SHORT-RUN MEASURES TO STIMULATE THE ECONOMY

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SHORT-RUN MEASURES TO STIMULATE THE ECONOMY

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PREFACE

Short-Run Measures to Stimulate the Economy reports the Congressional Budget Office's updated estimates of the costs, employment impacts, and legislative and operational aspects of a variety of measures intended to accelerate recovery of the economy from its current high level of unemployment.

Estimates of this nature inevitably change with changing economic conditions and with development of improved estimating methodology. Those set forth here, although presented in terms of ranges of possibilities, differ somewhat from previous CBO estimates and undoubtedly will differ from future ones. They are published at this time because of the current efforts by the Congress to select means of economic stimulus. The stimulus measures considered here cover a wide spectrum.

This report was prepared under the direction of Robert A. Levine, Deputy Director. All divisions of the Congressional Budget Office contributed to its preparation. Editorial assistance was provided by Tricia Knapick. Barbara M. Bishop, Janet L. Fain, Shirley Hornbuckle, Betty J. Ingram, and Dora Jean Malachi helped prepare the manuscript.

In accordance with CBO's mandate to provide objective and impartial analyses of budget issues, this report presents no recommendations.

Alice M. Rivlin
Director

March 1977

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PART I. SHORT-RUN MEASURES TO STIMULATE THE ECONOMY

The recession of 1974-1975, and the seeming pause in the recovery from that recession in the last half of 1976, have led to a wide variety of proposals to stimulate employment. Proposals have been put forth to modify the structure and/or funding levels of programs such a countercyclical revenue sharing, public service employment, Economic Development Administration (EDA) public works projects, other public works projects, and housing assistance. In addition, other proposals have been suggested to stimulate the economy through various forms of tax cuts--such as rebates, permanent cuts in personal income taxes, and business tax cuts.

This analysis details the ways in which such programs would work, the legislative and administrative requirements for their implementation, and rough estimates of their employment impacts for fiscal years 1977 and 1978. 1/

Each of the prospective programs is evaluated for:

1/ An earlier CBO paper, Temporary Measures to Stimulate Employment: An Evaluation of Some Alternatives (September 1975), presented a similar analysis. Unlike this analysis, however, the 1975 paper was general, examining the alternatives in an undated setting for their potential addition to employment and GNP at any time during which they might be implemented. For that reason, as well as a general updating of methodology and assumptions, the estimates here differ somewhat from the earlier ones.

- o Estimated costs in terms of increased budget authority and outlays for fiscal years 1977 and 1978.

- o Legislative and operational aspects.

- o Estimated speed with which it is likely to take effect.

- o Estimated size of the employment impact.

A more detailed discussion of each program is presented in Part II.

The remainder of Part I summarizes these estimates and indicates where President Carter's proposals and the stimulus packages voted by the House and Senate fall in relation to the ranges analyzed here.

BUDGET COST AND ECONOMIC IMPACT OF VARIOUS PROGRAMS

Table 1 provides rough estimates of the increased numbers of jobs that might be brought about in the next two years (1977 and 1978) as a result of alternate programs for economic stimulus. The estimates are for net total jobs: the number funded by initial spending minus the number that would have been funded by nonfederal spending in any case (fiscal substitution) plus the number stemming from follow-on spending by the recipients of the initial spending (the multiplier).

Expenditure programs were selected and their budget magnitudes determined based on Congressional Budget Office (CBO) estimates of the maximum employment impact that could be achieved over the next two

TABLE 1. COSTS AND IMPACT OF STIMULUS PROGRAMS (ADDITIONS TO EXISTING PROGRAMS)

Program	Additional Budget Authority ($ Billions)	Additional Direct Budget Cost--Outlays ($ Billions)		Additional GNP ($ Billions at an annual rate)		Additional Net Budget Cost ($ Billions)		Additional Impact on Employment (Thousands of Jobs)	
		FY 1977	FY 1978	1977:4	1978:4	FY 1977	FY 1978	1977:4	1978:4
<u>Tax Cuts</u>									
Single Rebate 77:2		15.0	0.0	11	5	12.4	-2.3	370	140
Rebates 77:2 78:2		15.0	15.0	11	16	12.4	10.2	370	480
Repeated Permanent increase in deductions (77:3)		1.5	6.0	5	10	1.3	3.9	70	210
<u>Countercyclical Revenue Sharing</u>									
Full Funding	1.4	0.3	1.2	1	1	0.2	0.7 to 0.8	30 to 40	40
Doubling formula and full funding	3.8	1.4	2.4	3	3 to 4	1.3 to 1.4	1.1 to 1.9	90 to 120	110
<u>Direct Employment</u>									
500,000 total Public Service Employment*	2.5	0.4	1.6	2	3	0.2	0.6	150	150
1,000,000 total Public Service Employment*	4.8	0.4 to 0.7	3.0 to 5.1	2 to 4	7 to 9	0.2 to 0.5	1.4 to 2.7	180 to 270	430 to 440
Youth Public Service Employment	1.1	0.2	0.9	1	2	0.1	0.4	120	100
<u>Public Works</u>									
EDA a/	5.0	.05 to 0.4**	2.8	1 to 5**	4 to 5	.04 to 0.3**	1.8 to 1.4	b/ to 50**	90 to 120
NonEDA--new	1.2	.05	0.5	c/	1	.04	0.3	10	30
NonEDA--ongoing	0.8	.20	0.5	1	1	.10	0.2	20	20

a/ Economic Development Administration.
b/ Less than 5,000
c/ Less than 0.5 billion.
* These estimates show the impact of increases from the current program level of 310,000 jobs.
** The more optimistic end of the range assumes authorization and apppropriation in the second quarter of calendar 1977. Slower authorization, or slow allocation of funds by EDA, can delay the effects of public works programs substantially.

years. 2/ That is, attempts to increase expenditures above the levels shown might lead to a low level of absorption--substantial failure of recipients such as state and localities to use the additional funds in ways that would increase employment. 3/

Were long-run stimulus the need, higher expeditures for these programs might be phased in. However, a need for long-run stimulus could also mean that spending programs in almost any area of government responsibility would become candidates for inclusion in the package. This is an important point

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2/ For all but the countercyclical revenue sharing and the two nonyouth public service employment (PSE) programs, the increases are over CBO current policy estimates. For revenue sharing, the increase is over appropriation levels, since current policy estimates assume full funding and extension of the legislated revenue-sharing formula, and appropriated moneys were less than that would imply, given high rates of unemployment that have raised formula levels, and given the scheduled termination of the program. For PSE, current policy estimates have been based on the Second Concurrent Resolution on the Budget for Fiscal Year 1977. That resolution assumes higher funding levels for PSE than so far have been enacted into law.

3/ Estimates of absorption capabilities, spending rates, timing, and such matters are necessarily judgmental. The bases of the judgments by CBO's analysts for each program are summarized in Part I and detailed further in Part II. These judgments are necessarily based on the past performances of similar programs. No allowance has been made for intervening new factors, such as the change from administrators who opposed the programs to administrators who favor them.

missing from most of the current discussions about stimulus, but it lies outside the scope of this report.

To understand the estimates contained in Table 1, three key points should be kept in mind. First, major short-run reductions in unemployment depend in large measure on those programs that can be mounted on a large scale without "saturation" or substantial waste. This implies major dependence on tax cuts because all of the other options are restricted in size by limited numbers of administrators, projects, potential recipients, or incentives for state and local intermediaries to spend in employment-inducing ways.

Second, at the given program levels, tax cuts are the least efficient employment-inducing program per dollar spent. This is because beneficiaries tend to save substantial portions of their tax cuts, thus reducing the employment-creating impact.

Third, the alternatives vary widely in the speed with which their employment effects take hold. Public service employment programs can be started quickly because, for the most part, they merely require expansion of current authorizations and appropriations, and because these expansions can be used quickly and directly for jobs by state and localities. Once begun, however, public service employment is limited in size by the speed with which states and localities can absorb additional job slots. Too much speed may make the program less effective, because a larger proportion of the new jobs may substitute for jobs that would have existed in any case. Of the programs discussed in this paper, those that require the greatest start-up time are the various types of expanded multifamily housing efforts that would have little effect (if any) within the two-year period. Because of this negligible effect, they are not included in Table 1. Meaningful increases in public works programs can produce employment effects at a faster rate than is the case for housing programs, but the rate still

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remains slower than those of the other alternatives. Countercyclical revenue sharing and tax cuts have rates that fall in between those of public works and PSE--revenue sharing because revised state and local budgeting takes time; tax cuts because the machinery to return taxes operates only as income is earned. Tax rebates, however, can be mounted more rapidly than permanent reductions because the rebate is a return of taxes already paid.

In examining the estimates in Table 1, three general limitations should be kept in mind. First, comparisons among the spending programs (e.g., countercyclical revenue sharing, PSE, and public works) in Table 1 should be made cautiously. The estimates for these programs in the table are imprecise and depend crucially on assumptions that may change. Particularly important are the assumptions regarding "substitution" within programs involving grants to states and localities. 4/ Experience with such substitution is difficult to measure and to apply to future program operations under changed rules. To account for this, most of the program impacts in Table 1 are expressed in ranges.

Thus, the relative impacts of the programs are highly sensitive to the assumptions. However, the large differences among broad program types--as summarized in the three key points above--hold.

A second limitation on the estimates is that the programs are not pure alternatives. Combinations can be packaged together; an earlier CBO publication, The Disappointing Recovery, provides illustrations of packaged options.

4/ Substitution for programs involving grants to states and localities is defined as spending by a recipient of federal funds for purposes that would otherwise have used the recipient's own funds.

Third, the columns in Table 1 cannot be added, because some programs substitute for one another. For example, the revenue sharing options represent two levels of the same program. To include both of them in a stimulus package, therefore, would be to engage in double counting. In addition, youth employment and PSE programs, in all probability, could not be mounted at the same time. Since both are public service employment efforts, the existence of one program will affect the capacity of the states and localities to achieve the total projected job level of the other.

SUMMARY OF PROGRAM ASSUMPTIONS

This section provides summaries of the assumptions that underlie the estimates of the budget costs and employment impacts contained in Table 1. Greater detail for each program can be found in the appropriate sections of Part II.

Tax Cuts

Rebates. The estimates assume a rebate of $15 billion for each year in which the rebate is effective. This amount includes some payments to people who had no 1976 tax liability. Two estimates of unemployment effects are considered: for a 1977 rebate alone; and for a rebate in 1977, repeated in 1978. It is assumed that rebate legislation could be passed by and be effective in the second quarter of 1977.

> The rebate recommended by President Carter is smaller than the "high-level" program estimated in this report. The President's request is for $11.4 billion in 1977 alone, although it could be repeated in 1978.

A Permanent Cut in Personal Income Taxes. The estimates assume a cut at a rate of $6 billion a year, through an increased standard deduction, effective in the third quarter of 1977. Thus, only a $3 billion cut would take place in calendar 1977. The reason for not making the tax cut retroactive to the part of the year before passage is to avoid the experience of the 1975 tax cuts. The full-year cut in 1975 was credited to less than a full year of withholding, so that the annual size of the tax cut had to be increased the following year in order to avoid an increase in the withholding rate. Another way to handle this problem is to make no adjustment for taxes withheld in 1977 before the cut, but to distribute the money in the form of a refund in 1978.

> President Carter has proposed a permanent cut of about $4 billion a year resulting from an increase in the standard deduction and extension of the general $35 tax credit to exemptions for age and blindness (in addition to the existing credits for taxpayers and dependents). Due to the timing of this reduction, the President's request would reduce federal receipts by about $1.5 billion in fiscal year 1977 and $5.4 billion in fiscal year 1978. The reduction in 1978 revenues includes refunds of overwithheld taxes in 1977.

Business Tax Cuts. The employment effects of business tax cuts could not be estimated when this report was prepared.

> President Carter has proposed a business tax cut of $900 million in 1977, amounting to $2.5 billion in 1978. This would be in the form of either a credit against payroll taxes, or an increase in the investment tax credit, at the choice of the taxpayer. In its consideration of the Third Concurrent Resolution on the Budget for Fiscal Year 1977, the House lowered revenues to the level that would be required for the changes made by the Ways and Means Committee. The Senate agreed with

the President's totals for temporary and permanent tax reductions, although the nature and division between temporary and permanent was left to the Finance Committee.

Countercyclical Revenue Sharing

A countercyclical revenue-sharing program was passed by the last Congress. The funding formula for that program provides $125 million plus $62.5 million per quarter for each half of a percentage point by which unemployment exceeds 6 percent in the calendar quarter ending three months prior. Given recent high unemployment rates, this would lead to total outlays for the five quarters for which the program was authorized of approximately $1.5 billion. However, the authorization and appropriation put a ceiling of $1.25 billion on the program. The first CBO estimate is for full funding of the formula. This would add an additional $250 million in fiscal year 1977 and continue full-formula funding in fiscal year 1978. The second CBO estimate is for fully funding a doubled formula.

Although different states and localities receiving additional revenue-sharing benefits would react differently, the estimates here are based on the likelihood that, under current strained fiscal circumstances, most of the funds would be used to expand or maintain public services. To some extent, however, the funds would be used to hold the line on local taxes--keeping them from going up as much as they otherwise might have. This would also have a stimulative effect, although less of an effect than additional direct expenditure. To the extent that revenue-sharing funds merely add to state and local bank balances, they do not stimulate. However, CBO estimates that, under current conditions, little of this is likely to occcur. It is assumed that states and localities will begin budgeting and spending the money as soon as they are assured that it will be available.

To be specific, the top end of the range of impacts is generated by assuming that 60 percent of the money goes to public services (30 percent to tax reduction and 10 percent to bank balances) and that 75 percent of the portion for public services goes to wages and salaries; the lower end of the range assumes 50 percent to services (40 percent to tax reduction and 10 percent to bank balances) with half the 40 percent for services going to wages and salaries.

> President Carter has proposed changes in the program that would make it more sensitive to variations in the unemployment rate and would increase funding to a level somewhat below CBO's high-level option. The Administration currently estimates that its proposal would require an increased appropriation of $925 million in fiscal year 1977 and $1,550 million in fiscal year 1978. These estimates are not directly comparable to those presented here, as they assume the adoption of the entire Administration stimulus package and are therefore based on the entry into the formula of reduced unemployment rates.
>
> In its consideration of the Third Concurrent Resolution on the Budget for Fiscal Year 1977, the House allowed approximately $1 billion for the expansion of the countercyclical revenue-sharing program. The Senate included $600 million in its resolution.

Direct Employment Programs

Public Service Employment and Training. Current public service employment programs are estimated to cost approximately $2.5 billion a year, funding about 300,000 jobs. CBO estimates are made for two programs: one would raise the level of jobs to 500,000 at a cost of $1.66 billion above the current funding level; the other would raise the level of jobs to one million at a cost of $4.25 billion above the current funding level. The crucial variables in estimating the impact of these programs are: (1) absorption--the rate at which the states and localities that actually provide the jobs can create or find more jobs and put applicants into them; and (2) fiscal substitution--the proportion of these jobs that would have been funded in any case (including increases in the number of state or local jobs that would have taken place on a similar time schedule). In general, there is a trade-off between the two variables. That is, the faster the federal government pushes to build the absorption rate (perhaps relaxing guidelines and safeguards in the process), the more likely it is that the federally-funded jobs will be substitutes for jobs that would have been funded in any case. Experience indicates that an absorption rate of 30,000 jobs per month is a reasonable estimate; CBO has assumed that the first-year substitution rate at the 30,000 absorption level is 25 percent, building to 40 percent the second year. These are substantially lower substitution rates than indicated by existing analysis. However, a combination of some new regulations and a new administration eager to make the program work may result in lowering the rates.

To provide a high end of the range of impact estimates, CBO has assumed in the case of the program with the final goal of one million jobs, a 60,000 jobs-per-month absorption rate. At this level, substitution will be much higher, in part as a result of relaxation of administrative constraints. Therefore, a substitution rate of 46 percent in the first year and 60 percent in the second has been assumed. 5/ The higher absorption rate (and higher substitu-

5/ These rates are composites of different assumptions about substitution for the first 30,000 jobs of the 60,000 and for the second 30,000.

tion rate) might result in part from setting a one million job goal for the total program, rather than a 500,000 goal. All of these estimates, however, assume continuation of the present program structure, in which the jobs are developed by the states and localities. Direct federal employment might increase absorption and reduce substitution, but this approach has been tried only on a very special basis for a few youth programs.

> President Carter has proposed to build up public service jobs to 600,000 by the end of this year and 725,000 by the end of next year. This is similar to CBO'S high-level program estimates. However, the President has also proposed spending $328 million this year and $1.6 billion next for a variety of employment and training programs, most of which provide full- or part-time jobs for the trainees. This would fund about 200,000 additional full-time equivalent jobs. 6/ Such a a program would raise the number of jobs well above that of CBO's high-level program and might be difficult to achieve quickly.
>
> In its consideration of the Third Concurrent Resolution on the Budget for Fiscal Year 1977, the House added $403 million to the President's proposal for the direct job program $403 million, which--according the the House Budget Committee--would fund about 40,000

6/ This means that 200,000 individuals could be employed on a full-time basis for a year. In practice, a larger number of individuals will be employed because manpower training programs involve both full- and part-time jobs for trainees. Therefore, a full-year equivalency measure is used so this program can be compared to other job-creating efforts that hire people on a full-time basis.

additional jobs. The House also added $300 million to the training programs, which--according to the House Budget Committee--would fund 30,000 to 40,000 full-time equivalent jobs. The Senate provided an amount that would adequately fund President Carter's recommendation for additional public service jobs. In addition, the Senate added $600 million for some form of a youth employment program and enough funds--according to the Senate Budget Committee--to add 15,000 jobs to President Carter's job request for Title IX of the Older Americans Act.

Youth Employment. Currently, no year-round job program is designated specifically for youth. Two summer job programs do exist, and about 20 percent of the public service employment funded under the Comprehensive Employment and Training Act (CETA) goes to young people--on the order of 60,000 to 70,000 jobs. Several kinds of proposals have been made for year-round job programs specifically directed toward youth. One of these--estimates for which appear in Table 1--is a PSE program specifically for youth, possibly run through CETA. This might be considered to be a special case of the general public service jobs increase estimated above. For a youth program, the fiscal substitution rate would probably be less than in the above estimates, but this might be balanced off by the possibility that states and localities would have some difficulty bringing young people into the program. A second youth program that has been suggested is a natural resource program that could employ up to 60,000 youths and young adults (plus 15,000 skilled workers) for periods of three to six months in fiscal year 1977. This program would be an extension of current federal and state temporary employment programs. The agencies have proposed a program costing about $400 million 60 percent of which would be direct wages with the balance being for materials and support. the rate of fiscal substitution would be between 15 and 30 percent.

Public Works

EDA-Type Public Works. Most current proposals for rapid expansion of public works are for the types of projects funded by the Economic Development Administration (EDA); that is, those involving construction, renovation, or repair of local public works projects (streets, sewers, and other public facilities). These programs are designed specifically to promote economic development, and their funds are dispersed widely. Two billion dollars have already been authorized and appropriated for such projects through fiscal year 1977. CBO has projected that this money will actually be spent on construction rather slowly, with less than a third going into employment-generating outlays by the end of fiscal year 1977. Project proposals totalling $24 billion were received as applications for the $2 billion appropriated. While it is unlikely that the entire $24 billion could actually result in public works, the size does imply that substantial room exists for expansion of the program. CBO's estimate is that another $5 billion could be utilized. However, it is likely that the additional $5 billion would also be spent relatively slowly, as indicated in the impact estimates.

The estimates at the lower end of the range assume authorization in the third quarter of calendar 1977 and a 25 percent fiscal substitution rate. Estimates at the upper end of the range assume a second-quarter authorization and no substitution. 7/

> President Carter has proposed that $4 billion more be authorized for public works. Two billion of the $4 billion would be appropriated for fiscal year 1977 and $2 billion for fiscal year 1978. Since the $4 billion total is similar to the $5 billion

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7/ Little analysis exists of local public works of this type, so this substitution is more arbitrary than the others in this report.

discussed here, the impact would probably fall within the range of CBO's estimates.

In its consideration of the Third Concurrent Resolution on the Budget for Fiscal Year 1977, the House added $560 million to the President's proposed outlays for all EDA programs. The Senate approved a total for function 450 (Community and Regional Development) which would allow similar increases if the appropriate committees desired them.

Non-EDA Public Works. A wide variety of public works projects (ranging from those of the Corps of Engineers and National Park Service to various railroad rehabilitation programs) is carried out by the federal government. Together, these programs may provide some significant employment stimulus. For estimating purposes, they are divided into new programs (e.g., Railroad Rehabilitation and Improvement) that would take some time to establish, and ongoing programs (e.g., programs of the National Park Service), that would allow additional efforts to be mounted at a more rapid pace. 8/

President Carter did not include any non-EDA public works proposals in his stimulus package.

In its consideration of the Third Concurrent Resolution on the Budget for Fiscal Year 1977, the House added $200 million for railroad and highway construction. The Senate added $150 million.

8/ For further detail, including agency-by-agency analysis of available works projects, see pages 59-80.

Housing

Government National Mortgage Association (GNMA) Tandem. A Tandem program for multifamily housing which attempts to encourage housing construction by cutting housing costs through provision of mortgages at below-market interest rates, is authorized by the Emergency Mortgage Purchase Assistance Act through the end of fiscal year 1977. At present, only multifamily housing is eligible for assistance. Multifamily mortgages must be insured by the Federal Housing Administration (FHA) to be eligible for GNMA assistance. The projects now in the FHA pipeline will barely use up the remainder of the final $2 billion that has been released for the program. Additional projects take time to be processed (perhaps 12 months) and this time period, together with the substantial time over which the new construction itself takes place, would delay meaningful employment impacts until toward the end of the period discussed in this paper.

Assisted Housing Programs. The Section 8 leased housing assistance program authorized by the Housing and Community Development Act of 1974 is designed in part to subsidize newly constructed housing for lower-income tenants. As with GNMA Tandem, a long period for processing and planning must be allowed after funding. Additional construction would be unlikely until approximately 18 months after the Congress has authorized the funds. Therefore, no employment impact estimate is included in this analysis.

Part II: APPENDIX

DETAILS OF PROGRAMS FOR ECONOMIC STIMULUS

NOTE

The tables in this section present federal budget authority and gross outlays through fiscal year 1978 under the assumption that the programs are passed in the second quarter of calendar year 1977. In addition, they present net outlays (gross outlays, minus returns to the Treasury through increased revenues, decreased unemployment benefits, etc.).

SECTION 1: TAX CUTS

The following key points should be considered when comparing various types of tax cuts:

1. Because they had little or no tax liability for 1976, many low-income people would not receive full benefit from a rebate program limited to 1976 tax liability. However, payments to social security beneficiaries and to those who qualify for the earned income credit would reach most of the low-income persons who had little 1976 tax liability.

2. Any "permanent" tax cut should take into account the "temporary" cuts which expire at the end of calendar year 1977 and the increased social security taxes which begin in January 1978.

3. If full-year tax cuts are enacted after January 1977 and if withholding tables reflect the full-year cut, there would be an increase in withholding in 1978. This could be avoided by making the 1977 cut, at full-year rates, less than the cut for 1978. Alternatively, the withholding tables might not reflect the full-year cut, and any overwithheld tax would be refunded in early 1978.

4. Rebates or reductions of payroll taxes (including the allowance of a credit against income taxes for payroll taxes) present practical difficulties.

"ONE-TIME" REBATES

1. Timing. The 1975 rebate was enacted at about the end of March, and the first rebate was paid early in the second week of May. Nearly all of the rebates were paid before June 30 (but some had still not been paid by the end of 1976). This favorable experience was possible because the Internal Revenue

Service knew the program outlines early and had the rebate procedure programmed before enactment. If this experience can be duplicated, the first rebates could be paid about five or six weeks after enactment, and nearly all of them could be paid within two months after all tax returns are filed. If the Congress acts promptly, over 90 percent of the rebates could be paid during the second calendar quarter of 1977.

2. <u>The design of the 1975 program</u>. The 1975 rebate was equal to 10 percent of tax liability with a minimum of $100 or the amount of tax liability, whichever was less. The maximum payment was $200, but it was phased down as adjusted gross income exceeded $20,000 and dropped back to $100 for taxpayers with adjusted gross income over $30,000. In addition, there was a $50 payment to each social security recipient. This program was fairly complex, and a simpler program might be implemented more quickly. However, if a rebate were structured as the 1975 one was, the 1975 experience would be helpful in reducing time lag.

3. <u>Design of a 1977 program</u>. Any rebate based on income tax liability will exclude nontaxpayers because the amount of the rebate would be limited by the amount of the tax liability for 1976. This limitation would exclude a number of relatively low-income families. For example, a family with three children would have no 1976 tax liability on income up to $7,450. Thus, a rebate of 1976 income taxes would not give them any relief.

Some of the nontaxpaying public can be reached by making payments to those receiving social security, supplement security income, and railroad retirement benefits. Such payments would reach about 36 million persons. The 1975 program included a $50 payment to social security recipients. This group includes most of the aged poor, but it also includes some who received an income tax rebate. The number of persons who would receive dual payments is unknown, but believed to be very small.

Other low-income persons might be reached by extending the rebate to those persons (mostly nontax-payers) who qualify for the earned income credit whether or not they paid any income tax. Such a payment probably would not reach parents of AFDC recipients, most single persons (largely the young), the elderly, or students, but it should reach many poor persons. However, many eligible persons failed to take advantage of the earned income credit and, therefore, would exclude themselves from this program, too.

Payments to persons not reached by the foregoing suggestions raise some problems because qualifying individuals would be required to make a claim with some agency. Some persons might not. Others might make more than one claim. Also, if the program is enacted in the early part of the year and implemented immediately, administration by the Internal Revenue Service (IRS) would increase its workload when its facilities are already strained to the maximum. The added workload on the IRS is more than mere administrative inconvenience. It would slow the processing of tax returns filed by taxpayers. A delay in processing tax returns would delay the rebate program and also refunds of overwithholding on about 80 percent of the returns. This delay might reduce the stimulative effect of the rebate program.

PERMANENT TAX CUTS

1. The present "temporary" tax cuts. Permanent tax cuts should be made in light of the several temporary tax cuts which will expire at the end of calendar year 1977 unless extended by new legislation this year. For individuals, the general per capita tax credit (the greater of \$35 per person or 2 percent of taxable income up to \$9,000), and the earned income credit (10 percent of earned income up to \$4,000 phased out between \$4,000 and \$8,000) are scheduled to expire. These aggregate about \$11 billion per year. For business taxpayers, the corporate tax rates will increase by slightly more than \$2 billion because the temporary higher "small

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business" corporate surtax exemption is scheduled to end. (Business taxes increase again in 1981 when the temporary investment credit provisions, amounting to about $3.5 billion per year, are scheduled to expire.) In addition, social security taxes will increase as of January 1, 1978. The overall rate will increase from 11.7 percent to 12.1 percent, split equally between withholding from the employee and payment by the employer. The wage base will also increase to an estimated (by the Office of Management and Budget) $17,700. If this increase is realized, the total increase in the employer's share and the employee's share of the social security tax will amount to nearly $215 for each worker earning the maximum wage base. The aggregate revenue increase is about $13 billion, spread evenly across the year.

Also, the unemployment tax rate increased from 0.5 percent to 0.7 percent on January 1, 1977. This rate change will raise about $400 million in 1977. On January 1, 1978, the wage base will increase from $4,200 to $6,000. The 1978 revenue gain will be about $2.5 billion. Both of these increases will be realized in the first halves of the respective calendar years.

2. Withholding taxes. Any decrease in individual taxes would be implemented largely through lower withholding from wages. Most individual taxpayers are on a calendar year basis, but the period for withholding in 1977 would be something less than the full calendar year. If a full-year tax cut is to be withheld over the balance of the year, withholding must decrease by more than the annual rate of the tax cut. In 1978, withholding would spread over the entire year. Thus, amounts withheld in 1978 would increase unless the permanent tax cut were larger for 1978 than it was for 1977. One way to avoid this problem is to reduce withholding for the balance of the year at full-year rates. Thus, there would be some overwithholding in 1977 which would be refunded in early 1978.

A law passed in early 1977 probably could not be implemented until well into the second quarter of the calendar year. The beginning of the third quarter has been used in these estimates. Withholding would fall evenly over the balance of the year and evenly over the years thereafter.

3. Nontaxpayers. A permanent tax cut will not provide any relief to nontaxpayers unless the cut is in the form of a refundable credit.

4. Business cuts. In the business area, an increase in the investment tax credit would be easy to implement. It would also be immediately reflected on corporate estimates. Corporations make estimated payments on the fifteenth day of the 4th, 6th, 9th, and 12th months of the tax year. Thus, if a law retroactive to January 1 were enacted by the end of March, nearly the full-year effect would be realized in 1977. About 15 percent of the investment credit is claimed by individuals. No relief would flow to those who have no tax liabilities.

An income tax credit equal to some part of the wages paid by employees has also been suggested. Some proposals would allow the credit only against the wages of additional employees over the number of employees in a base period. Such a tax cut would be reflected on estimates as soon as qualifying wages were paid.

Corporate tax rate reductions have also been mentioned. Individual proprietors and partners, who would benefit from an increase in the investment credit, would not benefit from corporate rate reductions.

PAYROLL TAXES

A reduction of payroll taxes has been suggested. However, the trust funds are currently quite low, and any reduction would further deplete them. The alternative of a payment from general funds has been suggested before, but never adopted.

Another alternative, proposed by President Carter, is that the employer be allowed an income tax credit for 4 percent of his social security taxes. Some employers have less income tax liability than the credit (for example, some airlines and railroads and all tax exempt organizations). Under the President's proposal, funds would be paid in these cases. Variations on this proposal usually just increase the size of the credit. If enacted by the end of March, this credit would fall more or less evenly (but not entirely so, as estimates fall in the 4th, 6th, 9th, and 12th months of the corporation's tax year, which in many cases is a fiscal rather than a calendar year) over the year as quarterly estimates are made.

As another alternative, the social security tax could be maintained at its current rate and employees could be granted a credit against income tax liability equal to a part of their share of the social security tax. The credit would be allowed immediately by reducing the withheld income taxes by an equal amount. If the employee's income tax was less than the credit for his share of the social security tax, the unused credit could be paid as a refund the following year when the income tax return is filed.

While this suggestion concentrates its relief in the lower- and middle-income ranges, the two-earner family receives greater income tax relief than the one-earner family. Also, this credit is unrelated to family size, and general income tax cuts usually take family size into account.

The self-employment tax is the social security tax equivalent for sole proprietors and partners. The self-employment tax rate, however, is a single rate which exceeds the employer's half of the social security tax but is less than the total of the employee's share. Thus, a credit at the same rate as applied to social security would grant greater relief to the self-employed than to employees. Those self-employed who are required to pay self-employment tax in excess of income tax liability could be paid a refund of the excess when the tax return is filed.

An income tax credit allowed to the employee for some part of his social security tax could be implemented very quickly, without a change in withholding tables. Consequently, it could operate almost upon enactment. However, such a credit would raise several administrative problems in 1977 if collections before enactment were to be rebated. A formula for rebating collections during the first quarter of 1977 would be difficult to work out and difficult for employers to institute. A credit for 25 percent of the employee's share would amount to about $10 billion per year. Its timing in 1977 would depend on the formula for handling first-quarter collections. Perhaps, a cash rebate of about $2.5 billion in the second quarter could be assumed (although there is no easy way to rebate such taxes) with lower collections of the same amount in each of the three subsequent quarters. Decreases in 1978 collections would fall more or less evenly over the year, although a slightly larger portion would fall into the first half of the year.

ESTIMATES

Table 2 shows the timing of revenue gains from scheduled tax changes through fiscal year 1978. Table 3 shows the costs and impacts of three tax cut alternatives: one- and two-year rebates, and a permanent increase in deductions.

TABLE 2. TIMING OF REVENUE GAINS FROM SCHEDULED TAX CHANGES, IN BILLIONS OF DOLLARS

Provision	1977 January - June	1977 July - December	1978 January - June	1978 July - September
Expiration of temporary tax cuts				
Earned income credit	0.0	0.0	0.6	0.3
Per capita credit	0.0	0.0	4.8	2.4
Larger Corporate surtax exemption	0.0	0.0	1.0	0.5
Increase in social security tax a/	0.0	0.0	7.0	3.0
Increase in unemployment insurance	0.3	0.1	1.3	1.2
Total	0.3	0.1	14.7	6.4

a/ This increase is due to a combination of increased tax rates, a higher wage base, and greater numbers of taxpayers. There is no breakdown between these three elements.

TABLE 3. TAX CUT COSTS AND IMPACT OF THREE TAX CUT ALTERNATIVES, IN BILLIONS OF DOLLARS AND THOUSANDS OF JOBS

Item	1977	1978
Temporary Rebate: 1977 only		
Gross Revenue Reduction (fiscal year)	$ 15.0	$ 0.0
Net Revenue Reduction (fiscal year)	$ 12.4	$ -2.3
Increases in Jobs (last quarter of calendar year)	370	140
Temporary Rebate: 1977 and 1978		
Gross Revenue Reduction (fiscal year)	$ 15.0	$ 15.0
Net Revenue Reduction (fiscal year)	$ 12.4	$ 18.2
Increases in Jobs (last quarter of calendar year)	270	480
Permanent Increase in Standard Deduction		
Gross Revenue Reduction (fiscal year)	$ 1.5	$ 6.0
Net Revenue Reduction (fiscal year)	$ 1.3	$ 3.9
Increases in Jobs (last quarter of calendar year)	70	210

Title II of the Public Works Employment Act established an antirecession grant program (countercyclical revenue sharing). Funds are paid to state and local governments to facilitate the maintenance of services despite revenue shortfalls attributable to the weak performance of the national economy.

CURRENT LEVEL OF PROGRAM OPERATIONS

The antirecession grant program is authorized through the end of fiscal year 1977. Funds are authorized on a quarterly basis with the amount contingent on the rate of national unemployment. The formula specifies a quarterly funding level of $125 million plus $62.5 million for each half of a percentage point by which unemployment exceeds 6 percent in the calendar quarter ending three months prior. A ceiling of $1.25 billion was placed on the authorization for the five-quarter period. The full amount authorized was appropriated.

Given the recent performance of the economy, it now appears that only $62.5 billion of the appropriated sum will remain for distribution in the last quarter of fiscal year 1977.

States and general purpose local governments serving areas with unemployment rates higher than 4 1/2 percent are eligible to receive Title II grant funds. A unit's allocation is determined based on its unemployment in excess of 4 1/2 percent and its general revenue-sharing entitlement.

STIMULUS POTENTIAL

Increased spending might be achieved in the countercyclical revenue-sharing program by extending

TABLE 4. DETERMINATION OF COUNTERCYCLICAL REVENUE SHARING FORMULA AMOUNTS FOR THE CURRENT AUTHORIZATION PERIOD, IN MILLIONS OF DOLLARS

Calendar Year Quarters	Based on Unemploy- ment Rate	(in)	Second Preced- ing Quarter	Funding per Formula	Cumula- tive Distri- bution
1976:III	7.6		1976:I	312.5	312.5
1976:IV	7.4		1976:II	250.0	562.5
1977:I	7.8		1976:III	312.5	875.0
1977:II	7.9		1976:IV	312.5	1,187.5
1977:III	7.8		1977:I	(312.5)a/	

a/ Requires additional Congresssional action to reach this level.

the authorization and/or by changing the funding level.

- Without changing the structure of the program, the Congress could allow full formula funding by lifting the funding ceiling for fiscal year 1977 and extending the authorization through fiscal year 1978. Based on the December 10 economic projections, this would result in spending increases of $250 million in fiscal year 1977 and $1,187.5 million in fiscal year 1978. The 1978 figure could be lower if other stimulus efforts succeed in lowering the unemployment rate.

- The Congress could change the law, increasing the amount of funds authorized at specific rates of unemployment. Such funding changes might be accompanied by changes in the designation of eligible recipients.

EXPECTED STIMULUS/FISCAL SUBSTITUTION

The size of the stimulus that might be expected from an increased federal commitment to this program depends upon what state and local governments do with the money received. Some economic stimulus will result unless state and local governments use antirecession grant funds to build long-term cash reserves, retire debts, or reduce borrowing. Given current stresses on their budgets, that response is least likely but will nevertheless occur in some jurisdictions. In general, however, funds are more likely to be used to expand or maintain public services. To the extent that such expansion or maintenance would not have occurred without the federal grant, the grant will achieve its stimulative effect through the increased purchase of these services. To the extent that state and local governments would have done the same thing (by increasing taxes rather than using the federal funds) or, if (as is unlikely under current circumstances) the federal grants are used directly for tax cuts, the stimulative effect will be a smaller one, resulting from lower taxes. A decision to extend the program would increase the likelihood of recipient governments using revenue-sharing funds to expand programs. With increased certainty over the future flow of funds, governments can hire on a permanent, rather than a temporary basis.

TIMING--EXPECTED SPEED OF STIMULUS

In the antirecession grant program, federal outlays take place almost immediately, but they have no economic impact until state and local governments actually use the federal dollars. While the law requires recipients to obligate funds within six months, this provides little guarantee of actual expenditure. Rather, the real response of a state or local government to the receipt of Title II grant funds is dependent upon the status of its current budget. If revenues are falling below planned levels, then federal funds are likely to be spent rather quickly to meet budget commitments which might otherwise have to be broken. Indeed, in some cases, the knowledge or belief that a federal grant will be forthcoming may lead to an expenditure that would otherwise have been cancelled (or the retention of an employee who otherwise would have been fired), and the economic impact of the grant would thus precede its passage. On the other hand, a relatively comfortable local fiscal situation may permit the banking of the grant until the beginning of the next fiscal year. At that point, grant funds might be applied to a reduction in taxes or to an increase in spending. Data are not available to calculate the overall balance of timing among the various cases. The quarterly estimates below reflect a best judgment.

SIZE OF STIMULUS

There is no way of knowing how much stimulus is too much in a program like countercyclical revenue sharing. If one views revenue sharing as a replacement of lost revenues, then the $17.2 billion estimated to have been lost by recipient governments as a result of the economy operating below its full potential might be considered an upper limit. However, it is unlikely that state and local governments could absorb this amount in a short period. A significant share would be banked, thereby substantially reducing the job impact per dollar of expenditure.

A long-run consideration in evaluating proposals to increase spending is the danger that recipient governments may be tempted to increase the size of their operations beyond that which could be supported by their own revenues when antirecession dollars phase out. The danger lies primarily at the local level, rather than at the state level, because local revenues are derived primarily from the property tax--a tax that is less responsive to changes in the performance of the economy.

ESTIMATES

Table 5 displays federal authorization and outlays and the increase in jobs brought about by two possible programs changes. The first option calls for full-formula funding of the existing legislation for fiscal year 1977 and an extension through fiscal year 1978. An additional authorization and appropriation of $250 million in fiscal year 1977 and $1,188 million in fiscal year 1978 would be required. The second option involves extending the program and doubling the formula amounts retroactive to the beginning of fiscal year 1977. This requires an additional authorization and appropriation of $1.5 billion in fiscal year 1977 and $2.38 billion in fiscal year 1978. 1/

For each option, a range of estimates regarding the likely impact has been specified. The range was produced by adjusting CBO's assumptions regarding: (1) the rate of fiscal substitution, and (2) the share of total purchases devoted to direct payments for personnel. CBO's low estimate of employment impact assumes that recipient governments use 50 percent of countercyclical revenue sharing to increase purchases, 40 percent to reduce taxes, and 10 percent to increase surpluses or retire debts. For the high estimate, the assumed share going to expenditures is increased to 60 percent, while the portion used for tax reduction is decreased to 30 percent. Part of the stimulus to be achieved from either program change discussed in this section stems, not only from increased outlays, but also from the assumption that under conditions of greater certainty over the future funding, state and local governments will reduce the rate of fiscal substitution. Thus, a higher share was assumed to be devoted

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1/ The spending estimates are biased upwards slightly since they are based on CBO's projection of unemployment rates prior to the application of stimulus measures.

TABLE 5. COSTS AND IMPACT OF TWO OPTIONS FOR COUNTER-CYCLICAL REVENUE SHARING, IN BILLIONS OF DOLLARS AND THOUSANDS OF JOBS

	1977	1978
Full-Formula Funding and Extension		
Budget Authority: $1.4 billion		
Gross Federal Outlays: (fiscal year)	$0.3	$1.2
Net Federal Outlays: (fiscal year)	$0.2	$0.8
Increases in Jobs (last quarter of calendar year)	30-40	40
Doubled Formula and Extension		
Budget Authority: $3.8 billion		
Gross Federal Outlays: (fiscal year)	$1.4	$2.4
Net Federal Outlays: (fiscal year)	$1.3-1.4	$1.1-1.9
Increases in Jobs (last quarter of calendar year)	90-120	110

to increased purchases for both options than has been the case under current law.

For both options, the lower employment impact estimate is based on the assumption that countercyclical revenue-sharing dollars will purchase goods and personnel services in the same proportion as other revenue dollars--about 50 percent. It may be argued that, at the margin, in times of high unemployment, recipient governments would prefer to hire people rather than purchase goods. Therefore, for the high estimate of the employment impact, CBO increased the share of total purchases devoted to personnel services to 75 percent.

CBO assumed some lag in the use of grant funds to purchase goods and services or to reduce taxes, because it appeared likely that an effort would be made to incorporate these funds into regular planning for upcoming fiscal years.

PROGRAMS

The Comprehensive Employment and Training Act (CETA) authorizes two public service employment programs. Title II provides unemployed and underemployed persons residing in areas of substantial unemployment (an area with a population of at least 10,000 and an unemployment rate of at least 6.5 percent) with transitional employment in state and local government. Title VI originally provided transitional public service employment for the unemployed and underemployed, but it expired on December 31, 1975. The Congress reauthorized Title VI by enacting the Emergency Jobs Program Extension Act of 1976 (P.L. 94-444) on October 1, 1976. This legislation required that one out of every two vacancies in Title VI be filled by low-income persons who have been unemployed 15 weeks or longer, who have exhausted unemployment compensation, or who are AFDC recipients. Currently, about 300,000 jobs are funded by Titles II and VI.

POTENTIAL FOR ADDITIONAL STIMULUS: SIZE, SPEED, AND SUBSTITUTION

The estimates in this section are for two programs: one building from the current level of about 300,000 public service employment jobs to 500,000; the other building to one million jobs. The controlling variable in estimating the impact of either program is the rate of buildup. Although no evidence exists on the relation of program size to speed of buildup, it seems possible that the larger program will build up somewhat more rapidly than the smaller.

Experience with Title VI provides the major evidence on the buildup speed for these types of

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of programs. The initial buildup under that title--to about 170,000 jobs in the first quarter of calendar 1975--occurred in three months, implying a rate of about 60,000 jobs per month. However, recent spending lags by states and localities for CETA jobs, and new administrative constraints in Title VI may imply a rate as slow as 30,000 jobs per month.

CBO uses as assumptions underlying the range of employment impacts for the million-job program both the 30,000 and the 60,000 jobs-per-month buildup rates. 1/ However, there is a trade-off between the speed of buildup and the rate of fiscal substitution --the proportion of the federally-funded jobs that would have been funded by state or local revenues in any case. 2/ The higher buildup rates are likely to be achieved in large measure by relaxation of administrative controls designed to ensure that the federally-funded jobs are really new ones, and this relaxation is thus likely to increase substitution. The rapid 1975 buildup under Title VI was achieved through such minimal controls. Since then, Title VI controls have been tightened, and this may not only cut fiscal substitution but also slow down buildup.

General estimates of fiscal substitution in public service jobs programs range from as high as 60 percent in the first year to 90-100 percent in the long run. It is believed that in the long run state and local employment would increase in any case and

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1/ The modest 500,000 job goal (200,000 jobs more than currently funded) probably would not be approached in 3 1/3 monthly increments of 60,000 jobs each. Such an attempt would be inefficient because of the higher rate of fiscal substitution likely with the rapid buildup.

2/ As noted elsewhere, even the substituted jobs have a positive economic impact due to the resulting tax savings on the state and local levels.

federal funding merely would shift the costs of the increases to the federal government. However, the joint effects of recession and inflation on state and local tax bases may reduce the current rate of fiscal substitution. The range of estimates here, therefore, assumes a 25 percent fiscal substitution rate for the first year of the 30,000 job-per-month buildup, growing to 40 percent for the second year. These substitution rates are also assumed to hold for half the jobs funded under the 60,000-per-month absorption rate. This half might be under the administrative constraints of Title VI. The other 30,000, however, were they to be added to the monthly rate, probably would be administered with fewer constraints, and CBO therefore assumes a first-year substitution rate of 67 percent, growing to 80 percent in the second year. The high rates are consistent with existing analysis. The composite result for the total 60,000 jobs-per-month buildup is a 46 percent fiscal substitution rate in the first year and a 60 percent rate in the second year.

In any case, these estimates are all for current types of CETA programs, administered (as noted) through states and localities. If job slots actually were federal ones, as is the case now only with two youth programs--Job Corps and Youth Conservation Corps--substitution would probably be much less, but current lack of experience with such direct federal programs on a large scale would imply the need for a substantial startup time.

ESTIMATES

Estimates resulting from these conditions are shown in Table 6.

TABLE 6. COSTS AND IMPACT OF TWO PSE JOB PROGRAMS, IN BILLIONS OF DOLLARS AND THOUSANDS OF JOBS

	1977	1978
500,000 Job (total) Program		
Budget Authority: $2.5 Billion		
Gross Outlays: (fiscal year)	$ 0.4	$ 1.6
Net Outlays: (fiscal year)	$ 0.3	$ 0.7
Increases in Jobs (last quarter of calendar year)	110	140
1,000,000 Job (total) Program		
Budget Authority: $4.8 Billion		
Gross Outlays: (fiscal year)	$ 0.4	$ 3.1
Net Outlays: (fiscal year)	$ 0.3	$ 1.6
Increases in Jobs (last quarter of calendar year)	140	340

SECTION 4. YOUTH EMPLOYMENT PROGRAM

CURRENT PROGRAMS

Currently, two direct job-creating programs are provided exclusively for youth. 1/ The Summer Youth Program, part of CETA Title III, enrolls almost 900,000 disadvantaged 16 to 19 year-olds for 10 weeks during the summer at minimum wages. The jobs are part-time, so the average cost per participant for the program is $595; the average cost per year of service is $2,380. Jobs are provided by prime sponsors, usually state and local governments.

The Youth Conservation Corps (YCC), run by the Departments of Interior and Agriculture, employs approximately 20,000 persons under the age of 20 during the summer to work on conservation projects. The jobs are full-time at the minimum wage, but the high administrative and materials costs make the average cost per participant $1,400, and the average cost per year of service $9,100.

PROPOSED PROGRAMS

Congressional and other interest in youth employment programs as part of a stimulative package has revolved around two basic proposals. The first is a public service employment (PSE) program for youth, designated for urban community service projects. The second is an expansion of the current seasonal employment of federal natural resource agencies, specifically for youth. This would not

1/ Public service employment provides about 20 percent of its jobs to youth.

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be an expansion of the YCC, but rather an expansion of the regular, seasonal employment programs of these agencies. 2/

COST

The natural resource program might cost $10,000 per service year. Half of these costs would be direct wages; the other half administrative and materials costs. The relatively high cost per job results from the need for extensive supervision and use of materials.

The cost per job of the CETA-type program might be about $6,000. This includes minimum wages and 10 percent administrative and materials costs.

SIZE AND SPEED OF STIMULUS

It is estimated that the natural resource program could support a maximum of 75,000 additional seasonal jobs (60,000 of them unskilled) over five months of the summer of 1977. This would cost about $400 million over current funding levels for fiscal year 1977.

The capacity to absorb jobs provided by a CETA-type program is unknown. The administrative mechanism is in place, and there is a large pool of eligible persons. The current level of 310,000 PSE

2/ Additionally, a Young Adult Conservation Corps that would provide employment for 19-23 year-olds on conservation projects has been proposed. Because this program would require a fairly long startup time, it is not thought to be appropriate as a stimulus instrument. The effects of a recently-proposed public works youth program are also not estimated in this report.

jobs (20 percent of which are held by youth) suggests that additional PSE funds may not stimulate as much employment initially, as did previous PSE appropriations. One possible constraint on a rapid spendout rate is the prime sponsors' perception that funding for these jobs would not continue for long. If the prime sponsors were confident that additional funds would be appropriated, they might be willing to spend at a more rapid rate. If $1 billion could be spent, over 160,000 jobs could be created.

FISCAL SUBSTITUTION

Fiscal substitution, the phenomenon by which federal money replaces money from other sources that would have been spent on the same services, may not be as prevalent in youth employment programs as it is in other employment programs. The fiscal substitution rate would be quite small in a natural resource program, because the work done on federal land could only be done with federal support. Since the backlog of conservation projects is so large, additional projects can be funded without raising the substitution rate. The CETA-type program would have low fiscal substitution rate, not only because it is a youth program, but also because it is targeted on the disadvantaged. State and local governments are not likely to hire these workers without federal funds. While there is no conclusive estimate of what fiscal substitution for this program might be, it could be as low as 20 percent in the first year and 50 percent in the second.

OTHER CONSIDERATIONS

Net Budget Effects

Reductions in transfer payments because of youth employment programs are less than those resulting from regular public service employment, because youth do not receive unemployment compensation and other income assistance benefits at as great rate as older workers.

Target Population

A natural resource program could be targeted on areas of high unemployment, but it would not be restricted to the disadvantaged population. Proposals for a CETA-type program generally limit participation to currently unemployed persons who come from economically disadvantaged families in high unemployment areas.

Future Employability

Presumably, a major purpose of any employment program for youth would be to develop skills and foster good work attitudes that would enable the participants to find jobs with greater ease after they complete the federal program. The employability effects for these two new proposals cannot be estimated, due to a lack of evidence.

ESTIMATES

The estimates presented here are for a CETA-type program targeted on youth at a level of $0.9 billion and 150,000 jobs per year.

TABLE 7. COSTS AND IMPACT OF A 150,000 JOB CETA-TYPE YOUTH EMPLOYMENT PROGRAM, IN BILLIONS OF DOLLARS AND THOUSANDS OF JOBS

	1977	1978
Budget Authority: $1.1 Billion		
Gross Outlays: (fiscal year)	0.2	0.9
Net Outlays: (fiscal year)	0.1	0.4
Increases in Jobs (last quarter of calendar year)	120	100

SECTION 5. INTRODUCTION TO THE DISCUSSION OF PUBLIC WORKS PROJECTS

The public works projects that might be used to stimulate the economy are of many different types and sizes. For purposes of illustration, CBO presents information on potential countercyclical public works programs in three groups: programs of the Economic Development Administration (EDA), non-EDA construction programs, and non-EDA rehabilitation and maintenance programs.

EDA programs are designed specifically for economic development effects, and they are tailored to provide wide dispersal of funds. Projects consist largely of renovation or repair of such local facilities as streets, sewers, and public buildings.

This report contains estimates of the extent to which existing federal non-EDA public works programs could be increased in the short run. The speed with which such programs can be mounted varies markedly and affects their contribution to economic stimulus, so it is useful to consider them in two groups. The first, called Type A projects in this report, consists of traditional public works construction. These programs are ordinarily undertaken primarily because of the benefits--irrigation, flood control, recreation facilities, and so forth--which they provide, rather than because of the employment or economic activity they engender. Examples of proposed economic stimulus programs in this category include accelerated construction of the Interstate highway system, lengthening airport runways, and building dams. Funds for such projects tend to be obligated and expended at a relatively slow rate.

The second group of non-EDA projects, called Type B projects in this report, consists largely of rehabilitation and maintenance of existing facilities, rather than construction of new facilities.

Also in this group are some very small projects (perhaps less than $100,000 per project) which can be undertaken quickly. While perhaps stretching a traditional definition of "public works" somewhat, these are the programs that can in fact lead to the most rapid payout of federal funds.

Table 8 contains the outlay rates for the three types of programs. The relatively high outlay rates for the non-EDA programs (as compared to the EDA programs) in the first two calendar quarters (1977:II and 1977:III) may be somewhat optimistic, but beyond that point relative buildup capabilities seem more reasonable.

TABLE 8. OUTLAY RATES FOR PUBLIC WORKS PROJECTS, IN PERCENT BY CALENDAR-YEAR QUARTER

Type of Project	1977 II	1977 III	1977 IV	1978 I	1978 II	1978 III	Unexpended Balance
Non-EDA Type A a/	1.4	3.0	5.5	8.7	12.8	13.7	54.9
EDA	0	1.0	9.0	20.0	15.0	11.0	44.0
Non-EDA Type B b/	6.5	19.0	16.9	16.1	12.5	11.3	17.7

a/ Type A public works projects are primarily for construction.

b/ Type B projects are primarily for rehabilitation and maintenance, and some extremely small construction projects.

In examining the various programs, approximately $1.2 billion of Type A (non-EDA construction) projects, and approximately $0.8 billion of Type B (non-EDA renovation and maintenance) projects have been identified and are detailed in the following sections. For EDA projects, a rough estimate is that $5 billion would cover the projects that could be made available through the end of calendar year 1978. Because of the differences among the payout rates of the three projects, only 10 percent of non-EDA Type A projects ($118 million), 42 percent of Type B projects ($337 million), and 10 percent of the EDA funds are likely to be spent on goods and services in the remainder of calendar year 1977. The balance would be expended in fiscal year 1978 and subsequent years.

The next sections take up in detail the EDA and two non-EDA categories.

NOTE ON THE U.S. CONSTRUCTION INDUSTRY

Whether a program involving the acceleration of spending for public works can be successful in creating new jobs without adding to inflation will, in large measure, depend upon the condition of the construction industry. Presently, there is no reliable capacity measure for the construction industry. However, several indicators would suggest that there is considerable excess capacity in the aggregate. "New construction put in place" is one indicator of spending for new construction. Using this indicator, current spending (in 1967 constant dollars) amounts to $73 billion, while the figure for 1973 was $95 billion. A second indicator is public construction. In terms of 1967 dollars, public construction is currently running at $18 billion, compared to $23 billion in 1973. A third indicator is the level of unemployment in the construction industry (which is currently 17.1 percent--down from 19.7 a year ago).

The significant drop in real construction spending since 1973 has been accompanied by significant increases in costs. This is reflected in the Department of Commerce's Cost Index, which is set out in Table 9.

TABLE 9. DEPARTMENT OF COMMERCE COMPOSITE COST INDEX

Calendar Year	Index	Annual Percent Increase
1971	128.1	
		5.4
1972	135.0	
		9.5
1973	147.8	
		16.8
1974	172.8	
		9.6
1975	189.4	
		6.1
1976 (first 7 months)	196.0	

SOURCE: U.S. Department of Commerce, <u>Construction Review</u> (August/September, 1976).

Because these cost increases have occurred in the face of falling construction demand, due consideration should be given to inflation in labor and materials when evaluating the impact of increases in construction spending. For the present, however, the current rate of inflation (6.1 percent) in the construction industry has moderated considerably from the heated state of 1973-74 (16.8 percent). This moderation is reflected in the recent construction bids for federal contract construction which are coming in at lower-than-anticipated levels. 1/

Although in the aggregate the construction industry appears to be well below capacity and

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1/ U.S. Department of Commerce.

experiencing moderate rates of inflation, these conditions may not always apply to specific localities (e.g., Washington, particularly at the height of Metro construction). The industry cannot easily shift resources from one locality to another; consequently, local conditions must be considered in evaluating the merits of specific projects.

Similarly, aggregate inflation indexes may obscure problems of shortage in particular skill categories and materials. A number of materials have experienced considerable price pressure in recent months and bear watching. These are copper water tubing, building wire, plumbing fixtures and brass fittings, aluminum siding, portland cement, asphalt roofing, window glass, and building lime. All of these materials have experienced at least a 10 percent increase in price between August 1975 and August 1976.

The impact of shortages in critical materials may be a severe limitation on the extent to which a major expansion in new public works construction can be realized. 2/ Even though the construction industry is well below capacity, the cement industry is not. There has been no significant addition to plants in the cement industry in 15 years, and there is little likelihood of addition in the near future. 3/

2/ The need for some ability to monitor what is happening to construction materials is apparent.

3/ U.S. Department of Commerce.

SECTION 6. LOCAL PUBLIC WORKS: ECONOMIC DEVELOPMENT ADMINISTRATION

A $2 billion local public works grant program (Public Works Employment Act of 1976) has just been implemented. The appropriation was signed into law on October 1, 1976, and approximately 2,000 grants--averaging $1 million in size--are expected to be approved by January 30, 1977. The $2 billion represents a small portion of the $24 billion in applications that were received by the Economic Development Administration (EDA). The Congress is now discussing an additional $2-4 billion for public works projects as part of the economic stimulus package.

CURRENT SITUATION

Title I of the Public Works Employment Act of 1976 authorized $2 billion for grants to state and local governments. The grants were authorized through fiscal year 1977 and could either finance 100 percent of project costs or pay for the previously nonfederal share of other federal grant programs. CBO's projections of the outlay pattern of the $2 billion is as follows: $600 million for fiscal year 1977, $920 million for fiscal year 1978, $460 million for fiscal year 1979, and $20 million for fiscal year 1980.

Projects involving construction, renovation or repair of local public works projects (e.g., streets, public facilities, and sewers) were eligible for funding. Various time requirements were included in the legislation in order to insure a fast spending pattern among the selected projects. The result was that large public works projects like dams and harbor improvements were not appropriate and were made ineligible by the legislation. The average project size among the initial recipients and among all applicants was approximately $1 million, and the average project was projected to have an actual construction period of less than one year.

The actual selection of the first $2 billion in projects was based on a formula--states were allocated funds based upon the number of persons employed and the rate of unemployment. Within each state, applications were separated into two groups. The first group--those applications for project areas experiencing an unemployment rate above the national average--competed for 70 percent of the total state allocation. The second group--those applications for project areas in which the unemployment rate was below the national average but above 6.5 percent--competed for 30 percent of the state's funds. Each project was ranked according to a scoring formula that involved the following factors:

- o Number of persons unemployed in the project area
- o Unemployment rate in the project area
- o Income level in the project area
- o Labor intensity of the project
- o Potential for long-term benefit
- o Type of government sponsoring the project and whether or not the project was included in existing economic development plans.

POTENTIAL FOR EXPANSION

Approximately 24,000 projects (totaling $24 billion) were received as applications for the $2 billion appropriation. Based on average project size, average projected duration, and initial impressions of types of projects, CBO estimates that an additional appropriation of up to $5 billion will result in similar types of projects being selected.

As indicated in the previous section, the capacity of the construction industry to absorb an additional $2-4 billion of public works activity is a matter of some debate. While the slack in the construction industry seems substantial, others express concern about potential inflationary pressures among skilled laborers and in the cement industry.

EXPECTED STIMULUS

The magnitude of the fiscal stimulus is difficult to estimate. The three critical issues in determining the impact are the extent of fiscal substitution, the rate of spending, and the employment generated.

The current applicants for public works grants had to certify that construction on their projects had not begun and that the factor causing delay was the lack of funding for the nonfederal share of the project. Clearly, the intent is to prevent fiscal substitution. While the fast timing requirements generate concern that some of these projects may have been funded locally if federal funds had not been forthcoming, the extent of such substitution is difficult to measure. The estimates below assume a substitution rate ranging from 0 to 25 percent.

SHARE TO CITIES

A current debate focuses on whether the present funding formula discriminates against cities. Data are not available to determine whether cities have received their proper share of the available funds. It should be noted, however, that the 70/30 percent division of state allocations could have produced some distortions. Competition among areas with an unemployment rate above the national average was much more intense than it was in those areas with unemployment above 6.5 percent but below the national average. If city applications were concentrated in areas with unemployment above the national average, urban areas may have faced more competition than suburban or rural areas (which tend to fall in other category).

ESTIMATES

Table 10 presents estimates for budget authority, outlays, and employment impact for a $5 billion program. The estimates are presented in the form of ranges. In each case, the optimistic end of the range assumes authorization and appropriation in the second quarter of calendar 1977, and no fiscal substitution. Slower authorization or slow allocation of funds by EDA can delay the effects of public works substantially, and substitution can reduce impacts significantly. The estimates at the lower end of the range assume a 25 percent substitution rate. However, little analysis exists of substitution stemming from federal funding of local public works, so this assumption is essentially arbitrary. A higher substitution rate would reduce the impact of the program.

TABLE 10. COSTS AND IMPACT OF A $5 BILLION EDA-TYPE PUBLIC WORKS PROGRAM, IN BILLIONS OF DOLLARS AND THOUSANDS OF JOBS

	1977	1978
Budget Authority: $5 billion		
Gross Outlays: (fiscal year)	.05-.40	2.8
Net Outlays: (fiscal year)	.03-.30	1.4
Increases in Jobs (last quarter of calendar year	4 - 50	90 - 120

Because the non-EDA public works projects which might be used to stimulate the economy come in bits and pieces that are small taken separately but together might have a significant effect, they are considered here in groups. Two groups are distinguised by markedly different rates of fiscal impact: Type A (primarily construction) and Type B (rehabilitation, maintenance and small projects). The applicability of the given public works programs to each category is set out in Table 11. The same table also contains the potential first-year increments (the additional outlays in fiscal year 1977) for each program. These total to slightly more than $400 million. Realizing the impossibility of actually putting all these pieces together in a single year, CBO has estimated the impact for a $250 million package in fiscal year 1977. This package combines programs from both categories (Types A and B). The spendout rate of the package will, of course, increase in fiscal year 1978.

Despite the distinction of these classes of projects and the use of aggregate outlay rates in the simulations, it should be stressed that the programs reviewed are by no means uniform. They differ markedly in extent of backlog, potential outlay rates, and labor intensity.

The backlogs surely contain projects which have been well thought out and carefully engineered, and which will contribute importantly to agency objectives. Just as surely, certain projects in certain backlogs are of dubious quality or programmatic merit, or are not as well prepared. CBO is in no position to make specific judgments, but urges caution in interpretation of the potential of these programs and selectivity in program implementation.

TABLE 11. POTENTIAL PUBLIC WORKS INITIATIVES, IN MILLIONS OF DOLLARS

Budget Subfunction	Program	Outlays Estimated Fiscal Year 1977	Potential Stimulus Package: Additional Budget Authority Required	Potential Stimulus Package: Additional Outlays Fiscal Year 1977	Type A d/	Type B e/
051	Military Construction	1757	a/	a/	x	x
301	Water Resources--					
	Bureau of Reclamation	574	40	3	x	x
	Corps of Engineers	1668	360	83	x	x
	Soil Conservation Service	117	26	2	x	x
302-303	Parks and Public Lands	600	370	185		x
304	Sewage Treatment Facilities	4100	a/	a/	x	
305	Petroleum Storage Facilities	231	b/	b/	x	
402	Postal Service	438	a/	a/	x	
404	National Railroad Rehabilitation c/	30	530	50		x
404	Northeast Corridor Rail Program	85	415	20	x	
404	Highway Bridge Replacement	122	540	6	x	
404	Acceleration of Interstate Highway Construction	2500	300	9	x	
405	Airport Grants	308	200	5	x	
804	General Services Administration	147	259	44	x	x
	Total	8577	3040	413		

a/ Negligible.

b/ This program is fixed in size, but could be accelerated in fiscal year 1979 or expanded by new legislation.

c/ For loans; guarantees are additional.

d/ Primarily construction.

e/ Rehabilitation, maintenance and small projects. (Some programs include projects of both types.)

There are important differences in the job-creating potential of the various projects. In some cases, relative judgments may be made, but in all cases the quality of the actual data is uncertain. In order to determine the job-creating potential of a program, at least three factors have to be examined: (1) the job-creating rate, measured either in jobs or man-years per million of federal expenditures [these differ because of the seasonal character of construction]; (2) the time-phasing of creation and phaseout of jobs; and (3) the expenditure limits within which these factors apply--and beyond which, capacity is strained so as to degrade the employment-generating factors.

Some of these points are addressed, where data are available, in the individual subsections of Section 8. However, the methodology of data collection and the format of data reporting tend to vary by program. Thus, the comparability of the data listed in Table 11--across programs--is far from assured.

The data should be interpreted in a cautious manner, because the whole may be less than the sum of the parts. This arises from the fact that many of the individual programs would compete for the same labor force and materials. 1/ For example, while there is no reliable capacity measure for the construction industry, several factors suggest that there is excess capacity in the aggregate. Limitations on the capacity include availability of materials (notably cement) and the difficulty of shifting construction resources from one region to another.

1/ See note on the U.S. construction industry in Section 5.

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ESTIMATES

The federal outlay and spending estimates for the two parts of the $500 million package are presented in Table 12.

TABLE 12. COSTS AND IMPACT OF TWO TYPES OF NON-EDA PUBLIC WORKS PACKAGES, IN BILLIONS OF DOLLARS AND THOUSANDS OF JOBS

	1977	1978
Type A: New Construction Projects		
Budget Authority: $1.2 billion		
Gross Outlays: (fiscal year)	$ .05	$ .50
Net Outlays: (fiscal year)	$ .04	$ .30
Increases in Jobs (last quarter of calendar year)	10	10
Type B: Rehabilitative Maintenance		
Budget Authority: $0.8 billion		
Gross Outlays: (fiscal year)	$ .20	$ .50
Net Outlays: (fiscal year)	$ .10	$ .20
Increases in Jobs (last quarter of calendar year)	20	20

MILITARY CONSTRUCTION (Subfunction 051)

Description

The military construction (MILCON) budget pays both for various defense facilities for the active and reserve forces, and for construction and maintenance of housing for military families. Fiscal year 1977 requests ranged from an aero-engine test facility through the TRIDENT submarine base to multifamily housing. In fiscal year 1976, $3.589 billion in budget authority and $3.211 billion in outlays was spent on military construction. It is estimated that, in fiscal year 1977, the corresponding figures will be $3.339 billion in budget authority and $3.182 billion in outlays. Of these amounts, family housing construction is a relatively minor item. (The current policy budget for it in fiscal year 1978 is $81 million.) Moreover, Department of Defense (DoD) witnesses said last year that they had almost no backlog of required family housing left to build.

Potential For Expansion

MILCON probably offers relatively little hope for rapid expansion. However, there is some possibility that a backlog exists in the defense maintenance area. 1/ If this is the case, a potentital for expansion would exist. Unfortunately, there are no estimates of the size of these backlogs, although they could amount for as much as $250 million.

1/ Much of defense maintenance actually comes under the Organization and Maintenance Appropriation, rather than MILCON.

Upgrading facilities so that they would be more energy-efficient may also be a way of speeding up outlays.

Multiplier And Substitution Considerations

MILCON probably takes, on average, no more skilled labor than civilian government construction.

WATER RESOURCES (Subfunction 301)

Description

Water resources development projects--such as dams, canals, levees, and reservoirs--add more than $2 billion annually to the nation's stock of capital resources. They are designed to enhance navigation, provide irrigation, generate and transmit electricity from hydropower, control floods, improve water supplies, and develop water-based recreational opportunities. Agencies with large water-related construction programs for fiscal year 1977 include the Corps of Engineers ($1,668 million in appropriations), the Bureau of Reclamation ($574 million), and the Soil Conservation Service ($117 million).

Most projects for this subfunction are undertaken in rural areas. Both ongoing and potential construction efforts of the Corps of Engineers (Corps) and Soil Conservation Service (SCS) are widely diffused throughout the country. Those of the Bureau of Reclamation (BuRec) are concentrated in 17 Western states and Hawaii.

State and local matching requirements vary widely, depending upon type and purpose of the program. For instance, most flood control projects are fully funded by the federal government, whereas construction costs of water supply impoundments are generally funded 100 percent by local sponsors. Moreoever, most--but not all--recreation projects must conform to a 50/50 matching formula. The small loans programs are administered with an 80/20 split, the larger federal share being self-liquidating over time.

Pctential For Expansion

A sizable backlog of water-related public works projects exists. This backlog includes projects in which either preconstruction planning is now underway or construction is ongoing. An agency-by-agency summary of approved projects that could be included in a stimulus package is presented in Table 13.

A more detailed breakdown of the first-year potential increment by activity and agency is illustrated in Table 14. All of the projects except for new construction could commence within six months.

TABLE 13. POTENTIAL FOR EXPANSION OF WATER RESOURCES DEVELOPMENT, IN MILLIONS OF DOLLARS

Agency	Construction Appropriations Fiscal Year 1977	Potential Increment-- Fiscal Year 1977 Outlays	Additional Budget Authority Required for this Increment
Corps of Engineers	1,668	129	360
Bureau of Reclamation	574	8	40
Soil Conservation Service	117	4	26
Total	2,359	141	426

TABLE 14. AMOUNT OF BUDGET AUTHORITY THAT COULD BE ABSORBED IN FISCAL YEAR 1977, BY TYPE OF WATER RESOURCES PROJECT AND AGENCY, IN MILLIONS OF DOLLARS

Type of Project	Corps	BuRec	SCS	Total
Operating & Maintenance	200	6	a/	206
Potential Title X b/	100	3	-	103
Accelerated Construction	25	21	16	62
New Start Construction	35	10	10	55

a/ Prohibited by law.

b/ These are potential projects whose labor component must exceed or equal 75 percent to qualify, and include such activities as work on recreation sites, fencing, and clearing of brush.

Constraints on further expansion fall into two categories: institutional and environmental. Institutional constraints include a 50/50 matching requirement for local sponsors of recreation-oriented projects, and the prohibition on the use of federal funds for acquisition of land easements and rights-of-way. In addition, the demand for SCS projects would be expected to increase considerably if local sponsors were no longer required to fund 100 percent of the associated operating and maintenance expenses. Environmental constraints also exist, particularly with some of the larger-scale Corps of Engineers and Bureau of Reclamation projects.

PARKS AND OTHER PUBLIC LANDS (Subfunctions 302 and 303)

Description

Public works projects in the Land Management and Recreation budget accounts are usually small ($10,000 to $200,000 per project) and could more accurately be characterized as rehabilitation and maintenance. Most such projects are accomplished by temporary or seasonal employees. A small percentage of the work is performed by contractors. The total funding level for all of the public works projects included in subfunctions 302 and 303 is about $600 million. Of this amount, about $400 million is for road construction--mostly on Forest Service land. The small projects are diffused widely and occur in all states. A majority of the projects are in rural areas.

The following types of projects could be included in a stimulus package: construction of small buildings (garages, storage sheds), rehabilitation of facilities, reforestation, erosion control, fence and trail maintenance, and road rehabilitation.

Potential For Expansion

There is a large backlog--about $4 billion worth--of these types of projects. About 25-40 percent of this amount could be used for stimulative purposes. Because specific plans have been developed recently to support other public works initiatives, projects accounting for $400 million could be started within a few months. The effect of this proposal would be to accelerate the normal funding of the projects by one to two years. Such acceleration would not alter the existing cost-effectiveness of the projects. For the most part, the new projects would be about as cost-effective as those already funded. The potential for expansion is summarized in Table 15.

TABLE 15. POTENTIAL FOR EXPANSION OF PARKS AND OTHER PUBLIC LANDS PROGRAMS, IN MILLIONS OF DOLLARS AND NUMBERS OF JOBS

	Required Budget Authority	Outlays in Fiscal Year 1977	Potential New Employment (6 mo. equivalent)
Forest Service	$190 a/	$ 95	45,000
Bureau of Land Management	20	15	2,000
Soil Conservation (Agriculture Stabilization and Conservation Service and Bureau of Indian Affairs	100	55	7,000
Fish and Wildlife Service	80	20	2,000
National Park Service	90	55	10,000
Total	$430	$240	65,000 b/

a/ Includes state cooperative programs.

b/ Peak employment would occur between July and October when about 85,000 people would be employed. It should be recognized that these estimates are fairly soft and are somewhat inconsistent between agencies.

Multiplier Or Substitution Considerations

Most projects are labor-intensive, with about 60 percent of all funds going directly for labor. Consequently, while directly affecting employment, these proposals would have little inflationary impact. Approximately 80 percent of the new employees would be unskilled and semiskilled workers. At least 70 percent of the projects would not be in urban areas. The programs will support between 30,000 and 35,000 man-years of employment. For every direct job, between 0.7 and 1.0 indirect jobs would be supported--but for a temporary period.

Substitution effects are difficult to evaluate. Most of the projects have been deferred for several years. A substitution rate of 15 to 30 percent would be a reasonable estimate.

MUNICIPAL SEWAGE TREATMENT CONSTRUCTION GRANTS (Subfunction 304)

Description

The Environmental Protection Agency (EPA) pays, in the form of a direct grant, 75 percent of the total eligible costs of constructing publicly-owned, municipal sewage treatment facilities. States and municipalities provide the remaining 25 percent.

The Federal Water Pollution Control Act of 1972, which authorized the program, provided a total of $18 billion in budget (contract) authority. Annual appropriations are required to liquidate obligations. It has been Congressional practice to provide new budget authority, not as outlays occur, but as individual states exhaust their allocations of contract authority. EPA currently has over $6 billion to obligate in the remainder of fiscal year 1977, in addition to the $480 million provided in the appropriation for the 1976 Public Works Employment Act. With the exception of this appropriation, no new budget authority has been enacted since 1972. Outlays for the construction program were $2.5 billion in fiscal year 1976 (including some small outlays to retire pre-1972 obligations); outlays in fiscal year 1977 are expected to be $4.1 billion.

New legislation is expected in fiscal year 1977 to extend the program. Based on a 1976 House-Senate agreement, it is likely that budget authority could be provided at a level of $5 billion for fiscal year 1978. The level of budget authority for each succeeding fiscal year (one or more) could be $5 billion or more. In his 1978 budget, President Ford proposed to provide budget authority at an annual level of $4.5 billion for ten years, beginning with fiscal year 1978. In addition, he proposed a supplemental request for $400 million in fiscal year 1977. This amount would be allocated among those states that have obligated all of their share of the original $18 billion.

Potential For Expansion

Expansion of this program could accelerate efforts to provide the best available treatment for municipal wastewaters by 1983. 1/ However, the constraints on any rapid expansion of this program are sizable. First, a considerable period of time--ranging from one to several years--is needed by states and municipalities to prepare, and receive federal approval of, the plans and engineering specifications required. Second, there is no significant backlog of planned, approved projects awaiting construction funding. In fact, some states have been hard-pressed to obligate the amounts allocated to them under the provisions of the 1972 Act. A number of reasons account for this:

- Insufficient staffing levels in many state pollution control agencies and at EPA.

1/ A goal of the Federal Water Pollution Control Act of 1972.

- o Difficulties encountered by some municipalities in securing acceptable interest rates for the tax-exempt bonds with which the 25 percent state/local share is generally financed.

- o Litigation over the siting, sizing, or other aspects of proposed projects.

- o Federal, state, and local administrative requirements, such as procedures for bidding on public works contracts, that pace the program.

For these reasons, it is questionable whether additional funds, beyond those now available and those anticipated for fiscal year 1978, could be obligated in the near future.

Multiplier Considerations

For each billion dollars (federal and local) obligated for construction, 15,300 on-site construction jobs are created. 3/ For each on-site job, nearly 1.3 off-site jobs are created, or about 19,500 off-site jobs per billion dollars of construction funds. This all comes to about $29,000 per job (of which the federal share is about $21,700).

3/ These estimates are drawn from an update of a study prepared by the Bureau of Labor Statistics on the employment effect of this program. The 1970 data were updated by EPA. See The Stimulus to Employment Provided by EPA's Construction Grants Program, Environmental Protection Agency, 1976.

PETROLEUM STORAGE FACILITIES (Subfunction 305)

Description

The Energy Policy and Conservation Act of 1975 mandated the creation of a national strategic petroleum reserve. Current Federal Energy Administration (FEA) plans call for the creation of a 500 million barrel reserve by fiscal year 1982. The implementation of these plans envisions the construction of salt-dome storage facilities, pipelines, and terminals in the U.S. gulf states.

The cost of the strategic petroleum reserve may be divided into three segments: the cost of storage facilities (including acquisition of sites, design, construction, and operations); the cost of acquiring and transporting the petroleum; and the cost of program management. Total outlays for the program--most of which goes for acquisition of petroleum--may reach \$7-\$8 billion by fiscal year 1982. The public works component of this program (facilities construction) may total \$0.7-\$0.9 billion in outlays by fiscal year 1979. Budget authority and outlays for the next two fiscal years are set out in Table 16.

The fiscal year 1977 funding level for the programs has been set. The magnitude of the program in fiscal year 1978 depends upon Congressional reaction to President Carter's amendments to the Strategic Reserve Plan submitted by President Ford on December 15, 1976.

TABLE 16. BUDGET FOR STRATEGIC STORAGE OF PETROLEUM FOR THE NEXT TWO FISCAL YEARS, IN MILLIONS OF DOLLARS

Item	Budget Authority 1976 and T.Q. a/ (Actual)	Budget Authority 1977 (Actual)	Budget Authority 1978 (Est.)	Outlays 1977 (Est.)	Outlays 1978 (Est.)
Site Acquisition	58.1	--	26.0	55.1	26.0
Operations	--	1.4	7.8	1.4	7.8
Construction	242.3	--	364.0	203.5	97.0
Subtotal--Cost of Storage Facilities	300.4	1.4	397.8	259.0	130.8
Total Cost of Strategic Reserve Program b/	314.0	444.7	1,689.5	317.1	1,428.6

a/ Transition Quarter.

b/ These figures include costs for acquisition and transportation of petroleum and for program management, in addition to the cost of storage facilities.

Potential For Expansion

The objective of this program is to provide economic storage and handling facilities for stored petroleum in accordance with a schedule that would provide 150 million barrels of crude oil by December 1978 and 500 million barrels by December 1982.

The magnitude and scheduling of the program depends ultimately upon the final size and location of the reserve, as well as on the rate at which the facilities can be made available for the reserve. The current FEA schedule envisions roughly a capacity of 260 million barrels in fiscal year 1978, 340 million in fiscal year 1979, 465 million in fiscal year 1980, and 500 million in fiscal year 1981. It is unlikely that this schedule can be easily accelerated in fiscal years 1978 and 1979. However, acceleration might be possible after fiscal year 1979. Increasing the final storage capacity above the current objective probably would not have a significant impact on construction in fiscal year 1978. However, it could have an impact in later years.

Presently, the program is constrained by its final size and by the decision to employ salt domes located primarily in the gulf states.

Manpower Requirements

Under the existing program, total manpower requirements during construction are estimated to reach 1,050 skilled and unskilled workers. Several skilled categories may be in short supply, e.g., welders, machinists, electricians, and pipefitters. 4/

POSTAL SERVICE (Subfunction 402)

Description Of Activity

The Postal Service is responsible for the design and construction of postal facilities, and the alteration and improvement of leased and owned facilities. As indicated in Table 17, planned commitments for fiscal year 1977 are $417 million, and planned cash outlays are $438 million.

Potential For Expansion

The Postal Service presently has adequate capital to meet its needs and cannot identify any projects of significance that are prevented from going forward by a shortage of financing. Acceleration of current programs is constrained by federal procurement practices, environmental investigations, and other factors. The only capital investment projects that could be accelerated--in order to have some impact in fiscal year 1977--are those for equipment rather than construction. The magnitude of the equipment purchase is $41 million.

4/ Strategic Petroleum Reserve Plan, Federal Energy Administration, December 1976, p. E-11.

TABLE 17. POSTAL SERVICE PLANNED COMMITMENTS AND PLANNED CASH OUTLAYS ON QUARTERLY BASIS, FOR FISCAL YEAR 1977, IN MILLIONS OF DOLLARS a/

	Planned Commitments (Awards)	Planned Cash Outlays
1st Quarter b/	176	108
2nd Quarter	92	105
3rd Quarter	59	92
4th Quarter	90	134
Total	417	438

a/ The data are classified in fiscal-year quarters. Thus, the 1st quarter of fiscal year 1977 is equivalent to the 4th quarter of calendar year 1977; the 2nd quarter of fiscal year 1977 is equivalent to the 1st quarter of calendar year 1978; etc.

b/ Estimated actual commitments in the first quarter will only be $60 million, and estimated actual outlays will only be $86 million.

RAILROAD REHABILITATION AND IMPROVEMENT (Subfunction 404)

Description

The Railroad Revitalization and Regulatory Reform Act of 1976 provides for federal assistance ($600 million in direct loans and $1 billion in loan guarantees) to railroads for facilities rehabilitation and improvement. Later action appropriated $70 million for the loans and set a $400 million ceiling on the guarantees for fiscal year 1977.

Potential For Expansion

One of objectives of this effort is to upgrade track maintenance to increase the safety and efficiency of railroad traffic. In 1974, the Department of Transportation identified a $4.1 billion backlog in deferred maintenance. Not all of this was "critical."

In the past, track maintenance has tended to be deferred because of the low return on investment. The $530 million authorized, but not yet appropriated, for direct loans probably could be obligated fairly rapidly. Some of the guaranteed loans can be used for this purpose as well. However, they would not be "taken down" as quickly as the direct loans, because of their higher interest rates.

Multiplier Of Substitution Consideration

Substitution effects could be large, since funds under this program could easily be substituted for expenditures the railroads would have incurred anyway. 5/ Projects funded under this program are

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5/ In 1974, Class I railroads spent $2.3 billion on maintenance.

likely to be relatively labor-intensive, with much of the labor not requiring a high degree of skill. However, some of the work financed by this program may be constrained by provisions regulating subcontracting. This work might have to be performed by railway union members.

Based on estimates of the Senate Commerce Committee, the program expansion envisioned above would result in about 30,000 new jobs.

NORTHEAST CORRIDOR RAIL PROGRAM (Subfunction 404)

Description

Recent legislation authorized $1.75 billion to provide significantly faster passenger service in the Boston-Washington rail corridor by 1980. Appropriations for fiscal year 1977 are $150 million; outlays will be $85 million. Some projects (e.g., fencing along the tracks and station rehabilitation) require 50 percent matching funds from the affected states. Legislation may be submitted to remove these matching requirements.

Potential For Expansion

The United States is apparently committed to funding this program, so its acceleration would presumably result in decreased funding later, when there is less need for fiscal stimulus. Based on Department of Transportation (DOT) testimony before the House Appropriations Committee in February 1976, at least $415 million additional budget authority could be added in fiscal years 1977 and 1978. Progress could be accelerated even more, if desired, by changing program priorities toward earlier bridge construction and maintenance, and by omitting matching requirements.

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Multiplier Or Substitution Considerations

No fiscal substitution is expected for this program. If $415 million in budget authority were added, DOT estimates that approximately 8,500 jobs could be created by 1978. The labor component of the accelerated work is fairly high, especially for installation of safety fencing, and bridge construction and maintenance. Not all the labor requirements have to be filled with railway union members. An agreement has been reached that any jobs created in excess of the 1980 requirement may be filled with non-railway union members. Thus, of the 8,500 jobs that would be created under this ground rule, approximately 7,000 need not be filled by railway union members.

HIGHWAY BRIDGE REPLACEMENT (Subfunction 404)

Description

The federal highway program includes the replacement of unsafe and obsolete (in terms of capacity) bridges in the "federal-aid system." This effort is currently funded at an annual level of $180 million (contract authority) in fiscal years 1977 and 1978. Outlays for these two years are expected to be about $122 million and $160 million. States put up 25 percent of the total to get the grants, which are allocated by a formula based on "need." 6/

Potential For Expansion

Expansion can be brought about either by raising the appropriation level to $720 million

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6/ Currently, a state's share of the total grant appropriation is equivalent to its proportion of the nation's unsafe bridges.

per year, reducing the matching requirement to 10 percent, making eligible bridges that are outside of the federal-aid system, and/or by permitting "rehabilitation and repair," as well as replacement. Bills were introduced in the last Congress to bring about each of these changes. It can be expected that similar measures will be introduced in the 1st Session of the 95th Congress.

The present large backlog would allow expansion to a $720 million appropriation level. The value of project applications already received by the Federal Highway Administration (FHWA) 7/ is $5.1 billion. FHWA will be able to specify, in the near future, the value of projects that are "ready-to-go." FHWA estimates that at least an additional $540 million in budget authority could be used quickly. This would mean an expansion to a $720 million level and would result in an outlay increase of $22 million in fiscal year 1977 and $220 million in fiscal year 1978. Moreover, because the Secretary of Transportation has some leeway in adjusting the allocation formula, it might be possible to target these additional funds to those areas of greatest economic need, as long as they were also areas that contained unsafe or obsolete bridges.

Most of the constraints on the expansion of this program are related to the planning and environmental approval processes. However, additional constraints are alleged to include the lack of matching funds and the small grant size. 8/ While

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7/ FHWA is a modal administration established within the Department of Transportation (DOT).

8/ States and localities frequently are forced to accumulate such small grants over a number of years before they have enough funds to finance this type of project.

lowering the state matching requirement would alleviate the alleged lack of matching funds, permitting rehabilitation and repair would--by decreasing the size of the project--ease the constraint of grant size.

Multiplier Or Substitution Considerations

A DOT study shows that the fiscal substitution rate for non-Interstate highway grants is almost 100 percent. 9/ The study does not, however, single out an estimate for the bridge replacement program.

Labor costs comprise about 25 percent of the cost of these programs. This percentage could be higher, however, for rehabilitation and repair efforts. For the replacement of concrete bridges, unskilled labor comprises about 40 percent of the labor costs. Hence, perhaps 4,000 jobs could be created by 1978.

ACCELERATION OF INTERSTATE HIGHWAY CONSTRUCTION (Subfunction 404)

Description

Grants to the states for construction of Interstate highways are authorized at \$3.5 billion and \$3.6 billion (contract authority) in fiscal years 1977 and 1978. The outlays for these years will be about \$2.5 billion and \$2.9 billion, respectively. State matching fund requirements are 5 to 10 percent, depending on extent of public lands in the state.

9/ Leonard Sherman, "Impacts of Federal-Aid Highway Program on State and Local Highway Spending," Ph.D. dissertation, Massachusetts Institute of Technology, 1975 (under contract to the Department of Transportation).

Potential For Expansion

Expansion would accelerate completion of the 42,500-mile network of Interstate highways. The volume of projects "ready-to-go" and awaiting funds is unknown. However, any large expansion will be hampered by statutory allocation formulas, lack of matching funds, and the requirement that the projects meet environmental standards. Because of these and other factors, even the currently authorized levels may not be obligated.

Multiplier Or Substitution Considerations

Evidence indicates that, for each $1 million of federal expenditures, a total of $1.62 million in outlays is distributed through this program. 10/ This ratio is considered a high leverage factor. In addition, there appears to be almost no fiscal substitution effect.

If a $500 million expansion were authorized and obligated in fiscal year 1977, federal outlays could be increased by about $30 million in fiscal year 1977 and by $120 million in fiscal year 1978. Labor costs comprise about 25 percent of the cost of these programs. Thirty-three percent of the labor costs are associated with unskilled labor.

AIRPORT GRANTS (Subfunction 405)

Description

Federal grants are made available to states for construction and improvement of airports. Contract authority for this program is authorized at $510 million for fiscal year 1977 and $550

10/ Ibid.

Potential For Expansion

The Department of Transportation (DOT) estimates that perhaps $200 to $300 million in additional projects could be funded over and above current program levels, although experience has shown that such estimates tend to be optimistic. 11/ Constraints on such expansion would include availability of state and local matching funds, a requirement for environmental approval in some cases, and statutory allocation formulas that would limit the ability to target grants to depressed areas.

Multiplier Or Substitution Considerations

DOT has indicated that these grants have substituted for local funds in some large airport construction projects. To the extent that most projects funded deal with runways and obstruction removal, the program is fairly labor-intensive. As such, the projects are comparable to highway construction (for which the labor component is about 25 percent of the total cost, and 33 to 40 percent of the labor component goes for unskilled labor). Hence, about 1,000 additional jobs might be created by 1978.

11/ Many of the projects currently funded through this program are either safety-related (runway improvement/extension/grooving, obstruction removal, etc.) or are related to alleviation of environmental concerns (land purchases for "noise buffer zones").

GENERAL SERVICES ADMINISTRATION (Subfunction 804)

Description

The General Services Administration (GSA) is responsible for the design, construction, and renovation of general purpose federal buildings. As indicated in Table 18, the total program level for new construction and renovation (repair and alteration) is estimated to be $89 million for fiscal year 1977.

TABLE 18. GSA NEW CONSTRUCTION AND RENOVATION FOR FISCAL YEAR 1977, IN MILLIONS OF DOLLARS

	Current Program Level	Outlays
Prior Year	NA	81
New Starts		
Construction	28	22
Renovation	61	44
Total	89	147

General purpose construction projects require both individual approval of the prospectus by the House and Senate Public Works Committees and line-item specification in annual appropriation acts. Both of these requirements have been satisfied for the current (fiscal year 1977) program.

Potential For Expansion

There is potential for expansion in both new construction and accelerated renovation of federal buildings.

Construction. If funding and necessary project approval were obtained, about six projects--totalling $159 million--could be added to the current fiscal year 1977 program level ($28 million). GSA indicates that construction of these additional new projects could be started no sooner than in the third quarter of fiscal year 1977. Currently, these projects await Office of Management and Budget approval. If that approval is forthcoming, the projects will be submitted to the Public Works Committees for consideration.

Renovation. A maximum of $100 million could be added to the current fiscal year 1977 program level ($61 million), if funding were provided. A majority of the $100 million would be spent on small projects (less than $500,000 in size).

Funding. Both types of projects (construction and renovation) are financed from the "rental" charges paid into the Federal Building Fund (the Fund) by agencies using GSA space. Consequently, the level of rental receipts limits the extent of public buildings activity. In fiscal year 1977, less than $10 million would be available in the Fund for program expansion (e.g., additional new construction and renovation). To realize the full potential for expansion ($159 million for construction and $100 million for renovation), additional appropriations would be required. Because such appropriations would probably by-pass the Fund, they might be subject to a point of order when taken up for floor consideration.

Multiplier Or Substitution Considerations

The $100 million identified for expanded renovation work generates approximately three times as many jobs per dollar as does the $159 million for construction of new buildings.

GNMA TANDEM MULTIFAMILY PROGRAM FOR UNSUBSIDIZED HOUSING

Description

Under the current "Emergency" Tandem program, the Government National Mortgage Association (GNMA) makes commitments to buy mortgages made by private lenders, but insured by the Federal Housing Administration (FHA), for new multifamily housing projects. 1/ The mortgages must be made at a 7 1/2 percent interest rate (well below market rates). GNMA commits to buy them at near face value, so that the lender faces no loss despite the below-market interest rate. GNMA may later resell the mortgages at a discount, suffering a loss because of the difference between the 7 1/2 percent rate and the market rate. The purpose of the program is to encourage multifamily construction by providing lower cost financing to developers.

Current Status

Currently, the Emergency Tandem program is authorized only through fiscal year 1977. Appropriations of $5 billion were provided in fiscal year 1976. The last $2 billion of this appropriation was released by the Secretary of Housing and Urban Development (HUD) during the Transition Quarter. Most of this $2 billion (about $1.8 billion) has yet to be committed and thus remains available. No additional appropriation was made in fiscal year 1977. However, the Third Concurrent Resolution on

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1/ This program was authorized by the Emergency Home Purchase Assistance Act of 1974.

the Budget for Fiscal Year 1977 allows for $2 billion in additional budget authority, and the current authorizing legislation allows for $5 billion additional budget authority. Therefore, a fiscal year 1977 Supplemental Appropriation of $2 billion could be secured without other action. Program operations for fiscal years 1977 and 1978 are shown in Table 19.

TABLE 19. BUDGET LEVELS FOR THE GNMA EMERGENCY TANDEM PROGRAM a/ FOR FISCAL YEARS 1976, 1977, AND 1978, IN MILLIONS OF DOLLARS

	1976 and T.Q. b/	1977 Appro-pria-tions	1977 Current Policy c/ (Est.)	1978 Current Policy (Est.)
Budget Authority	5000	0	2000	0
Outlays	436	0	463	179

a/ Outlay numbers in the table reflect previous single-family, as well as, multifamily commitments.

b/ Transition Quarter.

c/ As reflected in the Third Concurrent Resolution on the Budget for Fiscal Year 1977.

Potential For Expansion

The Tandem program cannot be expected to provide economic stimulus without substantial delay. Under the existing program, mortgages must be FHA-insured in order to be eligible for purchase by GNMA. This administrative requirement means that the start of construction must await FHA's processing of project applications.

Twelve months is a fairly optimistic estimate of how quickly this processing occurs. Some unknown additional time must be allowed for developers to decide to undertake Tandem-assisted projects and to make necessary plans in advance of applying for FHA insurance.

Once construction begins, activity is spread out over about 18 months for the relatively large-scale projects that are typical under FHA financing.

The period from release of Tandem funds to construction start could be shorter if many projects were already part way through the FHA "pipeline" when additional funds became available. At present, however, the projects now in the FHA pipeline will barely use up the remainder of the final $2 billion that has been released for the program.

It is impossible to say anything definitive about "capacity constraints" that might inhibit program expansion. Two potential constraints are the willingness of developers to increase investment in FHA-insured multifamily housing even at below-market interest rates and the ability of the FHA to increase the volume of insurance applications processed. FHA-insured Tandem projects have limited mortgage amounts, involve delays, and require environmental and structural strandards that may discourage some potential participants. Moreover, recent increases in costs relative to rents may make some projects infeasible even at the 7 1/2 percent interest rate.

Multiplier Or Substitution Considerations

While the net effects of the GNMA Tandem program are difficult to estimate precisely, substitution is likely to be substantial. Tandem commitments are available through lenders to developers, regardless of their previous intentions to build. Since the 7 1/2 percent interest rate involves a valuable subsidy, many developers already planning to build apartments naturally seek and receive these commitments. Indeed, these developers may be at an advantage in obtaining Tandem assistance because of their "head start" in planning projects and moving toward FHA approval.

In the short run, the Tandem program may increase the total supply of multifamily mortgage lending enough to lower market interest rates and to encourage additional construction--thereby increasing net effects. The extent of these effects depends on how GNMA operations are financed and whether and when the mortgages are resold.

For a number of reasons (headed by the program's short duration to date), the net effects of the multifamily Tandem program have not been empirically estimated. A rough analysis for the single-family Tandem program estimated a net impact of less than 15 percent. This result could be somewhat higher for multifamily structures, because marginal developers might be more interest-rate responsive than marginal homebuyers and because the 15 percent estimate assumed no short-run effects on total mortgage supply. Therefore, the net effects of a multifamily Tandem program may range roughly from 20 to 50 percent.

It is important to note the relation of net federal outlays to net impact. For example, consider a case in which the government used its budget authority to buy a mortgage of $30,000 with a net impact of $4,500 (i.e., 15 percent of $30,000) in increased construction. If the government later resold the mortgage for $27,000, the short-term net impact would be large relative to the ultimate outlay ($4,500 vs. $3,000) though small relative to the budget authority and the initial outlay.

Program Alternatives and Trade-Offs

A GNMA Tandem program purchasing conventional multifamily mortgages would have fewer delays because it would not require FHA processing. Higher costs could arise, however, because default rates might be high for projects reviewed only by private lenders who knew in advance that they would be selling their mortgages to the federal government. A GNMA Tandem program restricted to subsidized housing would probably reduce substitution but increase the time lag between release of the funds and the beginning of construction.

ASSISTED HOUSING PROGRAMS

Description

Assisted housing programs that support apartment construction for low- to moderate-income renters are possible elements of an economic stimulus package. This is particularly true under present conditions of continued high unemployment in the construction industry and a low rate of multifamily-housing construction starts. The focus of such a stimulus package element could be on additional funding for new construction projects under the Section 8 housing program with GNMA "Tandem Plan" purchase of mortgages on these projects at a 7 1/2 percent rate. 2/ The economic stimulus of other forms of the currently authorized low- and moderate-income housing programs would either be smaller in magnitude or occur at a slower pace.

Current Status

Approximately $7 billion is available (but not obligated) either from funds released in fiscal year 1977 or from the carryover of unused funds from prior years. Such an amount could be used to approve proposals for approximately 91,000 additional Section 8 new construction units in fiscal year 1977. Through the end of the transition quarter, proposals had been approved for about 190,000 new construction

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2/ The Section 8 new construction program was authorized by the Housing and Community Development Act of 1974.

units under Section 8, and construction had started on about 26,000 units.

TABLE 20. PROGRAM OPERATIONS OF THE SECTION 8--NEW CONSTRUCTION PROGRAM, IN BILLIONS OF DOLLARS AND NUMBERS OF UNITS

	1976 and Transition Quarter (Actual)	1977 (Estimated)	1978 Current Policy (Estimated)
Budget Authority Released	$ 6.6	$ 5.8	$ 4.3
Units in Approved Proposals	157,116 a/	91,065 a/	38,700

a/ Department of Housing and Urban Development estimates from Summary of Housing and Urban Development Budget Fiscal Year 1978, January 1977.

Potential For Expansion

One way of expanding the level of program operations is to provide additional budget authority for HUD commitments to pay rent subsidies. This would involve a 20-year commitment for apartments built by private developers under the Section 8 new construction program. To insure the availability of financing at a profitably low interest rate, other budget authority could be provided for GNMA commitments to purchase 7 1/2 percent mortgages on these apartments. Approximately 23,300 apartment units would be supported by an additional $2 billion budget authority for section 8, linked with an additional $600 million budget authority for GNMA.

There are three principal constraints on the program's capacity that might limit program expansion: (1) the developers' interest in subsidized housing, (2) the investors' interest in financing 10 percent of the equity of the projects, 3/ and (3) the processing ability of HUD and FHA. Of these, the third factor is probably most important. All parts of the private sector involved in FHA-insured or subsidized housing complain about HUD/FHA processing delays. At present the funds available for mortgages on multifamily dwellings are limited. In addition, Section 8 projects--when financed with market-interest-rate mortgages--are potentially unprofitable. For these reasons, additional funding for Section 8 projects that is not accompanied by support in the form of additional GNMA mortgage purchasing authority could fail to induce additional construction of multifamily dwellings.

Multiplier Or Substitution Considerations

Speed of Stimulus. This program would be slow to stimulate economic activity. After Congressional release of funds, approximately 18 months would elapse before the start of apartment construction or any stimulative impact. Detailed advance planning and HUD/FHA and local government processing and clearance are required before the start of construction under any current low- and moderate-income housing program. Following an estimated 18-month construction period, federal outlays for rent subsidies would provide a small stimulus by increasing tenant incomes.

Substitution and Net Effects. It is difficult to estimate the rate of fiscal substitution for these types of programs because of the complex

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3/ FHA-insured mortgages purchased by GNMA provide the other 90 percent of development costs.

interactions in financial markets. However, the rate is likely to be substantial--ranging from 40 to 70 percent. 4/

Program Alternatives and Trade-Offs

New housing construction through housing assistance programs couild be encouraged at a lower cost by additional funding for Section 8 new construction without additional GNMA mortgage purchasing authority. As discussed above, however, this would likely introduce a constraint on the availability of financing, as well as increasing the substitution rate by forcing subsidized projects into competition with nonsubsidized projects for a finite amount of mortgage money.

This problem can be avoided by having state or local housing agencies finance Section 8 construction through the selling of tax-free bonds. To the extent that these agencies could market bonds without driving up interest rates on all tax-free bonds, financing constraints and extensive substitution might be avoided. However, twice as much budget authority per housing unit would be required. This is because these Section 8 projects utilize a 40-year rent subsidy contract, rather than the 20-year contract used for privately developed projects.

4/ This is less than the 86 percent substitution rate reported in the one available study on this issue. (See Craig Swan, "Housing Subsidies and Housing Starts," Federal Home Loan Bank Board, Working Paper No. 43, April 1973). There are two reasons for this discrepancy. First, private sector funds in savings and loan associations are more plentiful now than they were during the period studied in the Swan report. Second, GNMA mortgage commitments may provide additional net lendable funds.