence that the act has slowed the exodus of farmers or saved open space. For example, a 1962 study of six Maryland counties showed that 71% of rural land buyers were not farming, and 79% had not previously farmed. These buyers also paid much higher prices for the land than its farm value would justify. On the other hand, rural landowners have eagerly turned farmer for tax purposes. For example, in 1967 the amount of property assessed as farmland in Montgomery County, a rapidly slurbanizing D.C. bedroom, increased by 5,902 acres. Thousands of "farmland" acres in the county now belong to two huge developers, Boise Cascade and Levitt & Sons.

The California Land Conservation Act, better known as the Williamson Act after its sponsor, went into effect with much fanfare in 1966. Unlike the Maryland legislation, the Act requires farmers, in return for tax relief, to sign contracts agreeing to keep their land undeveloped for at least ten years, with substantial penalties for developing sooner. Land under contract is taxed in proportion to its production rather than its sales value. Ironically, considering the intent of the Act to save "prime agricultural land", the new tax formula gives the biggest tax break to the least productive land.

The Williamson Act has induced a mad scramble to "save California's scenic beauty" -- particularly in areas with no prospect of development. By 1972, some 9,562,706 acres have come under Williamson Act contracts: almost a tenth of California's privately owned land, 25% of private farmland, and 50% to 75% of the land in some counties. But a 1970

survey found less than 20% of the land then under the Act to be "prime agricultural land", only 1.33% of it within a mile of any city, and less than 5% within three miles.

Williamson Act tax breaks, running over 80% per owner, last year cost local governments better than \$40 million. The greatest relief, by no coincidence, goes to the country's welfare champions, Central Valley farmers like J.G. Boswell who got over \$6 million in Federal crop subsidies in 1970, and Russel Giffin who got over \$3 million. Others now protected from the greedy developers include the Tejon Ranch belonging to the Los Angeles Times, the Kern County Land Company belonging to Tenneco, Southern Pacific Railroad, Standard Oil of California, the Getty Oil Company, and the Irvine Company. 1969 amendments to the Act also allow landowners to cancel contracts easily without much penalty, by claiming that development will be in "the public interest". In short, the Act grants a whopping tax break to owners of low value tracts remote from cities, with no obstacles or penalties when the land finally does become ripe for development.

The 1969 Amendments extended the Williamson Act's preservationist zeal in other ways as well. In addition to agricultural lands, Williamson Act tax breaks now go to oil fields, riding academies, archery ranges, land along "scenic" highways, aircraft landing strips, hunting and fishing clubs, radio and TV transmitter sites, 1/2 acre single family homesites, quarries, golf courses, salt ponds (owned by Leslie Salt), swamps, timberlands -- in fact any kind of land that can be vaguely construed as "open space".

The California legislature, aware that the Williamson Act has faults, is currently considering a variety of adjustments, such as reimbursing local governments for lost revenues. Can the Williamson Act and other farmland tax shelter legislation be salvaged? Emphatically, no. The

arguments supporting such legislation represent a complete misanalysis of the problem.

Fallacy Number 1: We Must Preserve "Prime Agricultural Land" Or  
Risk Starvation

Senator Williamson told a member of the Ralph Nader California Taskforce that he feared California might someday have to "rip up miles of asphalt" or face drastic food shortages.

In fact, the United States has no shortage of agricultural land, "prime" or otherwise, and no prospect of shortage in the foreseeable future. On the contrary, American agriculture currently suffers from severe overproduction. The Federal Government now pays farmers billions of dollars to stop farming millions of acres, in a totally vain effort to reduce the overproduction stimulated largely by further billions spent paying farmers artificially high support prices for their crops. Then, logically, the government spends yet further billions subsidizing the irrigation of new unneeded farmlands.

Farmland could also be cultivated more intensively. For example, in 1968 almost 50% of California's irrigated land was devoted to low value-low intensity crops like wheat and feed grains, hay, and irrigated pasture. Another large fraction produced cotton and sugar beets, which would not grow in California without subsidies. Almost all this land could support high value crops like fruits and vegetables. One 1964 study of agricultural productivity concluded that the State of Iowa could supply the nation's entire need for feed grains if all the farmers there adopted the practices of its most "progressive" farm managers.

Conservationists who admit we face no absolute food shortage still fear that sprawl threatens the loss of fruits, vegetables, flowers, poultry and dairy products often raised close to cities. But farmers

logically produce these high value, perishable items seemingly in the path of the bulldozers to reduce the cost and time of transportation to market. As cities expand, production easily shifts to new land. When Los Angeles sprawled out over all those fine orange orchards, for example, the oranges simply moved up to the southeast San Joaquin Valley, and over to Arizona.

Finally, what about feeding the world's starving multitudes? The United States is unlikely to indulge in such generosity -- even if Dr. Ehrlich approved. Besides, starvation abroad results less from gross shortage of agricultural land than maldistribution of wealth and opportunity.

This is not to condone the wanton destruction of land by sprawl. But if we wish to preserve agricultural land in preference to, say, estuarine land, we must do so for reasons other than potential food shortages.

Fallacy Number 2: The Best Way To Preserve Open Space Is To  
Preserve "Prime Agricultural Land"

People value open space in proportion to its attractiveness, its unique features, and its accessibility. For example, they don't much prize urban open space in its typical unlovely form of asphalt car parks downtown, or vacant "industrial" parks in suburbia, nor finely minced into ten thousand well-mowed private lawns.

How about farmland? Heavily cultivated "prime" agricultural land near a city -- before it joins the speculators' "weed belt" -- little resembles city folks' bucolic ideal. The working farm means toxic fertilizers and pesticides, noisy machinery, foul smells, and contaminated runoff water from fields and feedlots. Acres of cabbage may please the eye, but people cannot recreate in a vegetable patch; nor would the

sell. Hence, until the 1969 amendments to California's Williamson Act made it easier to break the Act's no-development contracts, the most heavily taxed farmers, those nearest expanding cities, refused Williamson Act tax relief -- lest their land be tied up when Mr. Right Developer came along. As Associate Planner of Contra Costa County (California) Joseph Barnwell explained to the Oakland Tribune, "Almost every prime land farmer I've talked to takes this approach: 'I'm going to farm as long as I can, then sell out at a good profit and retire. I don't want my land frozen.'"

Farmland tax relief will simply allow certain farmers to keep on farming a little longer -- while the developer buys a different parcel farther from the city. Ironically, all the money now thrown away in farmland tax breaks could easily buy and permanently save substantial quantities of open land. A 1967 study in Maryland calculated that tax revenue loss in eight counties near Washington, D.C., and Baltimore could have purchased between 1/2 and one percent of the farmland in the counties each year.

Fallacy Number 4: Farmers Deserve Tax Relief Anyway, Since It Is Unfair To Tax Them A Large Part Of Their Income To Provide The Growing Community With Services From Which Farmers Do Not Benefit

In 1971, the Planning Department of Ventura County (California) issued a projection that by 1980, farmers would pay \$15.7 million in property taxes, but receive only \$0.4 million in services. According to the Chairman of the Planning Commission of Alameda County (California), William Carpenter, "It is now being recognized that the greatest tax inequities are being imposed on those people in agricultural pursuits". He added, "I feel there is more public sympathy for the heavily taxed

farmer appreciate their trying. Non-"prime" land, like grazing land, though attractive and suitable for recreation usually lies too far from people -- including developers -- to merit high priority for rescue.

Some agricultural land may deserve saving as such, but so may alot of other land. The public should choose, parcel by parcel. A general directive to preserve "prime agricultural land" abdicates any pretense to public planning, leaving the actual selection of land to narrow private interests. And the Maryland and California fiascos have amply proved the administrative and political impossibility of keeping tax windfalls from the undeserving clutches of landowners not endangered by development.

Fallacy Number 3: The Way To Save Prime Agricultural Land, Assuming You Still Want To Save It, Is To Give Farmers Tax Relief

High property taxes no more drag farmland into development than the bow wave pulls a ship forward. At first, a few farmers sell out to developers and city speculators at fancy prices. Development prices in turn raise the assessment of the remaining farmers' land, and subsequently their taxes. While the higher taxes make life tougher for these farmers -- if they puritanically refuse to borrow against their reassessed land value -- developers and speculators offer them yet choicer prices. Finally, the occasional farmer who genuinely wants to stay despite tax pressures and developers' lures, faces further difficulties as creeping suburbia isolates him from agricultural suppliers and markets, while his new neighbors pass ordinances forbidding him to spray pesticides and fertilizers, or to rev up his tractor before seven in the morning.

Farmers want tax relief all right, but not to farm the old homestead indefinitely, even if they could. Rather, they want tax relief so they can continue farming until the price is right, at which point they will



agriculturalist than ever before".

But farmers do get a substantial benefit from the new community: the inflated value of their land. Likewise, they impose a large cost on the community, because they hold land that would be more valuable to the community if put to more productive use such as housing or industry -- or, perhaps, if set aside as a public park. The increase in their taxes with the increase in their land values gives them the economic signal to move. When they sell out, they receive quite adequate compensation for their troubles -- money sufficient for older farmers to retire with a comfortable nest egg, and for younger farmers to buy a bigger farm farther out and start over again. Of course, farmers don't see things this way.

American farmers have historically been speculators, provoking some Europeans to comment that American farmers do not grow crops, they grow land values. Would-be homesteaders of the West, as historian Richard Hofstadter has observed, traversed not only natural deserts, but "speculators' deserts" -- vast tracts of land farmed lightly or not at all as their owners waited for the price to rise. Today, the speculative tradition finds its reflection in the farmers' righteous conviction that they should have their high land values but not pay taxes on them, in effect, have their cake and eat it too. This belief, complemented by the ideal of the "family farm", lies at the heart of support for farmland tax breaks. Farmers believe, in the words of Dr. Thomas Hady of the USDA, that "it is unfair to force a family that has owned land for several generations to sell just when it stands on the threshold of large capital gains, simply because it cannot pay the taxes necessary to hold the land for a few more years".

Ironically, this poor little farm family benefits the least from increased land values; big "farmers" like Tenneco get the most. And

high land values hurt a small farmer more as a farmer than they help him as a speculator. Unless the gods bless him with a highway interchange, his little windfall just doesn't compensate for a lifetime of scrimping to pay the mortgage and his inability to buy or rent the land needed to expand his farming operations to a more profitable size. High land values also prevent poor farmworkers, however great their skills, from ever buying land to become farmers themselves. And to the extent that high land values attract "farmers" like Tenneco, they guarantee small farmers the unfair competition of corporations that can farm at a loss yet still make a good profit on tax breaks and speculation.

So next time a farmer complains bitterly that urban sprawl has tripled his taxes, conservationists need shed no sympathetic tears. Just ask this farmer would he prefer that his land were worth a third its present value!

The complaints of farmers who, in proportion to their size, actually stand to benefit from sprawl, have distracted attention from the real nature and cause of sprawl.

#### The Real Problem: Low Density

By definition, sprawl is extremely low density urban development. For example, the 1969 Report of the Sacramento Regional Area Planning Commission estimates that there are some 60,000 acres of vacant land within the already urbanized parts of the Sacramento region, land which "sits idle, awaiting the developer's bulldozer". Their Report estimates that at just the current density, these vacant lands could hold at least 400,000 people, or approximately 70% of the additional population projected for the region by 1990.

The costs of sprawl are largely the costs of inefficient transportation and communication arising from low density.

The longer the wires, pipes, and roads, the higher the cost of utilities, mail, garbage, fire, police, etc. In particular, low density forces heavy reliance on cars, trapping the poor and the elderly far from jobs, stores, and hospitals, and afflicting the public with noise and smog. The streets and highways in turn deprive local governments of valuable property tax revenue, cut up or wipe out neighborhoods, and engender the ugliness and traffic hazards of strip development. Nor does the vacant land, from the black top parking lots of the inner city to the weed-grown trash-blown "industrial parks" of suburbia even provide recreational land in recompense.

#### Subsidies to Sprawl

What causes sprawl? Urbanologists have tended to regard the asphalt amoeba as spontaneously generated in the absence of planning, and to recommend more and better planning as a disinfectant. In fact, however, Federal, state and local taxpayers subsidize sprawl at truly massive levels, while at the same time imposing severe financial penalties on economically and environmentally sound development. This rigged economic system makes traditional planning futile. There are three basic kinds of subsidy to sprawl: tax subsidy, service subsidy, and financing subsidy.

#### Tax Subsidy

A number of tax policies make it profitable for speculators to hold land that should be developed, forcing developers to "leap-frog" over them to cheaper land farther from town. Essentially, these tax loopholes allow the landowner to keep his valuable site undeveloped until other peoples' improvements, or public works on nearby land, have driven the price sufficiently high for his liking. In this fashion, the specu-

lator gets something for nothing, a windfall for playing dog-in-the-manger with land that others could have used to good advantage. The fact that the landowner, like a farmer, may not consciously consider himself a speculator makes no difference. Government and utilities need the power of condemnation lest speculators' extortion bring their operations to a halt.

The list of land income tax shelters runs into the dozens. Of these, the Federal capital gains tax is most familiar. Compare an investment in land with an investment in a savings account for an individual or corporation in a high tax bracket, say 50%. The interest from the bank account is taxed at 50% annually, while the increased value of the land will be taxed at the capital gains rate of 25% and only when the land is sold. If the land appreciates only as fast as money in a bank, the land investor has reduced his tax from 50% to below 25% because he has gotten compound interest on taxes not paid. And until he actually sells the land, he pays no income tax at all, although he can borrow against the land's appreciated value -- and even deduct the interest payments! Another very important tax loophole permits "farmers" to deduct against ordinary income their improvements to land, such as planting an orchard or building up a herd of cattle. Such deductions allow corporations and persons in high tax brackets to operate orchards or breeding herds at an economic loss while making a handsome profit on saved taxes. By this loophole, millionaire Governor Ronald Reagan avoided California income taxes in 1968 and 1970. In turn, all the rich tax dodgers buying land inflate its value faster and higher, even remote from cities, making land an even more attractive investment.

On top of income tax loopholes, local property tax assessors tend to assess raw land at a smaller fraction of market value than developed land. Farmland tax break laws legitimize and greatly extend this prac-

tice. The resulting undertaxation makes it even cheaper to hold land out of development, increasing yet further the value of land to the speculator. So, by swelling the beseiging army of speculators around a city, farmland tax breaks force developers to leap farther, and increase the ransom price for public open space.

While vacant land is undertaxed, buildings are overtaxed, particularly in slum areas. Sources of slum overtaxation include: lagging reassessment as the buildings decline in value, numerous tax breaks for homeowners which do not apply to the rental units typical of slums, and political gerrymandering that leaves areas most in need of services with the poorest property tax base. Any tax on buildings, as opposed to the land under them, penalizes the owner who develops and maintains his property. But the slum landlord faces a disproportionately whopping tax increase should he try to renew his buildings or construct new housing -- and he loses a juicy depreciation tax shelter to boot. As a result, the development that might have occurred in the run-down area instead sprawls onto new land.

#### Service Subsidy

Any new development needs transportation, water, sewers, power, telephone, mail, garbage, fire, police, schools, hospitals, and social services. Most of these services come heavily subsidized; the more the sprawl, the greater the subsidy.

Transportation comes with the highway subsidy. Particularly since the highway lobby managed (via highway trust funds) to earmark gas tax money for new highway construction, developers can count on state and local governments to run roads to their subdivisions, almost regardless of cost. These roads in turn subsidize further strips and blobs of development. In fact, highway planners even make road-generated sprawl

the justification for building the roads. For example, the California State Department of Highways calculated the "need" for the Malibu-Whitnall Freeway near Los Angeles on the basis of population projections for Malibu which assume the presence of the freeway.

A city hungry to expand its tax base will also subsidize a developer near the periphery by extending services to him at unit price -- although it may cost the city ten times as much to provide water, sewers, and police at the city border as in the center. The development may bring in enough new children to swamp the city's school facilities, but the developer pays not an extra cent. The local property taxes simply go up by the amount of the subsidy to the new development. A 1970 study calculated that servicing a new development in the Palo Alto Foothills would cost the city of Palo Alto so much it could actually save money by buying the land for open space. The Ventura County (California) Planning Department, projecting trends to 1980, found that residential areas would bring \$39.7 million in taxes but cost \$96.9 in services; industrial areas would bring \$8 million but cost \$8.9, and commercial areas would bring \$2.5 million but cost \$3.9.

If city government acted rationally, it would charge the full cost of services, and refuse to incorporate a development unless the developer paid. But while local governments perversely subsidize high-value developments to the point that they cost more than they return, they notoriously refuse on economic grounds to permit developments that might bring in large numbers of children or poor people.

The conflict between reason and equity arises from a failure to distinguish services to property from services to people. Services to property, like utilities, roads, sewage, fire and police protection, enhance local property values. The beneficiaries of such services, including developers, should logically pay for them in full, through user

charges and local property tax. Services to people, like schooling and welfare, benefit society "in general" -- although the line gets fuzzy as when construction of a college enhances local property values. Consequently, services to people should derive from statewide or nationwide taxes. In fact, a recent California Supreme Court decision invalidated as inherently inequitable the use of local property tax to support schools. A statewide property tax would be much fairer, although the Williamson Act may rule out this option.

### Financing Subsidy

Even when a city wisely refuses to provide for a developer who will cost more than he will bring in revenue, the developer can resort to yet another subsidy: the tax-free municipal bond. As an example of the possibilities of municipal bonds, consider the machinations of T. Jack Foster, the founder of Foster City in San Francisco Bay. Foster incorporated his city into a "Special Improvement District" in 1959, and issued municipal bonds in 1962. When the bond interest became due, he issued more bonds and paid off the interest on the first bonds with the money from the new bonds. In this fashion Foster financed a development for very little out of pocket cost by transferring the burden to the unfortunate inhabitants of Foster City in the form of astronomical property taxes and utility rates. Without the municipal bond -- subsidized by general tax payers who make up the taxes lost on the bonds -- this development would not have been profitable. California no longer permits some of Foster's more imaginative financing tricks, but the municipal bond, in California as elsewhere, remains very much open to abuse.

Other forms of financing subsidy encourage single family home developments. These include homeowners' property tax exemption,

exemption of the homeowners' "imputed" income from renting his property to himself, and cheap Federal Housing Authority loans to home buyers. Apartment renters get no such breaks, although apartment buildings cost less to service and consume less land. Many municipalities further encourage single family developments through zoning, under the delusion that this will keep down the number of children in the schools. A recent study in New York's Westchester County found that since a high proportion of middle class apartment dwellers have no children or grown children, apartment developments add far less to the school burden than single family.

Like the picture of Dorian Gray, the sprawl that blights the landscape reflects the hidden, ugly reality of years of private sins against the public treasury and welfare. The sprawlers succeed because, well, how many people can get excited over tax loopholes? Froth at the mouth over imbalances in municipal account books? Money doesn't even change hands, since the sprawlers receive their subsidy mostly in the obscure form of increased land values. The public just quietly pays the tax bill, and suffers the economic and environmental damages.

#### How To Starve The Amoeba

Just for a moment, picture a county that owns its land. Instead of collecting taxes, a benevolent County Board of Supervisors leases the land at the best rates possible, while providing services to property at their true cost. This arrangement allows county planners real power to decide where development should and should not go, and how it should look.

In this planners' nirvana, developers build just where they should, in or right next to a town, instead of beyond the ring of speculators. Since the rent depends solely on the value of the location, a building



owner renting a good site cannot afford to let his property run down into a slum. More people live happily in apartment buildings, and fewer in single family homes. From the most valuable downtown sites, alas for conservationists, sky scrapers rise. In compensation, the county has without difficulty set aside parks and spared marshes by the score. Out in the countryside -- there is alot more countryside without sprawl -- small farmers rent the land they need. Big agribusiness corporations, denied their tax breaks and speculation, keep out of the county. And with the rent money, the county finances schools and hospitals second to none.

Two towns in this country, Fairhope, Alabama, and Arden, Delaware, actually do rent out their land, as does to some extent the State of Queensland, Australia. But a government can achieve a similar effect without having to buy all the land.

Ever since Henry George, some economists have recommended the so-called "site" or "inverse valuation" tax to keep speculation from hindering rational land use. This tax, imposed on the market value of the land, but not on the improvements, has the same effect as renting the land. That is, it keeps the price of land so low that municipalities can easily buy parks, developers can buy the land most suited for development, and poor farmers can buy farms. At the same time, it forces owners of very valuable sites such as downtown land to develop and maintain it fully. This tax is also highly progressive, easy to collect, and provides ample revenue.

A number of US cities including San Diego applied the site tax during the Progressive Era (1900-1914). Today, the site tax applies in a number of Australian cities, including Sidney, in parts of New Zealand including Wellington, and in a number of African cities including Nairobi, Kenya. Denmark derives about 50% of its tax revenues from a

national "ground rent". Pittsburgh and Scranton, Pennsylvania, as well as a number of western Canadian cities including Vancouver tax land about double the rate of improvements. The real obstacle to wider applications of this kind of tax has been and always will be the political muscle of the big corporate speculators, and the tunnel vision of the little ones, especially down on the farm.

#### The Moral

Even highly visible, thoroughly understood subsidies to sprawl will be difficult to eliminate, as conservationists who have undertaken to bust the Highway Trust Fund well know. Under such circumstances, conservationists ignore at their peril the dull financial, economic, legal, and political details of a conservation issue. Succumbing to fuzzy thinking, they become the good shepherds of special interest wolves in ecological wool -- like speculators demanding tax breaks in the name of open space.

## BIBLIOGRAPHY

- "Agriculture's Value to County Economy Noted by Planners", Press Courier, Oxnard, California, May 16, 1971.
- Demain, Don. "Tax Shelter Costing Million", Oakland Tribune, seven part series, January 2 - January 8, 1972.
- Fellmeth, Robert. Power and Land in California, Grossman, New York, 1972.
- Gaffney, Mason. "Containment Policies for Urban Sprawl", in Stauber, Richard (ed.), Approaches to the Study of Urbanization, Governmental Research Center, The University of Kansas, 1964, pp 115-33.
- Gaffney, Mason. "Coordinating Tax Incentives and Public Policy: The Treatment of Land Income." Presented at the Brookings Institution, May 1969, to be published in Charles Schultze (ed.) The Role of Incentives in Public Policy, 1970.
- Hady, Thomas F. "Differential Assessment of Farmland on the Rural-Urban Fringe", American Journal of Agricultural Economics, Volume 52, Number 1, February, 1970.
- Hofstadter, Richard C. The Age of Reform, Knopf, New York, 1955.
- Rowe, Jonathan A. Property Taxes on Farmland on the Urban Fringe, unpublished. Thesis for Prof John C. Keane, U PA, Institute for Environmental Studies, 1971.
- Whyte, William. The Last Landscape. Doubleday, Garden City NY, 1968