I enjoyed reading Dr. Upchurch's fine paper and my appraisal follows the two major parts of the paper.

The second one-half of Dr. Upchurch's paper deals with programs for achieving land policy objectives. I have three brief comments on this part of the paper.

The first one-half of Dr. Upchurch's paper rests heavily upon the findings and reasoning presented in the USDA report, "Land and Water Resources: A Policy Guide," published in January, May and September of this year. To this part of Dr. Upchurch's paper, I shall devote most of my time and effort since it contains, I feel, several intriguing contributions, some serious weaknesses and some serious omissions.

Programs for Achieving Land Policy Objectives

Returning to the second part of the paper, I have three rather brief comments.

1. Dr. Upchurch presents an excellent description of those parts of the Food and Agriculture Act of 1962 as the act applies to land resource use; namely, Sections 101 and 102 and Title IV.

2. Dr. Upchurch exaggerates a bit when he states that "The act included more fundamental land use legislation than any act since the 1930's . . . They mark 1962 as a banner year with respect to land policy and the achievement of basic land use adjustments." This statement sent me scurrying back to reread the last eight pages of the paper and a review of the sections and titles in the 1962 act with the expectation that my second reading would reveal considerably more than my first. However, I conclude that if "the act included more fundamental land use legislation than any act since the 1930's" then there hasn't been much important land use legislation since the 1930's and, second, that the terms fundamental and basic in this context may be a slight exaggeration.

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For example:

a. The cropland use adjustment feature provided in Section 101 is an extension of the Conservation Reserve for a longer period and into forest, wildlife and recreational uses without much thought given to the demand for these resources from a kind, quality or locational viewpoint. However, this feature of Section 101 is limited to 41 counties in 13 states with a $10 limitation of outlay. So I fail to see how this is either fundamental or a basic achievement.

b. The renewal of acreages expiring under the Conservation Reserve under Section 101 to the extent of 1.3 million acres this month and the 6 million acres one year hence plus the 50% reduction in payment penalty for pasturing the Conservation Reserve land would hardly qualify as a fundamental or basic land use adjustment.

c. The resource conservation and development project feature authorized under Section 102 of the act hardly qualifies as a basic or fundamental change in land policy since no funds were appropriated to implement the authorization.

d. The "income producing outdoor recreation" feature under Title IV of the act using the loan authority of FHA, the technical assistance of SCS and the cost sharing practices of ACP hardly sounds like a fundamental or basic break with the past.

e. The "recreation on flood control and watershed projects" feature enabling recreational cost sharing on PL 566 Watersheds is scarcely a basic or fundamental change.

3. Dr. Upchurch concludes his paper suggesting that the task is far from finished and emphasizes the need for further research, continued appraisal, improved administration and changes emanating from this research and appraisal such as provided at this conference and the series of land and people conferences.

Land and Water Resources Study

Now I return to the first part of Dr. Upchurch's paper, which rests heavily upon the department's land and water resources study. My appraisal here deals with (1) the strengths, (2) the weaknesses and (3) the omissions of this part of Dr. Upchurch's paper and the policy guide that must be recognized if we are to address our efforts to basic structural changes in land resource use.

Throughout the past four decades the "farm problem" including land resource has been treated policy-wide as a problem (1) largely confined within the agricultural sector and (2) characterized as temporary, albeit urgent. This has led to many proposed panaceas seeking solutions largely within agriculture. Likewise, this has led to a series of program expediencies seeking amelioration on the basis of temporary and emergency measures. It is indeed gratifying and refreshing to read the USDA's report "Land and Water Resources - A Policy Guide" as referenced by Dr. Upchurch which holds that agriculture's problems(1) possess interactions throughout the economy and (2) are chronic and continuing, demanding for their amelioration, planning horizons of decades rather than years.
Certain challenging and constructive ideas implicit and explicit in the report and Dr. Upchurch's paper should be emphasized as the New Frontier ventures further to solve our land resource problems. Their approach recognizes, as I interpret it, that this nation does not now have a land resource policy consistent in its elements and varied to fit different sections and interests. They place high priority on building a land policy recognizing the task as a long-run effort and not merely as a series of emergencies. The nucleus of this policy embraces land and people and their interdependencies plus the idea that land resources are to be used rather than idled.

This policy implies that land presently committed to agriculture is not irrevocably imprisoned within the agricultural plant but should be available for any use that will contribute most to the welfare of the nation and its people. Thus, land in agriculture, but presently underemployed or unemployed in this use, is the reservoir from which uses outside agriculture may be fashioned. It is a reservoir in which all citizens have a stake and from which all citizens may derive satisfactions.

This philosophy implies that farm policy is more than a policy for farmers. It projects farm policy into the national perspective of economic growth and national well-being. It is in keeping with the motto etched on the Department's edifice, "Dedicated to agriculture in the public interest." In pursuing this philosophy, we are confronted with a legacy of programs which contradict it. The philosophy demands a flexibility of land uses which permits land to move from one use to another in the public interest, which is a dynamic concept. Likewise, it demands mobility of labor which permits and encourages people to move to positions of employment where they may receive increased wages and satisfactions from their increased productivity.

Instead of mobility and flexibility, programs have tended to create immobilities and inflexibilities. The use and application of historical bases for output control, the minimum allotments for all producers of a product, public investments in rural areas which do not possess the economic resources to support them, the capitalization of expected program benefits into land values—all of these practices tend to immobilize both human and natural resources in place and contradict the philosophy of full employment of resources toward the end-in-view of maximizing the kinds and amounts of goods and services the people want.

The report represents a valuable study as emphasized by Dr. Upchurch. I would like to address these remarks to our congressmen in particular. In light of the numerous assumptions stated, the analysis meets adequately the criteria expected of research. However, serious questions may be raised if the conclusions are used as the exclusive basis for land and water use policy in the United States. Other assumptions equally valid would yield materially different results. The point is that a valid research study is not necessarily a valid basis for policy, although the study may well be an important contribution to the basis for policy. In my view, the report becomes a starting point rather than a point of conclusion for policy formulation into the future with all the implications such policy holds for land and people. 2

Harry A. Steele and Mark M. Regan in an excellent article "A Review of Current National Plans for Land and Water Use," J. Farm Econ., December 1962, treating alternatives to the assumptions used in the report.
The conclusion of "50 million excess crop acres by 1980" remains in the area of a hypothesis subject to testing through research rather than a fact which is beyond serious question. Research required to test this hypothesis remains to be done as part of the entire analysis of agricultural adjustment. Certainly, neither logic nor fact permits us to draw implications from an interesting hypothesis to any region. Rather, intensive studies within regions carried out as parts of regional and national models are required to provide the insight, facts and logic for national aggregative conclusions.

In large measure, the report seeks to answer the question, "How much land do we need to retire (unemploy) from farming in order to lessen or eliminate the excess supply of farm products at support prices?" I would suggest we address our research to the question "How should our land be used over the long pull if land is to make its maximum contribution to economic growth and to what extent will this utilization help solve the imbalance problems within the farming industry?"

In recent decades, land policy has been tied increasingly to price and income objectives within farming without adequate regard for long-run opportunities to adjust the components of the resource mix. Implicitly, we have made land resources carry the burden of agricultural adjustment attempts, but this policy appears incompatible with the economic use of our land resources from a national viewpoint. Land use geared to economic growth of the nation cannot be specified without involving labor and capital inputs and their alternative uses. Land should be allocated among alternative uses on the basis of how much and in what way it adds to the national income. Allocations should not be related merely to the size of the imbalance in farm output and demand for farm products.

May I suggest certain limitations in the methodology? The estimates and assumptions used in the report leading to the end-in-view of 50 million excess crop acres by 1980 necessitate considerable refinement and continuing study. The use of projected crop yields to 1980, based on trends of the last decade, is open to question in light of weather effects alone. Professor L. M. Thompson of Iowa State University is engaged in a study which indicates that on the basis of a 27-year weather period (1935-1961), over 50 percent of the increases in corn yields in the five major corn-producing states during the 1950's may be explained by favorable weather. Despite the well-known hazards of long-range weather prediction, the report does in effect predict weather through 1980 on the basis of weather through the 1950's if the conclusions are used as the basis for policy. Possibly alternative assumptions embracing various coefficients of change would be useful. During the early 1950's USDA officials suggested the fifth plate derived from population growth would alleviate the surplus productive capacity of the agricultural plant. Research might well inquire into what went wrong with this prediction.

Further refinements in the report findings are needed in the regionalization of the productivity estimates, by uses, if the findings are to be made the basis for land policy toward the future. Furthermore, the analytical model must have the ability to accommodate change on a continuous basis whether the change emanates from technology, changing consumer preferences, population growth, weather cycles, or international affairs. Thus, the formulation and implementation of land resource policy becomes a process which is sufficiently dynamic to accommodate the dynamic components from which it is fashioned. A report limited to national estimates from the vantage point of one year, 1962, obviously becomes only a start in a long and arduous journey of research, education, legislation and administration toward building land resource policy.

Inasmuch as the science and art of predicting needs for lands well into the future are imperfect, the probabilities of uncertainty warrant the concept of a "contingency reservoir" of cropland which does not get committed irrevocably to other uses. Of the land not presently needed for agricultural production, a to-be-determined amount, kind and location of land might be assigned to and kept within the contingency reservoir. Such land might be used as uncertainties give way to certainty through changes as they unfold in population growth, technology, weather, international affairs and the like.

Land not needed either for current and prospective demands or for the contingency reservoir would be eligible for other uses yielding increased value products and services. Public payments for land idled in the farm plant mean that such lands yield zero product to the public. Idle resources make no contribution to economic growth from other segments of the economy. Sectors yielding positive value productivity must provide funds to induce landowners to idle agricultural land with the net consequence of diminished economic growth for the nation. If payments to landowners are based on agricultural uses producing products for which there is no demand, or if the payments are above the value productivity of the land in other than agricultural uses, the payments in themselves constitute an obstacle to land-use shifts and tend to freeze land within the agricultural plant.

Several critical considerations are not treated in the report. We shall mention and briefly discuss several of these considerations as emphasized by Professor Schultz yesterday. Payments to improve farmers' income conditioned on the recipients' rights in land (i.e., acreage allotments), or the right to produce or market (i.e., quota or franchise) tend to become capitalized into the land or other rights. To the extent that expected benefits from farm programs get capitalized into lands or other rights to produce or to sell, the intended income benefits are denied future owners of these rights unless benefits spiral upward by at least the amount of the annual increment of the capitalized value. A recent study published by the Virginia Agricultural Experiment Station estimates that the average price of an acre of flue-cured tobacco allotment alone in Greene, Wilson and Pitt Counties, Va., was capitalized into a value of $2,500 in 1957. Thus, the buyer of this acre of allotment was actually buying

future expected program benefits, which had become capitalized into the current land value. The important point is that the purchaser of the land including the right to income benefits under the program had paid for expected program benefits. This means that the program benefits as current income raising devices had been preempted by previous owners of the rights. Ownership transfers of farmland at an annual rate of 5 to 8 percent reinforce the importance of this point.

This subtle but positive means of negating the intended beneficial income effects of farm programs taking place through income transfers would appear to be diffused throughout agriculture. Of course, the effects with respect to corn, wheat, cotton, milk and other commodities may be less pronounced than in the case of tobacco in the Virginia study. In the process, an over-intensification of land use may arise with resultant increases in the average unit output costs of farm products with important implications for domestic consumers and international trade. In terms of land-use shifts, the effects may well tend to further freeze the land into certain uses of excess products and services and effectively prevent the land from shifting to another use with a greater value productivity.

Shifts of land from the agricultural plant have special and profound implications for soil conservation. Conservation expenditures, representing current investments with the anticipation of future returns, inherently assume continued uses of the land for the purposes for which the conservation expenditures were made. Conservation needs for land that is to be put into the contingency reservoir will be considerably different than for land that is to remain in crops. If the land is destined for recreation, urban, forest, or grazing uses, conservation investments will likewise be affected.

Conservation funds which are limited and in competition with other uses of public funds might best be allocated in terms of expected future uses of the land and the attendant needs for conservation investments. This reasoning leads to the necessity of identifying specific areas of land likely to shift to other uses in the years ahead as suggested earlier. Otherwise, the nation may experience serious sunk costs in conservation investments without realizing the benefits for which the investments were made.

Public use of the spending power alone has not and will not achieve and maintain needed land-use shifts once these shifts are identified by uses and by areas. There are many other ways and, I feel, more important means for guiding land-use adjustments in the years ahead. Aside from possible uses of easements, the report scarcely mentions techniques other than those involved in the use of the spending power.

Agriculture might benefit from methods used in urban areas in their guidance of land use toward long-run objectives. Urban land-use shifts and objectives have been achieved largely without the spending power and in its stead the regulatory and tax powers have been exercised by state and local government agencies. Possible uses of zoning ordinances, land-use regulations, permits, easements, 

purchases, and a host of related institutional tools and techniques for guiding land uses toward desired objectives remain to be developed, fashioned and applied to agricultural land. If public funds for agriculture become scrutinized more closely as competition for public funds increases and as the ratio between rural and urban populations widens, land-use shifts and adjustments within agriculture and between agriculture and other uses may well be expected to draw more heavily upon institutional means and less upon the spending power of the federal government.

State and local governments are important if not senior partners with the federal agencies in designing and putting into effect the kinds of land-use institutions needed for guiding land uses toward long-run objectives. If the modus operandi of future land-use adjustments shifts from almost exclusive dependence upon the spending power to increased use of other public powers as I feel will come about, state and local governments will necessarily assume increased responsibilities in achieving and maintaining land-use objectives.

Secretary Freeman in his paper at the Land and People Conference in January 1962, mentioned by Dr. Upchurch, concluded that the only sensible answer to the problem of underemployed labor resources in agriculture is to devise means for bringing new resources to the people of rural America. Continuing this reasoning, Assistant Secretary Baker estimates that well over 7,000,000 new or improved opportunities are needed for "... inadequately low income rural people over the next 10 years." In light of the inelastic nature of demand for farm products and the continuing substitution of capital for labor in using technology, the Freeman-Baker reasoning must assume that most such opportunities would involve other activities than the production of the usual farm products. This would appear necessary in the interest of achieving economic growth of the nation and improved economic well-being of people remaining in agriculture.

There are without doubt industrial development potentialities within rural redevelopment. There are also greater possibilities for part-time employment by farm people in industrial areas brought about by improved transportation facilities. But the largest potential employment opportunities for farm people remains in new and old industrial urban areas. Whether these people live in urban, suburban or rural areas is another question. But the answer to employment opportunities for farm people appears to rest for the most part in industrial, trade and service industries which tend to concentrate in urban complexes. With this, I rest my appraisal of Dr. Upchurch's excellent paper. Thank you.