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Enhanced Non-Federal Contributions for Special and Local Benefits

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ENHANCED NON-FEDERAL CONTRIBUTIONS FOR SPECIAL AND LOCAL BENEFITS

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STATEMENT OF THE PROBLEM

The Assistant Secretary of the Army (Civil Works) has requested that the Director of Civil Works examine current local cooperation policies for all (new) Civil Works projects providing special or local benefits and provide a discussion paper on such policies, the rationale behind those policies, options for enhanced cost recovery (cost sharing), and the pros and cons of each option.

SUMMARY

Current cost sharing policies relating to special and local benefits are summarized in Table I.

Opportunities to enhance non-Federal contributions for betterments, limited purpose measures, floodproofing, ring levees, protection of private shores, and dredged material with intrinsic value are very limited. In particular, the development of port facilities on land made with dredged material is treated as limited purpose and already requires a non-Federal contribution of 100 percent of allocated costs.

In the instance of waterway increments involving benefits which initially accrue to a single beneficiary, there are opportunities to extend the requirement for an additional non-Federal contribution to investment increments of any magnitude and/or to increase the proportionate magnitude of the contribution such that the non-Federal sponsor bears most or all of the costs allocated to exclusive benefits.

In the instance of intensification and location benefits from the provision of flood protection or the creation of flood-free land, there are opportunities to extend the requirement for an additional non-Federal contribution to a wider range of benefits and/or to increase the proportionate magnitude of the contribution such that the non-Federal sponsor bears most or all of the costs allocated to intensification and location benefits. In particular, an enhanced non-Federal contribution can be obtained for intensification and location benefits which accrue to non-users of a waterway from the disposal of dredged material.

INTRODUCTION

Section 2 of the Rivers and Harbors Act of 1920 (33 CFR 547) provides:

Every report submitted to Congress shall contain a statement of special or local benefit which will accrue to localities affected by such improvement and a statement of general or national benefits, with recommendations as to what local cooperation should be required, if any, on account of such special or local benefit.

TABLE I
SUMMARY OF CURRENT COST SHARING POLICIES FOR
SPECIAL AND LOCAL BENEFITS

Benefit Condition	Authority	Non-Federal Share of Suballocated Construction Costs	Non-Federal Share of Land Rights	Non-Federal Share of Suballocated O&M Expenses
Betterments	P.L. 84-826; P.L. 94-587; P.L. 67-647; administrative policy	100%	100%	100%
Limited Purpose Measures (including port development with dredged material)	approval of precedent- setting projects; administrative policy	100%	100%	100%
Floodproofing/Ring Levees	P.L. 74-738; P.L. 93-251	no suballocation made	100%	no suballocation made
Private Shore Protection	P.L. 84-826	100%	100%	100%
Initial Single Waterway User				
2 1) new channel or extension	approval of precedent - setting projects; administrative policy	50% of interest and amortization until multiple use	100%	50% until multiple use
2) modification - disproportionate incremental investment	approval of precedent - setting projects; administrative policy	50% of interest and amortization until multiple use	100%	no suballocation made
3) modification - progressive development	approval of precedent - setting projects; administrative policy	0% (traditional)	100%	no suballocation made
Intensification and Location				
1) obvious windfall from flood protection	P.L. 74-738; administrative policy	50%	100%	no suballocation made
2) from dredged fill but not for port development	approval of precedent setting projects; administrative policy	50%	100%	no suballocation made
Dredged Material with Intrinsic Value	approval of precedent - setting projects	case by case	100%	no suballocation made

The Senate report on the bill prior to its enactment (Senate Report 513, 1920) stated:

The time has come for greater local cooperation in making the river and harbor improvements. In some sections of the country substantial contributions are being made by localities benefited in connection with actual navigation works. They organize themselves into port districts and levy taxes to aid in this work. This should be done generally throughout the country. It will result in greater economy and more care in the selection of projects. In many cases local benefits are even greater than national benefits. Where local benefits can be approximately measured there is no good reason why the community should not take care of the same.

All the benefits and costs of water resources development ultimately accrue to individuals; however, the degree to which particular individuals may benefit substantially and directly from water projects varies among projects. Furthermore, the benefits and costs of any water project accrue to both localities and the nation at large in proportions which vary from project to project.

The 1920 Act was formulated at a time when there were few general cost sharing policies for water resource projects. However, over time the general principles of the Act have been applied to each project purpose in the form of an overall cost sharing policy for that purpose. The policy for each purpose has been developed through a combination of general water resources legislation, Congressional approval of precedent-setting projects and administrative initiatives. The "abc" requirements for non-Federal cooperation in local flood protection and Federal cost sharing policies for beach erosion control are examples of policies set by legislation. An example of past administrative initiatives is the establishment of a 50/50 cost sharing policy on the first costs of recreational boat harbors prior to enactment in the 1965 Water Project Recreation Act of comparable policy for other recreation developments.

In general, Federal financial participation is limited to general purpose measures which contribute to authorized purposes. Typically, a non-Federal unit of government acting as sponsor must provide lands, easements, rights-of-way, and utility relocations (i.e. "land rights"), plus an additional cash contribution where necessary to meet minimum cost sharing requirements based on a fixed percentage of the costs of the general purpose project-related measures. The non-Federal sponsor is expected to suballocate its costs to beneficiaries (i.e. levy taxes, assessments, or commodity charges) as it sees fit.

Ordinarily, current cost sharing policies are considered sufficient to compensate the nation at large for the incidence of special and local benefits, and the incidence and character of the benefits are of little concern to the Federal government. However, there are a number of conditions for which it may be appropriate to require an additional non-Federal contribution to water project costs:

- 1) Betterments. Betterments are particular measures which are incidental to project purposes.
- 2) Limited purpose measures. Limited purpose measures contribute to project purposes and are associated with general purpose project measures.
- 3) Floodproofing and ring levees. The costs of these measures are assignable to particular beneficiaries who receive exclusive benefit from the measures.
- 4) Protection of private shores. Such protection may be provided as an incidental element of public shore protection.
- 5) Incremental waterway development. Single users may initially benefit from an increment to waterway reach, length or depth.
- 6) Intensification and location benefits. Particular properties may receive added benefits from flood protection or the creation of flood-free land over and above flood damage reduction benefits.
- 7) Dredged material of intrinsic value. Such material has market value once excavated from rivers and harbors.

The purpose of this discussion paper is to examine the local cooperation policies of the Corps of Engineers which apply to the conditions described above, and for each condition to evaluate options for enhancing the non-Federal contribution to project costs.

DISCUSSION OF POLICIES AND OPTIONS

BETTERMENTS

The Corps of Engineers treats measures which are incidental to authorized purposes as betterments and requires that their entire cost be borne by the non-Federal sponsor or sponsors. Where betterments are physically separable, the sponsor must provide the measures using its own resources. The costs and benefits of betterments are not included in economic analyses. Examples of betterments include the following:

1. beach "improvements" over and above shore restoration and protection (Reference 3; Public Law 826, 84th Congress);
2. the incremental costs of beneficial forms of dredged material disposal (e.g., beach nourishment) above those of the least-cost, environmentally acceptable alternative (Reference 4; Section 145, Public Law 94-587);
3. covered flood control channels and similar costs when incurred to improve urban areas rather than mitigate the adverse environmental effects of project measures (References 3,7);
4. the costs of local drainage other than interior drainage necessary to mitigate adverse effects from general flood control features. (Local drainage improvements are administratively defined as improvements needed to serve areas drained by water courses whose 10 year discharge is 800 c.f.s. or less,

although exceptions may be granted if the 100 year discharge exceeds 1800 c.f.s.) (References 3, 5); and

5. bridge betterments and other special and direct benefits to bridge owners. Pursuant to the Bridge Alteration Act of 21 June 1940, as amended 16 July 1952, allocated costs are recovered directly from bridge owners (Reference 6; Public Law 647, 67th Congress).

Since 100 percent of the costs of betterments are contributed up front by the non-Federal sponsor, opportunities to increase the sponsor's share of such costs are limited. For separable measures, the non-Federal sponsor has the opportunity to install such measures should the Corps of Engineers request a contribution above the separable cost. For non-separable measures, recovery of more than 100 percent of the cost (say, up to the magnitude of the benefits) is likely to provide little additional contribution. Furthermore, the non-Federal sponsor may consider it improper to subsidize general purpose measures with non-Federal contributions for betterments. This is because the overall cost sharing policy for each purpose specifies the appropriate non-Federal contribution and because other water project cost sharing principles are based solely on allocated cost.

LIMITED PURPOSE MEASURES

Limited purpose measures are those measures which contribute to project purposes but are associated with general purpose measures. The Corps of Engineers requires that the non-Federal sponsor bear the entire cost of limited purpose measures and furthermore has adopted progressively more restrictive definitions of "general purpose measures." For instance, since 1959 the Corps of Engineers policy on cost sharing for small boat harbors has limited Federal financial participation to "general navigation" (Reference 2). As another example, the provision of disposal areas for dredged material is construed as a part of locally provided lands, easements, rights-of-way and relocations (Reference 3). Because limited purpose features contribute to project purposes and help to create benefits, they are included in economic analyses. Once project-related costs have been allocated among project purposes, the costs for each project purpose are suballocated to general purpose measures and to limited purpose measures. Examples of limited purpose measures are provided below:

1. Navigation features not classified as "general navigation." General navigation features are limited to breakwaters and jetties, entrance and primary access channels, turning basins, and anchorage areas which are not substitutes for mooring areas. Among features to be contributed by non-Federal sponsors are minor access channels, berthing areas, disposal areas for dredged material and self-liquidating land facilities (References 2, 3).

Port development using dredged material is treated as a limited purpose feature. Port development costs to be borne entirely by the non-Federal sponsor include the costs of dikes and embankments for dredged material; the incremental costs, if any, of dredged material disposal at the selected site; site development costs; and the costs allocated to land enhancement (Reference 8; Appendix B).

2. Recreation facilities such as access, parking, bath houses and comfort stations at beach erosion control projects (Reference 3).

3. Land acquisition at non-reservoir flood protection projects beyond the land acquired for the project or required for access to or safe use of the project (Reference 3).

Because 100 percent of the costs allocated to limited purpose measures are contributed by the non-Federal sponsor and because the definition of "general purpose measures" is applied restrictively by the Corps of Engineers, there is little opportunity to enhance non-Federal cost sharing. Furthermore, because limited purpose measures are physically separable or nearly so, the sponsor has the opportunity to install the measures should the Corps of Engineers request a contribution above the cost.

FLOODPROOFING AND RING LEVEES

The costs of most measures in a flood damage reduction plan cannot ordinarily be assigned to individual properties. Two exceptions are floodproofing of individual structures and ring levees around single properties. Although the costs of these measures are assignable and do create exclusive benefits, under current policies they are treated in the same fashion as other flood protection measures so long as they are part of a comprehensive flood protection plan (Reference 3). One reason is that the Flood Control Act of 1936 established the policy that Federal participation is appropriate if the benefits "to whomsoever they accrue" exceed the estimated costs. Furthermore, Section 73 of the 1974 Water Resources Development Act requires that non-structural measures receive equal consideration in the formulation of water resource plans and that the non-Federal share for nonstructural measures, including floodproofing, exceed neither the share for equivalent structural measures nor 20 percent of project costs. Second, floodproofing and ring levees are selected as plan elements only if they serve as more efficient alternatives to structural protection which would otherwise be provided at Federal expense (alternative non-Federal action being unlikely), thereby preventing distortion in investment choice away from the economic optimum. Third, the incremental investment in each such measure when part of a comprehensive protection plan is unlikely to be disproportionate with respect to overall project costs.

It appears that floodproofing and ring levees which contribute to an overall flood protection plan are neither special nor local. Requiring a special contribution would treat beneficiaries receiving comparable benefits inconsistently and would discriminate among communities based on the type of flood protection best suited to their flood problems. Where unusual or disproportionate benefits (e.g., intensification and location benefits, below) would accrue as a result of floodproofing or ring levees, applicable policies for such benefits should be applied. In this regard it may be appropriate to distinguish between public and private facilities being protected or between benefits which would otherwise accrue under an alternative form of local protection versus those which would not.

PROTECTION OF PRIVATE SHORES

The Beach Erosion and Shore Protection Act of 28 July 1956 specified:

Shores other than public will be eligible for Federal assistance if there is benefit such as that arising from public use or from the protection of nearby public property or if the benefits to those shores are incidental to the project, and the Federal contribution to the project shall be adjusted in accordance with the degree of such benefits.

Pursuant to the law, when privately used shores receive protection, the overall Federal cost share is reduced by a proportion equal to the proportion of private benefits to total benefits (Reference 3). In other words, costs are suballocated based on benefits, and 100 percent of the costs suballocated to private protection are borne by the sponsor.

1. Options for Protection of Private Shores

Option 1: benefits - based cost recovery. One option to enhance the non-Federal contribution for protection of private shores is to require a contribution from the sponsor greater than 100 percent of suballocated costs, up to the magnitude of the private benefit (as limited by the alternative cost of protection for the private shores).

This option would provide little additional contribution in most instances and would involve greater assessment and collection difficulties for any sponsor that desires to recover its contribution from the direct beneficiaries. The option also increases the contribution of sponsors that desire to protect public properties on shorelines of mixed ownership, but not that of sponsors protecting shores in consolidated public ownership or use. The former group of sponsors may consider it improper to subsidize public protection with added non-Federal contributions for private protection, particularly in light of the explicit provisions of the 1956 Act.

INCREMENTAL WATERWAY DEVELOPMENT

Current policies regarding incremental waterway development are derived from administrative consideration of, and Congressional authorization of, a number of projects with single-user aspects. These were formalized in a memorandum from the Assistant Secretary of the Army (Civil Works) dated 19 January 1977 (Appendix A). Under current policies Federal financial participation in development of any increment to the reach, depth, length, or other attribute of a waterway is warranted only if there are no restrictive conditions which permit to a single private user the exclusive present and future enjoyment of the project increment. In addition, Federal participation in a "significant" increment will not be recommended unless there is a firm prospect of more than one user within a reasonable period of time. (A significant increment is defined as one involving major increases in project length and/or depth and costs of at least 50 percent of total project costs.)

Once the appropriateness of Federal participation in an increment has been established, partial reimbursement may be required of the non-Federal sponsor until such time as multiple use of the increment is initiated. For new projects and extensions to projects, the sponsor is to reimburse 50 percent of the incremental Federal cost (interest and amortization [I&A] and

operating and maintenance [O&M] costs). For modification increments involving incremental investment which is "disproportionate" with respect to overall project cost, the sponsor must contribute 50 percent of I&A, but the Federal government continues to bear O&M costs since a Federal interest in the waterway has been established and the incremental O&M costs are difficult to separate from without-modification costs. Modification increments which do not involve "disproportionate" investment are treated as "progressive development" of the waterway. No additional non-Federal contribution is required for progressive development increments because the increments were not anticipated at the time of the original project, they are expected to be in exclusive use only temporarily, and the incremental cost allocations for minor increments are difficult to compute (Reference 3; Appendix A).

1. Options for Incremental Waterway Development

Five options are discussed which may enhance non-Federal participation in single-user increments: (1) increased non-Federal contribution; (2) benefits-based non-Federal contribution; (3) reimbursement for most single-user increments; (4) non-Federal financing and Federal reimbursement; and (5) fixed non-Federal cost share. The options may be combined to provide composites.

Option 1: increased non-Federal contribution. The first option is to increase the non-Federal cost share for single-user increments to be reimbursed until multiple use is attained, up to a maximum of 100 percent of allocated costs.

The advantage of option 1 is an increase in the non-Federal share of costs allocated to exclusively used increments. One disadvantage of option 1 is that the sponsors that choose to recover suballocated costs from the direct beneficiaries will encounter objections from those beneficiaries to the levying and collecting of assessments if the magnitude of the assessments is seen as approaching or exceeding that of the benefits. The sponsors that choose to absorb the suballocated costs will face greater affordability constraints to participation in the project and must bear a greater financial burden in the event that multiple use is not initiated as expected. Even if anticipated use develops, the financial evaluation of an increment involving distant payoffs by a sponsor who must make a high contribution may yield results very different from those of an economic evaluation of the same increment.

Option 2: benefits-based non-Federal contribution. This option involves a non-Federal contribution of greater than 100 percent of allocated costs, up to the magnitude of the benefits. Although the non-Federal contribution for single-user increments is maximized under this option, there are great disadvantages. For physically separable increments such as increments in project reach, the non-Federal interests have the opportunity to incur the incremental costs directly and avoid the added contribution. For other increments, the sponsor which must bear the incremental cost may find it improper to subsidize multiple-user increments at the expense of the sponsor or the initial single user. This is because the appropriate non-Federal contribution to multiple-user increments is addressed in overall cost sharing policy and because other water project cost sharing principles are based solely on allocated cost.

Option 3: reimbursement for most single-user increments. The third option to enhance non-Federal participation in exclusive waterway increments is to seek reimbursement for any single-user investment increment irrespective of relative or absolute magnitude (but above a nominal measurement threshold in light of computation and administration difficulties). Progressive development increments would be included. Furthermore, if multiple use of a single-user increment is initiated but a residual single-use increment remains, reimbursement would continue for the residual increment.

The advantages of option 3 are that the Federal share in single-user increments is reduced and that the cost burdens are more closely related to the distribution of the benefits. One disadvantage of option 3 is that the added computation difficulties and administrative expense may not be justified for exclusive use of short duration, even if the investment increment is above the nominal threshold. Also, the sponsor that wishes to suballocate costs to direct beneficiaries will have related problems in developing defensible assessment and collection procedures.

Option 4: non-Federal financing and federal reimbursement. This option provides for an up front non-Federal contribution of incremental investment costs. When an increment attains multiple use, the Federal government would refund the principal and interest on the unamortized portion of the increment.

The advantage of option 4 is that the non-Federal share of first costs is increased. The disadvantages of the option are that the non-Federal sponsor may face financing constraints which preclude its participation, particularly since the sponsor bears the financial risk that the anticipated multiple use will not develop and that its contribution will not be recovered.

Option 5: fixed non-Federal cost share. Option 5 calls for the sponsor to contribute a one time, non-refundable amount based on a percentage of the first cost of the single-use investment increment.

The advantage of Option 5 is that it provides certainty to both the sponsor and the Federal government in that each knows its cost obligations and shares in the risk of benefit shortfall. Option 5 is also easy to administer. The disadvantage is that any percentage figure (say, 10 percent or 50 percent) is arbitrary. For increments which rapidly achieve multiple use the non-Federal contribution may exceed even the magnitude of benefit to the single user. For increments for which multiple use is slow to develop the non-Federal share is insufficient to compensate the nation at large for the benefit to the single user.

INTENSIFICATION AND LOCATION BENEFITS

Intensification and location benefits are the increases in income or value which accrue to properties benefiting from a flood damage reduction plan, over and above the gains from avoided flood damages (Reference 10). The benefits are made possible by the increased productivity of or changes in land use. Such benefits may accrue to properties in or adjacent to the flood plain, to properties served by a major drainage outlet, and to lands the elevation of which is increased by the deposition of dredged material from flood control and navigation projects.

The treatment of intensification and location benefits has been an issue virtually since the Corps of Engineers received general flood control authority in 1936. The 1936 Flood Control Act stated that Federal participation in flood control is warranted "if the benefits to whomsoever they accrue" exceed the estimated costs. The 1936 Act may be interpreted as directing that flood control projects be formulated irrespective of the character or incidence of the benefits. In general, the Corps of Engineers has treated intensification and location outputs as incidental to the primary purpose of flood damage reduction but the benefits therefrom as contributing to national economic development and creditable to the project.

Since 1936 the major efforts to address intensification and location benefits have been administrative. Formal administrative policy was first enunciated in BOB Circular A-47 in 1952. Circular A-47 required that any Federal agency recommending a project involving "land enhancement" allocate Federal first costs to land enhancement in accordance with the proportion of land enhancement benefits to total benefits. The definition of "land enhancement" in Circular A-47 was limited to location benefits and excluded intensification. Circular A-47 further required that non-Federal interests contribute 50 percent of the costs allocated to land enhancement, over and above ordinary cooperation requirements.

With respect to major drainage, between 1952 and 1960 the Corps of Engineers encountered difficulties in applying the BOB policy. The Flood Control Act of 22 December 1944 had directed that "the words 'Flood Control' shall be construed to include channel and major drainage improvements." From 1952 on it was increasingly recognized that most major drainage outputs are in the nature of intensification and location outputs. In addition, Corps of Engineers field offices had difficulty distinguishing among damage reduction, intensification, and location benefits from major drainage. Consequently, a general cost-sharing policy for major drainage was adopted in 1960 which continues in effect today (Reference 1). The entire first cost of flood control measures providing major drainage benefits is to be allocated between major drainage and other flood control based on the proportion of benefits, and non-Federal sponsors are to contribute 50 percent of the costs allocated to major drainage. This policy is considered to ordinarily provide sufficient compensation to the Federal Government for the accrual of drainage benefits, whether inundation reduction, intensification, or location.

With respect to benefits from the deposition of dredged fill, current policies have continued the BOB policy but require a special contribution for both intensification and location benefits. These benefits are expressed as the benefits (as limited by the alternative cost of equivalent fill) which accrue over and above transportation savings, and net of diking, deposition and site development costs. Federal first costs are suballocated to transportation savings and land enhancement (intensification and location outputs) in the same proportion as the benefits from each. If the benefited lands are used by non-users of the waterway, 50 percent of the costs suballocated to intensification and location are contributed by the sponsor and applied against Federal first costs (References 3, 8; Appendix B). (Note that if the flood-free lands are used by navigation project beneficiaries, the sponsor is to contribute 100 percent of allocated costs. See discussion of "limited purpose measures" above and Appendix B).

With regard to ordinary flood control projects, the Corps of Engineers also encountered difficulty in implementing the BOB policy, largely because of the pervasiveness of the intensification and location benefits from such projects, the difficulties in distinguishing such benefits from damage reduction, and the recognition that pervasive and non-excludable benefits are best addressed in an overall cost sharing policy unless they are extraordinary in magnitude or incidence. In 1961 the Corps of Engineers developed and obtained BOB concurrence on a policy (Reference 9) for "land enhancement" at otherwise ordinary flood control projects which remains in effect today (Reference 3):

Hereafter, enhancement benefits resulting from reduction in the flood hazard will be treated, for cost-sharing purposes, in the same way as benefits resulting from reduction of flood damages, except when obvious windfall-type benefits will accrue to limited special interests. Where windfall benefits of unconscionable magnitude will accrue to limited special interests, reporting officers will carefully describe the situation and state the basis considered appropriate for either eliminating or requiring special local cooperation on this account. (Reference 9)

"Land enhancement" is now construed to include both intensification and location benefits. In the presence of obvious windfall land enhancement benefits the sponsor is required, as before, to contribute 50 percent of the allocated costs.

Implementation of the current policy has proved difficult because of the lack of consistent criteria for windfalls, unconscionable magnitude, or limited special interests. Factors used by reporting officers in evaluating intensification and location benefits have included the proportion of flood damage reduction benefits to intensification and location benefits, the existence of large holdings of land subject to land conversion and the identifiability of dominant beneficiaries, the degree of difficulty in differentiating among types of flood benefits, and the immediacy, certainty and absolute or relative magnitude of the benefits. Another important factor is whether the property in question can efficiently be eliminated from the protection plan.

1. Options for Intensification and Location Benefits

Four important considerations apply to any option for increasing the non-Federal contribution for intensification and location benefits. First, such benefits are pervasive. Second, such benefits, like flood damage reduction benefits, are a contribution to national economic development and are creditable to water projects. Third, the greater the non-Federal cost share called for by general cost sharing policies, the less persuasive is the argument for a special apportionment of costs based on the existence of benefits of a certain character or magnitude, and the more persuasive is the argument that such benefits are encompassed in the general policy. Finally, it is difficult to distinguish and quantify intensification and location benefits on a property-by-property basis for cost sharing determinations.

Two sets of options have been developed for intensification and location benefits from flood protection and dredged fill. The first set of options provides alternatives for the range of benefits which warrant an additional contribution, and includes: la) contribution for all intensification and location benefits; lb) contribution for intensification and location benefits of disproportionate magnitude; and lc) contribution for all benefits of disproportionate magnitude. The second set of options provides alternatives for the relative magnitude of the non-Federal contribution, and includes: 2a) contribution of 100 percent of allocated costs; and 2b) benefits-based contribution.

Option la: contribution for all intensification and location benefits.

One option for increasing the range of benefits requiring an added contribution is to extend the 50/50 cost sharing formula to all intensification and location benefits irrespective of magnitude. The major effect of this option is to require a contribution for flood-prone properties which receive less than an "obvious windfall" benefit.

This option would increase the non-Federal contribution, treat equally all intensification and location benefits, and more closely relate costs to benefits. However, intensification and location benefits are less certain than damage reduction benefits and their computation is likely to be less accurate. Consequently it will be difficult for the Corps of Engineers to gain the confidence of sponsors that its suballocation of costs is fair and defensible, and for the sponsors to defensibly levy and collect assessments. The sponsor would bear a greater financial burden and may encounter affordability constraints to participation in the project. Furthermore, requiring a special contribution for ordinary and pervasive benefits has adverse financial effects on communities which are rapidly growing or have substantial undeveloped lands, but not on those which receive immediate flood damage reduction benefits. Finally, because intensification and location benefits are pervasive, option la amounts to a double non-Federal contribution, once under the general policy (say, 50 percent to major drainage and the a-b-c's or 35 percent for other flood control), and second in a special contribution.

Option lb: contribution for intensification and location benefits of disproportionate magnitude. This option resembles option la but would require a contribution only for intensification and location benefits of a disproportionate magnitude. The judgment of whether a benefit is "disproportionate" can be formally set forth in criteria such as the percentage of project costs (say, 5 percent or 10 percent) per beneficiary and/or dollar benefit (say, \$1 million) per beneficiary.

This option shares many of the advantages and disadvantages of option la. Assuming that the added local cost share remains at 50 percent, the non-Federal contribution for intensification and location benefits from flood control (including major drainage) would be increased, but the contribution for dredged fill would be reduced. Many potential disadvantages, including computation and assessment difficulties, financial risk to the sponsor, disproportionate effects on certain types of communities, and double-counting

of benefits in cost share computations are all reduced compared to option 1a. However, great difficulty will be encountered in setting criteria for "disproportionate" benefits which are not subject to accusations of arbitrariness.

Option 1c: contribution for all benefits of disproportionate magnitude. Option 1c resembles option 1b but would require a contribution for any benefit of disproportionate magnitude, whether damage reduction, intensification, or location. This option recognizes that intensification and location benefits contribute to national economic development and is based on the principle that overall cost sharing policies should apply where no unusual (in relative magnitude) benefits occur. Under this policy, the concept of "special benefits" is synonymous with "disproportionate benefits" and is not based on the nature of the benefits.

Compared to option 1b, this option has added advantages, namely a greater non-Federal cost share and a lessened imbalance among various types of communities in the proportionate contribution expected. However, it involves greater computation difficulty and a greater financial burden for the sponsor.

Option 2a: contribution of increased share of allocated cost. One option relating to the magnitude of the contribution is to require a contribution of an increased share of costs allocated to intensification and location benefits, up to 100 percent of allocated costs. A comparable policy is now applied to protection of private shores at beach erosion projects. A major effect of this option is that the non-Federal contribution to total flood control project costs would be at least 35 percent (50 percent for major drainage) and could be very high if the benefits on which the contribution is based are broadly defined (e.g. option 1a or 1c).

Option 2a would provide a high degree of cost recovery. However, the option increases the financial burden of the sponsor and may render many plans unaffordable. In the instance of dredged fill from a navigation project, the reduced willingness of the project sponsor to pay for land disposal sites may jeopardize the the entire project. Second, it necessitates a resumption of the difficult practice of distinguishing wet soil damage reduction from other benefits of major drainage. Third, the treatment of intensification and location benefits would be inconsistent with the current cost sharing policies of the U.S. Department of Agriculture and the U.S. Department of the Interior regarding flood damage reduction, drainage and reclamation.

Option 2b: benefits-based contribution. This option would require a contribution by the sponsor in excess of allocated costs, up to the value of the benefits. Whereas this option would increase the non-Federal cost share for projects involving intensification and location benefits, it shares the disadvantages of option 2a. In addition, if the sponsor wishes to recover its contribution from beneficiaries, recovery of the value of the benefit would effectively deny to some individuals the benefits of flood damage reduction measures, in violation of the "to whomsoever they accrue" provision of the 1936 Act.

DREDGED MATERIAL WITH INTRINSIC VALUE

Under most circumstances the disposal of dredged material is adequately treated under three Corps of Engineers policies:

- a) the requirement that non-Federal interests provide dredged material disposal areas (see "limited purpose measures," above);
- b) the requirement that the sponsor pay the incremental costs above the least-cost environmentally acceptable alternative for disposal of the material in a manner which enables productive use (see "betterments," above); and
- c) the requirement that the sponsor make an added contribution for intensification and location benefits from disposal (see "intensification and location benefits," above).

However, from time to time the Corps of Engineers has undertaken river and harbor improvements which involve the excavation of material with intrinsic value, i.e. value over and above that derived from its use as land fill or beach nourishment material. Examples are coral, rock, clean sand and gravel. Recommendations as to the non-Federal contribution for the value of such material have depended on the circumstances of each case.

It may be possible to establish a general policy requiring special contributions for dredged material with intrinsic value or enabling the Corps of Engineers to recover such values by providing to dredging contractors flexibility in the disposal of dredged materials. However, there are at least two impediments to such a policy. First, the three policies cited above may provide sufficient guidance. Consequently, any modification to those policies to increase the non-Federal contribution will increase the contribution for dredged material with intrinsic value. Furthermore, suballocation of costs in order to identify those not treated under the cited policies may prove very difficult. The second impediment is the uncertainty over state versus Federal authority to control the disposition of materials from submerged lands. Many states claim ownership or public trust interest in such materials and would find it improper for the nation at large to receive any remaining benefit from such materials.

REFERENCES

1. U.S. Army Corps of Engineers, Engineer Manual 1120-2-109, "Federal Participation in Major Drainage Improvements," 23 May 1960.
2. U.S. Army Corps of Engineers, Engineer Manual 1120-2-113, "Benefit Evaluation and Cost Sharing for Small Boat Harbor Projects," 11 June 1959.
3. U.S. Army Corps of Engineers, Engineer Regulation 1120-2-20, "Project Purpose Planning Guidance," 29 January 1982.
4. U.S. Army Corps of Engineers, Engineer Regulation 1130-2-307, "Dredging Policies and Practices," 31 October 1968.
5. U.S. Army Corps of Engineers, Engineer Regulation 1165-2-21, "Flood Damage Reduction Measures in Urban Areas," 30 October 1980.
6. U.S. Army Corps of Engineers, Engineer Regulation 1165-2-25, "Navigation Policy: Cost Apportionment of Bridge Alterations," 30 May 1979.
7. U.S. Army Corps of Engineers, Engineer Regulation 1165-2-118, "Federal Participation in Covered Flood Control Channels," 13 October 1978.
8. U.S. Army Corps of Engineers, Engineer Regulation 1165-2-317, "Ownership and Cost Sharing of Lands Created for Port Facilities," 10 September 1979.
9. U.S. Army Corps of Engineers, ENGCW-PD Multiple Letter, "Federal Participation in Flood Control Developments that Encourage Increased Land Utilization," 26 July 1961.
10. U.S. Water Resources Council, Economic and Environmental Principles and Guidelines for Water and Related Land Resources Implementation Studies, 10 March 1983.



DEPARTMENT OF THE ARMY
OFFICE OF THE ASSISTANT SECRETARY

WASHINGTON, D.C. 20310

MEMORANDUM FOR THE CHIEF OF ENGINEERS

SUBJECT: Cost Sharing Policy for Navigation Channels with Limited Use

Section 2 of the River and Harbor Act of 5 June 1920 provides authority for recommending local cooperation because of special or local benefits. This memorandum modifies Army cost sharing policies for navigation channels with limited use.

As provided for under existing policy, no Federal participation is to be recommended for a project that is expected to be for exclusive use by vessels serving one individual or firm. However, Federal participation may be recommended when one beneficiary would be served initially, but a reasonable prospect exists for multiple use. "Multiple use" is defined as regular use by vessels serving a user other than the first user. A public utility will be treated as a single user and vessel traffic to a utility will not be considered as multiple use. If the project is a modification of an existing project, multiple use exists only if the vessels serving a user other than the first user require the improved project dimensions.

For new channels or extensions to channels, local interests will be required to pay 50 percent of the operation and maintenance costs until multiple use is established. However, operation and maintenance costs for project modifications that deepen and/or widen existing Federal channels will continue to be at Federal costs. This distinction between modifications to existing channels and new channels or channel extensions is appropriate because of the difficulty in realistically measuring incremental maintenance costs attributable to a channel modification. These requirements are in addition to the other established requirements of local cooperation for commercial navigation projects, and no change in the current policy for cost sharing the first costs for construction of navigation projects is necessary. Table I, enclosed, summarizes Army cost sharing policies for navigation channels with limited use as modified by this memorandum.

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Victor V. Veysel
Assistant Secretary of the Army
(Civil Works)



APPENDIX A

Table I

Single-User Cost Sharing Policy
Commercial Navigation Project

<u>Category of Project</u>	<u>Initial Use</u>	<u>Prospective Future Use</u>	<u>Degree of Federal Participation</u>	
			<u>Initial Construction</u>	<u>Operation & Maintenance</u>
New channel or extension to existing channel	Single-user only	Single-user only (1)	None	None
New channel or extension to existing channel	Single-user	Reasonable prospect, additional users	50% (2)	50% (3)
Modification (4) to existing channel	Significant proportion or increment for single-user	Reasonable prospect, additional users	50% (2)	100%
Modification progressive development (5)	--	--	100%	100%
New (Completed by non-Federal interests) (6)	Single-user	Reasonable prospect, additional users	None	None (7)
New (Completed by non-Federal interests) (6)	Multiple-use	Multiple-use	None	100% (8)

(1) Improvement for exclusive benefit of one user, e.g., one commercial entity controls all the land giving access to the improvement.

(2) Non-Federal interests pay 50 percent of the annual charges for interest and amortization of the first cost of general navigation component until multiple use commences.

(3) Non-Federal interests pay 50 percent of maintenance cost until acceptable multiple use commences. Thereafter, maintenance costs are borne by the Federal Government.

(4) Enlargement or realignment of existing Federal project involving increase in project depth and/or width.

- (5) Progressive development includes "end of the line" situation where part of the improvement is a last project increment reaching a last additional user. The last user may be "at the end" in terms of length, depth, or width, necessitating some project investment in his service alone. This is treated as multiple use unless disproportionate incremental investment is required.
- (6) Waterway constructed by non-Federal interests.
- (7) Prior multiple use is a requirement for Federal assumption of maintenance responsibility.
- (8) Not retroactive.



OFFICE OF THE UNDER SECRETARY
WASHINGTON, D.C. 20310

8 March 1979

MEMORANDUM FOR THE DIRECTOR OF CIVIL WORKS

SUBJECT: Cost Sharing for Special Local Benefits at Harbor Projects

Your 5 January 1979 Decision Memorandum recommended no change in cost-sharing policy for land enhancement at harbor projects where flood-free land is created for port facilities and plant operation. I do not concur with this recommendation.

Two options (options a. and b.) considered in your memo would require a cash contribution based on sharing a percentage of land enhancement benefits. Your argument for rejection of these options is consistent with policies requiring sharing of construction costs for reimbursable purposes and for windfall flood control land enhancement. However, the current policy of cost-sharing only 50 percent rather than 100 percent of allocated construction costs is not consistent with cost sharing for other types of reimbursable project features (M&I water supply and hydropower) where costs can be fully recovered by project sponsors. Costs allocated to increased land values resulting from creation of flood-free land at or near harbor projects can readily be recovered by lease of these lands to project users or by sale to others. A cash contribution of 100 percent of allocated costs would therefore be appropriate.

Increasing the cash contribution by local interests will not only produce a more equitable sharing of Federal costs, it will help reduce the incentive for promotion of over-deep or over-large harbors to gain valuable fill material at negligible additional cost to the local sponsor. Your recent policy of requiring waterfront land to be reserved for harbor users is another measure which should be effective in reducing bias for over-dredging in these situations.

In view of the above, existing cost-sharing policy should be modified for harbor projects which increase land values by the creation of flood-free land at or near the harbor. Land enhancement should be computed in accordance with the "Changes in the Market Value of Land" method described in ER 1105-2-351 using the project interest rate to annualize the increase in value and considering that the market value reflects the demand for and timing of use (EM 1102-2-101 needs to be revised to reflect this method of computing land enhancement benefits). All costs allocated to land enhancement will be reimbursed as a cash contribution.



8 Mar 79

Although you may wish to consider, for consistency, revised cost sharing for land enhancement for navigation channel projects, I can see no compelling need for change unless the circumstances are similar to a harbor. Normally, I would not expect the local sponsor or project users to receive these land enhancement benefits. If they do, harbor cost sharing would be appropriate.


Michael Blumenfeld
Deputy Under Secretary