

## WATER RESOURCE POLICIES AND AUTHORITIES

## Water Supply Storage in Corps of Engineers' Projects

1. Purpose and Scope. The manual prescribes policies for the inclusion of municipal and industrial water supply in reservoir projects under the jurisdiction of the Chief of Engineers. It is applicable to all elements of the Corps of Engineers performing civil works functions.

2. References.

a. EM 1120-2-101, Survey Investigations and Reports, General Procedures, particularly paragraphs 1-78c, 1-82d, 1-144.

b. Water Supply Act of 1958 (Title III of Public Law 85-500), approved 3 July 1958, as amended by the Federal Water Pollution Control Act Amendments of 1961, Public Law 87-88, 20 July 1961 (See Appendix IV).

c. EM 1165-2-112, Water Resource Policies and Authorities, Streamflow Regulations for Water Quality Control.

3. Rescission. EM 1165-2-105, 7 Sep 60.

4. Water Supply Act of 1958. The Congress in this Act provides a general policy for considering water supply in Civil Works projects including submission of new projects to Congress and modification of authorized projects to include water supply. Water supply is considered the primary responsibility of State and local interests, but Federal water resources projects should be planned in cooperation with responsible State and local interests so that water supply may be fully considered and provisions therefor included to the maximum extent practical consistent with sound engineering and economic principles.

5. Applicability.

a. The Water Supply Act of 1958 is applicable to all Civil Works reservoir projects provided, however, in those cases in which contracts have been executed under specific provisions of the authorizing act or other authorities, modification of the contract in accordance with the provisions of the Water Supply Act of 1958 will be permissible only if (a) water is not being delivered under the contract and (b) there is mutual consent to the modification. Approval of the Chief of Engineers will be required prior to making commitments to modify these contracts. In cases

*one acre-foot equals one acre of water one foot deep or 325,775 gallons.*

where contracts have not been entered into, the contracts shall be made in accordance with the Water Supply Act of 1958.

b. Application of the Water Supply Act of 1958 will be limited to municipal and industrial water supply and the term "water supply" as used herein is intended to refer to those purposes.

6. Water Supply Services to be Provided. These will normally consist of space in a reservoir for use in regulating the flow of water so that it is useful for water supply purposes, and the provision, where necessary, of facilities in the project structures to provide for the release or withdrawal of stored water for water supply purposes. Facilities for the conveyance of water to distribution points shall be considered as outlined in paragraph 16.

7. Water Rights.

a. Water rights necessary for the use of the stored water will not be acquired by the Corps of Engineers but will be obtained as necessary by the water users. The Corps of Engineers should not become involved in resolving conflicts among water users over the right to use stored water for water supply purposes, but will look to responsible State agencies to resolve such conflicts. Where more than one user is involved in the same project, it is desirable that arrangements be made with a single agency, if practicable, for payment and use of the entire water supply storage.

b. Possible encroachment of the operation of water supply storage on the lawful water uses in the downstream areas will be carefully considered and fully coordinated with the responsible local interests as well as with the State agency responsible for the administration of water rights and water laws. The local interests contracting for the use of the water supply storage will be required to hold the Government harmless from liability for or on account of any claim for damages which may be made or asserted as the result of the storage and withdrawal of water by the user and they will be required to use the water in a manner consistent with Federal and State laws.

8. Water Supply Storage.

a. Timely consideration will be given to the inclusion of water supply at reservoir projects to provide as full development of the water resources as practical so as not to preclude the future or expanded use of the reservoirs for water supply, since reservoir sites are becoming increasingly limited in many parts of the country.

b. The project may include provision for water supply for both immediate use (present demand storage) and future use (future demand storage). The inclusion of water supply storage should be based on sound engineering and economic principles of project formulation.

c. During the survey and early planning stages local interests shall furnish reasonable assurances that they will use and make demands for use of storage for water supply, and pay the costs allocated thereto, in accordance with the provisions of the Water Supply Act of 1958, as amended.

d. When State or local interests contemplate using water supply storage upon completion of construction, such interests are required, prior to the initiation of construction, to agree to pay the cost of present demand storage and other water supply provisions necessary to permit such immediate use. A contract, prior to initiation of construction, is considered the best form of the required agreement. Negotiation of a contract should be completed insofar as practical during the period of pre-construction planning so that the contract can be processed promptly after construction funds become available.

e. The contract for use of present demand storage and other facilities, as set forth above, should be accompanied by assurances for future demand storage as set forth in subparagraph 9d. An Exhibit should be attached to the assurances showing the estimated schedule when progressive increments of future demand storage in the project are expected to be placed in service (see subparagraph 9c). The details for computation of the various elements of costs to be borne by local interests as well as the current estimates thereof, for both present and future demand storage and services should be forwarded with the contract and assurances.

f. Planning for water supply in connection with projects to be constructed by the Corps of Engineers should be fully coordinated with responsible State agencies, local interests concerned, and other agencies who may be able to assist in this specialized field (see paragraph 20). In particular, the advice and assistance of the Public Health Service should be obtained (see subparagraph 20c and Appendix I). The views of those agencies and interests should accompany reports submitted to the Chief of Engineers.

9. Special Provisions for Future Water Supply. Future demand storage and other facilities may be recommended to meet anticipated future needs, subject to the following provisions:

a. Recommendations for providing for future demand storage and related facilities will be supported by information demonstrating that it is more economical to include such provisions in the initial construction than it would be to fully or partially defer such provisions until the demand for water supply arises. In preparing the economic justification analysis and in selecting an alternative plan for providing the deferred water supply, benefits and costs must be brought to a common time basis, recognizing that the alternative would probably not be built until the need for the services arises. Storage provided for future municipal and industrial water supply should be used to the maximum extent practical for other beneficial purposes in the interim until use is initiated for water supply. If such interim use is for irrigation and the project is located in the Western states, careful consideration will be given to the applicability of Reclamation Law, and to actions considered appropriate for such application. Interim use should be reflected in the benefits and allocations of cost.

b. The construction cost of including the water supply facilities for future use, including the allocated part of the joint construction costs of the project, should not be more than 30 percent of the total estimated construction costs of the project. ~~This may be in addition to an allocation for immediate water supply use when both immediate and future use are involved.~~ In exceptional cases for which there are compelling reasons, recommendations may be included in survey or review reports for provisions for future water supply involving more than 30 percent of the construction costs. However, advance approval should be obtained from the Chief of Engineers.

c. Reasonable evidence should be developed and analyzed by reporting officers to show that anticipated future demand for the use of such storage will be made within a period of time which will permit paying out the costs allocated to water supply within the life of the project. This will require careful analysis of projected water supply needs, and full coordination with the Public Health Service and State and local interests. One important element in the consideration of this matter is the effect of interest charges, commencing after the 10 year interest free period (see subparagraph g, below). For example, one dollar invested in uncontracted water supply storage and facilities for 40 years would, after the 10th year, accumulate interest charges of more than a dollar, thus more than doubling the investment cost to be repaid by the responsible local entity. Plans for future use will include an estimate of the dates when progressive increments will be placed in service for water supply.

d. The responsible State or local interests who will eventually contract for the water supply storage will be required to furnish reasonable assurances that demands for the use of such storage will be made within a

period of time which will permit paying out the costs allocated to water supply within the life of the project, but in no event to exceed 50 years after the project is first used for the storage of water for water supply purposes. The 50 year limitation for payout may be considered applicable to the entire future demand storage, or, if desired, to each of the progressive increments thereof as placed in service for water supply. Reasonable assurances that demands for use of storage for future use will be made obtainable, generally in a form similar to that shown in the attached Appendix III. Assurances will include a written statement to the effect that the project plan is fully understood so far as water supply provisions are concerned, that projections of future water demands are concurred in and are consistent with local projections, and that the local plans for future water supply will be directed toward utilizing the project water supply services under suitable repayment arrangements. The assurances should be obtained before construction is initiated and forwarded, along with evidence of legal authority, for consideration by the Chief of Engineers before commitments are made as to acceptance. There is, of course, no prohibition against early reimbursement of the cost of such water supply storage and facilities, and early contracts even prior to the initiation of construction to accomplish this objective should be encouraged.

e. It is not considered that the requirement to repay the future water supply costs "within the life of the project" is limited to the period assumed in evaluating economic justification of the project, but may be extended over the physical life during which the project can be reasonably expected to be operated without substantial impairment by sedimentation or by excessive physical deterioration of the engineering works.

f. No payment will be required for the cost allocated for future water supply until use is initiated. However, local interests should be encouraged to pay current interest charges on the allocated investment cost during the period of non-use after the interest-free period as discussed further below.

g. No interest will be charged on the investment costs (construction costs plus interest during construction) allocated to future water supply until use is initiated, but such interest-free period shall not exceed ten years. If use is not initiated until after ten years from the time the project is completed and available for water supply services, the interest from the tenth year until use is initiated may, at local option, be paid annually in order to avoid the long term cumulative effects of such interest (see subparagraph c, above). This may be accomplished by the inclusion of suitable provisions in the contract, if available, for present demand storage (see subparagraph 8d), or if not available, by contract pertaining to the future demand storage. Where it is impracticable to provide for payment of

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interest until use is initiated, the interest from the tenth year until use is initiated will be compounded annually and added to the investment costs to be repaid.

h. Annual operation and maintenance costs, and major capital replacement costs, will not be charged to future water supply until a contract is made for such future water supply and payments are initiated. Until payments are initiated, operation, maintenance and replacement costs allocated to future water supply will be assigned to nonreimbursable functions served by the project. Operation and maintenance costs should be assessed annually commensurate with the progressive increments of storage placed in service for water supply. In a similar manner, major capital replacement costs should be paid either annually, with interest on the unpaid balance, or in lump sum at the time such costs are incurred.

i. In accordance with the foregoing there may be number of different repayment periods for water supply in one project, depending upon the number of contracting entities and upon when use is initiated under the various contracts.

10. Modification of Authorized Projects which are not Constructed.

a. Authorized projects may be modified to include water supply, and the value of such water supply included in the economic justification. However, such modifications which would seriously affect the purpose for which the project was authorized or which would involve major structural or operational changes can be made only upon approval of Congress.

b. Planning studies of authorized projects will include full consideration of water supply which should be included in the project. Early consideration of water supply will be required so that the project will not be delayed unduly in the event additional approval by Congress is required.

c. If the project as planned to include water supply provides essentially equivalent services for the authorized project purposes as originally contemplated by Congress, and the inclusion of water supply does not involve any conflict with Federal or State laws or compacts approved by Congress, it will normally be considered that the purposes for which the project was authorized are not seriously affected and that major operational changes are not involved.

d. An important criterion in determining whether major structural changes are involved will be whether or not the allocation to future water supply is in excess of 30 percent of the total estimated reservoir project cost.

e. Full information will be furnished the Chief of Engineers during the planning studies for review and determination on whether or not inclusion of water supply as planned is authorized without further approval by Congress.

f. In the event the Chief of Engineers determines that approval of Congress for including water supply is required, it will be necessary to obtain authority and prepare a review report in accordance with existing procedures.

11. Modification of Completed Projects.

a. Consideration of water supply in completed projects normally will be based upon receipt of requests for such services or upon basin-wide review.

b. Favorable consideration should be given to the use of projects for water supply where the studies indicate that water supply represents a higher type of use compared to adverse effect on the authorized project purposes and considering other possible alternates which might be developed to provide the same service. Consideration should also be given to the possibility of enlarging projects for water supply. In basin studies involving needs for water supply, modification of completed projects should be among the alternatives considered.

c. Criteria for considering whether or not water supply is authorized in completed projects by the Water Supply Act of 1958 should be somewhat more restrictive than in the case of adding water supply as a purpose prior to construction. It is not considered practical to establish such criteria at this time. Accordingly, preliminary studies will be made of each request received and possible additional requests in the foreseeable future of sufficient scope to permit a reasonably firm determination of whether or not additional approval of Congress is required and a report submitted to the Chief of Engineers. The preliminary studies should be financed to the maximum extent practical from funds currently available. If extensive studies are required beyond that which can be financed with available funds, full information on funds needed should be furnished to the Chief of Engineers.

12. Benefits.

a. The benefits from municipal and industrial water supply storage result from improvements in conditions of water use, largely in regard to quantity and dependability, quality, and physical convenience. In basic concept the limiting values of such improvements are the maximum amounts prudent users would be willing to pay for the water supply storage components of municipal and industrial water supplies, assuming that decision would be made on the basis of a broad public viewpoint rather than a regional or local viewpoint. However, because of the complex objective and subjective considerations involved in the establishment of these maximum amounts, precise measurement of benefits on this basis frequently is difficult, if not impossible. Pending improvements in

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evaluation techniques, alternative costs comprise a conservative and the most generally acceptable basis for measurement of the benefits from municipal and industrial water supply storage.

b. Annual benefits resulting from an increase in water quantity and dependability may be measured as the cost of obtaining the same quantity and quality of water by the cheapest alternative means that would most likely be developed by the potential water users in the absence of the Federal project. The costs of the cheapest alternative source should be based on non-Federal practices for such works and non-Federal financing and interest rates. If the alternative source of water is not in the general vicinity of the proposed Federal project it will be necessary to adjust the benefits to the Federal site by adding or subtracting the estimated difference in the cost of transporting the water to the water users. An adjustment in benefits may also be necessary to allow for the amount of water required to meet any existing lawful uses of water in the downstream areas or to satisfy existing water rights which may be affected by operation of the water supply storage.

c. Additional annual benefits may result from an improvement in water quality resulting from use of a surface supply stored in a reservoir as compared with the quality of water from an existing source, such as from wells. Such benefits may be evaluated on the basis of savings in cost of treatment for the net increase in water supply, recognizing that additional benefits may result from increased effectiveness in the production of industrial products. Conversely, any decrease in the quality of water stored in a potential reservoir project as compared with an existing source should be accounted for by discounting water supply benefits to allow for increased treatment costs, or to allow for other adverse effects such as limitations on use by the water users.

d. Additional annual benefits may result from reduction in pumping costs due to the head provided by a reservoir project, or other improvement in physical convenience.

e. When it is not possible to definitely establish the potential water users, or the alternative water supply project that could reasonably be expected to develop in the absence of the Federal project, water supply benefits may be based on the average unit cost of raw water (for comparable units of dependable yield) from municipal or industrial water supply projects planned or constructed in the general region. Such benefits should be adjusted insofar as practicable to reflect the current price level, and differences in dependability, quality, and physical convenience. Water supply benefits also might be based, in this case, upon an estimated alternate reservoir to provide the same water supply services as from the multiple-purpose project following current practices for estimating costs of Federal projects.

f. Estimates of annual benefits resulting from water supply facilities provided for future use which are used in project economic analysis should be discounted at the Federal interest rate to allow for the estimated period of non-use.

g. A study of the benefits of a proposed water supply facility should include appropriate information on the increase in dependable yield from the regulation provided by the water supply storage.

13. Allocation of Costs.

a. The water users are to pay for the cost of water supply provisions on the basis that all authorized purposes served by the project, including water supply, share equitably in the benefits of multiple-purpose construction. As discussed in subparagraph 9a, interim use of future water supply storage for other purposes should be reflected in the benefits for such purposes as well as allocation of costs.

b. The allocation of costs should meet the following criteria:

(1) The costs allocated to any function will not exceed its benefits, or the lowest justifiable alternative cost, whichever is less.

(2) The costs allocated to any function will be at least equal to the costs incurred by the inclusion of that function in the plan of development.

c. In the case of water supply, the Corps of Engineers favors the Use of Facilities method of cost allocation, except where clearly not applicable or where power, recreation, or fish and wildlife also are involved as primary project functions. In these instances, the Separable Costs-Remaining Benefits method ordinarily will be used (see EM 1120-2-101, paragraph 1-85, and EM 1160-2-101). Where an allocation to water supply was presented to Congress in the survey report, that method of allocation will be used if it satisfies the criteria given above in subparagraphs 13a and 13b.

d. In the application of the Use of Facilities method, the cost of specific facilities shall be assigned directly to the purposes served, and the cost of joint-use facilities shall be distributed to the purposes in proportion to the comparable measure of use, which will normally be reservoir capacity.

e. The results of the allocation of construction costs to water supply will be expressed as follows:

(1) Local interests will be required to bear the construction cost of specific water supply facilities, presently estimated at \$ \_\_\_\_\_.

(2) Local interests will be required to bear \_\_\_\_\_ percent of the construction cost of the joint-use facilities, such share being currently estimated at \$ \_\_\_\_\_.

The allocation of annual operation and maintenance costs to water supply will be expressed in the same manner. A statement will be included requiring local interests to share the costs of major capital replacements, distributed in the same proportions as the construction costs.

f. The statement of local cooperation requirements in survey reports becomes exceedingly complex in the case of several multiple-purpose reservoirs wherein water supply storage is to be provided over a period of time in relation to water supply needs. In such cases, consideration may be given to simplified language requiring repayment of costs allocated to water supply in accordance with the provisions of the Water Supply Act of 1958, as amended; giving the present estimates in the simplest possible terms, such as in percentages of first costs, operation, maintenance and replacement costs; and providing sufficient information in reference tables or otherwise to make clear the basis of computation.

g. Cost allocations will be required at various times as outlined in paragraph 1-06 of EM 1160-2-101. In survey reports, the results will be carefully qualified, recognizing that a substantial period of time may elapse before construction is initiated and that substantial changes may be expected during the intervening period in some of the principal factors. The survey report allocation, therefore, should be subject to change by later studies to be made on the basis of conditions prevailing at the time of construction. It is recognized, however, that in some cases it will be necessary to make firm commitments with water users on the costs to be repaid prior to the final cost allocation as defined in EM 1160-2-101. In such cases, the cost allocation should be currently reviewed immediately prior to the time such commitments are necessary and prior approval obtained from the Chief of Engineers. The commitment should be based upon payment of specific costs plus a percentage of the joint-use costs. The exact amount of the payment would be determined by the actual costs incurred.

h. In the case of completed projects involving reimbursable functions such as hydroelectric power or irrigation, a complete analysis will be made of the effects of adding water supply storage on the preliminary or final cost allocations, and the adverse effects on existing or prospective reimbursement arrangements for such other purposes. If, for example, the water supply storage is reallocated from a portion of the power storage, the allocation to water supply should at least be sufficient to recover the loss in power revenues that results from the reallocation.

14. Repayment.

a. All construction, operation and maintenance, replacement, and interest costs incurred by the Federal Government and allocated to water supply should be repaid by the water users except for part of such costs allocated to future water as discussed in subparagraphs 9g and 9h.

b. The schedule of payments by States or local interests of such costs will provide either for paying the share of construction expenditure during construction of the project, plus payments for operation and maintenance costs, annually, and for payment of replacement costs when incurred or annually; or for annual payments for the construction costs, including interest during construction, and interest on the unpaid balance, plus payments for operation and maintenance, annually, and for payment of replacement costs when incurred or annually. The construction costs, including interest during construction, for the present demand storage and for the various increments of future demand storage, as needed (see subparagraph 9d), shall be repaid within the life of the project, but in no event to exceed 50 years after the date on which each increment of such storage is first used.

15. Interest Rate. The interest rate to be used to determine repayment requirements in computing interest during construction on the construction costs allocated to water supply and interest on the unpaid balance will be determined by the Secretary of the Treasury pursuant to the Water Supply Act of 1958 and will be furnished by the Chief of Engineers to Division and District Engineers. In applying the Water Supply Act of 1958, construction will be considered as having been initiated on the date when the first lands for the project are acquired or on the date when the first construction contract is let, whichever is the earlier. For planning purposes and the distribution of construction, operation and maintenance, and replacement costs among the purposes served, the interest rate established by the Bureau of the Budget under Budget Circular A-47 will be used in accordance with existing procedures (see EM 1120-2-104). The water supply interest rate furnished by the Secretary which is appropriate to the year construction was or will be initiated, will be selected from the tabulation in Appendix II.

16. Withdrawal of Water and Conveyance to Point of Use. Need for facilities for withdrawal of water from storage and its conveyance to point of use should be considered in survey studies to the extent necessary for sound planning and evaluation of Federal projects involving water supply storage, to insure adequate consideration of possibilities for multiple-purpose development to which the Federal interest may extend, and to insure effective development and use of water resources, subject to the following:

a. Where facilities for withdrawal and conveyance of water are essential components of plans for effective development and use of water resources for flood control, water supply, irrigation, navigation, hydro-electric power production or other purposes in which Federal interest resides, they may be incorporated as features of Federal projects proposed for such purposes. However, this provision does not extend to inclusion of local water distribution systems.

b. Where facilities for withdrawal and conveyance of water are incorporated as features of Federal projects for water supply and other purposes an equitable share of the first costs and operation, maintenance, and replacement costs will be allocated to water conveyance in accordance with the cost allocation procedures applicable to the projects as a whole.

c. Costs allocated to water conveyance will be assigned to non-Federal interests except for such portions as may equitably be assigned to the Federal Government as, for example, where a Federal installation would be served.

d. First costs for water conveyance assigned to non-Federal interests may be paid at the time of construction of water conveyance facilities, or on an annual basis beginning at the time of completion of these facilities. In the latter case repayment arrangements will be generally the same as for water supply storage, exclusive of waiver of interest. (The provisions of the Water Supply Act of 1958 relative to waiver of interest which apply to storage for future use are not considered to extend to conveyance facilities even in the case where immediate and future water supply are combined, and initially constructed conveyance facilities provide capacity for future use).

e. Responsibility for maintenance and operation of water conveyance facilities generally will be assigned to local interests. In special cases maintenance and operation might be undertaken by the Federal Government on a reimbursable basis as, for example, where service of a Federal installation would warrant such action.

17. The principles outlined in paragraph 16 will be applied in the survey stage. Problems arising in connection with their use will be referred to the Chief of Engineers for consideration. Appropriate background information and recommendations should be submitted at the same time.

18. Withdrawal of Water in Small Amounts for Domestic Purposes.

Where there are requests from landowners bordering a reservoir for small amounts of water for domestic use, arrangements may be made for them to cross Government land with a water pipeline under a license issued in accordance with Section II, EM 405-1-861. Such a license does not constitute authority to use reservoir water, but the Corps of Engineers has no objection where use is limited to requirements for domestic, stock watering, and small agricultural uses in connection with domestic needs. If a firm right is desired, it will be necessary for the applicant to enter into a contract under authority of the Water Supply Act. Licenses may be issued to new users as well as users who took water prior to the reservoir project. It is intended that the total of such uses from any reservoir will not be enough to require a reservation of storage for water supply services or to seriously interfere with authorized project purposes. Should a reservation of storage capacity be required for such aggregate of use it would be necessary to establish charges and for local interests to enter into contractual arrangements.

19. Municipal and Industrial Uses Not Requiring Reimbursement.

There are a few instances where water users desiring to take water directly from a reservoir would receive no benefit from the Federal investment, but would need to cross Government land to gain access to the water. Those users may be allowed to cross Government lands under a license as provided for in Section II, of EM 405-1-861. If the reservoir does not regulate the stream flows in the interest of water supply or otherwise provide a beneficial service to the water user, such as reducing pumping costs or improving physical convenience for taking water, and there is no loss to prospective power revenue, or adverse effect on navigation or other authorized project purposes, there is no basis for establishing charges. It is important that the facts in each case be carefully ascertained, including the effects on recreation and fish and wildlife, before a recommendation for nonreimbursement is made so that no pattern will be set which would interfere with the project at a later date when the pattern of use has fully developed. An analysis will be made of the character of such prospective use and a complete report prepared for consideration by the Chief of Engineers.

*discussed  
in ER 405-1-  
860*

20. Coordination.

a. Corps of Engineers' personnel responsible for planning and developing proposed projects shall, within the authority of existing laws and administrative practices, consult with local organizations in the area primarily affected, State and local governments, and other Federal agencies, with respect to the requirements and necessity for provision of additional water supply facilities. This consultation should take place at the earliest feasible stage and should be continued

throughout the investigations, survey, and planning stages, in order that the views of these groups and agencies may receive adequate consideration. Plans for the development of municipal and industrial water supplies shall be thoroughly coordinated with the State or States affected and the Public Health Service with a view to including their views and recommendations in survey and review reports to be submitted to Congress or in reports on authorized projects submitted to the Chief of Engineers.

b. Coordination with the local interests and the State water authorities will also include full consideration of the possible adverse effects of the operation of the water supply storage on lawful uses of water and water rights, with the understanding that the local interests contracting for the storage space will be required to utilize the water supply storage in a manner which is not inimical to such uses and rights.

c. A copy of a Memorandum of Agreement between the Department of the Army and the Department of Health, Education, and Welfare is attached as Appendix I. That Agreement provides a basis for obtaining the advice and assistance from the Public Health Service on water supply matters in connection with the Civil Works Program of the Corps of Engineers.

FOR THE CHIEF OF ENGINEERS:

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JOSEPH O. KILLIAN  
Colonel, Corps of Engineers  
Executive

APPENDIX I

MEMORANDUM OF AGREEMENT  
BETWEEN  
THE DEPARTMENT OF THE ARMY  
AND  
THE DEPARTMENT OF HEALTH, EDUCATION, AND WELFARE  
TO PROVIDE ASSISTANCE IN  
IMPLEMENTING THE WATER SUPPLY ACT OF 1958  
(TITLE III, PUBLIC LAW 500, 85th CONGRESS)

THIS MEMORANDUM OF AGREEMENT entered into this 4th day of November, 1958, by and between the Department of the Army, represented by the SECRETARY OF THE ARMY, and the Department of Health, Education and Welfare, represented by the SECRETARY OF HEALTH, EDUCATION, AND WELFARE.

W I T N E S S E T H

WHEREAS, the Department of the Army, through the Chief of Engineers, is authorized pursuant to various Acts of Congress to investigate, plan, construct, maintain and operate flood control, navigation and multiple-purpose reservoir projects; and

WHEREAS, the Water Supply Act of 1958 (Title III of Public Law 500, 85th Congress) authorizes the inclusion of storage in any reservoir project surveyed, planned, constructed or to be surveyed, planned, or constructed by the Corps of Engineers to impound water for present or anticipated future demand or need for municipal or industrial water, subject to the terms of that Act. and provides that the reasonable value thereof may be taken into account in estimating the economic value of the entire project; and

WHEREAS, the Public Health Service, Department of Health, Education, and Welfare, pursuant to the Public Health Service Act, as amended (42 U.S.C. 201 et seq.), conducts research, investigations and other activities relating to the diseases of man, including consideration of water purification and pollution of lakes and streams; and under the Federal Water Pollution Control Act (33 U.S.C. 466-466k) develops comprehensive programs for eliminating or reducing pollution, giving due regard to the improvements necessary to conserve waters for public and industrial water supplies and other purposes; and

WHEREAS, engineering, scientific and economic information and knowledge useful in the planning, design, and operation of water supplies has been and is continuing to be developed and evaluated by the Public Health Service under these authorities, which information would be helpful to the Corps of Engineers in carrying out its responsibilities under the Water Supply Act of 1958.

NOW, THEREFORE, because of the improvement in planning for water resources development that can result from cooperation of the two agencies, and the mutual advantages accruing hereunder to the Department of the Army and the Department of Health, Education, and Welfare in carrying out their respective responsibilities, it is hereby agreed as follows:

#### I - SURVEY AND REVIEW INVESTIGATIONS

a. In carrying out any authorized survey, or review investigation, which may lead to construction of projects at which provisions for municipal or industrial water supply may be feasible and justified, the Corps of Engineers will consult with the Public Health Service to obtain the views and recommendations of that agency on present and prospective needs for such water supply and the desirability of meeting those needs from the project or projects under consideration. The Corps of Engineers will include in reports submitted to Congress, plans for the development of water supplies for municipal and industrial purposes and the views and recommendations of the Public Health Service.

b. The Public Health Service will prepare and submit a report to the Corps of Engineers setting forth its findings and recommendations on each individual survey or review investigation involving improvements which may be useful and justified in developing water supplies. Upon completion of such survey or review investigation but prior to its submission to the Congress, the Chief of Engineers will furnish a copy of his proposed report to the Surgeon General, Public Health Service, for his review and comments in accordance with established Federal inter-agency procedures.

#### II - PLANNING OF AUTHORIZED PROJECTS

a. In the detailed planning of projects, the construction of which have previously been authorized by Congress, at which provisions for municipal and industrial water supply may be feasible and justified, the Corps of Engineers will consult with the Public Health Service to obtain the views and recommendations of that agency on the water supply aspects thereof.

b. The Public Health Service will prepare and submit a report to the Corps of Engineers setting forth its findings and recommendations on each authorized flood control, navigation, or multiple-purpose project being planned by the Corps of Engineers, which involves improvements which may be useful and justified in developing water supplies.

#### III - GENERAL COOPERATIVE PROCEDURES

a. In connection with consultations pursuant to sections Ia and IIa above the Corps of Engineers will furnish the Public Health

Service with information concerning scheduling and such other details as may be mutually agreed on as necessary to that agency for the successful carrying out of its responsibilities under this agreement.

b. The Public Health Service will provide advice and assistance in cooperation with the States and other interests on the present and anticipated future demand or need for municipal or industrial water supply, and on the economic value of such water supply, in connection with reservoir projects being investigated, planned or constructed by the Corps of Engineers. The Corps of Engineers will, in consultation with the States and interests directly concerned, make the final determination of the amount of storage to be recommended or provided in its projects for these purposes.

c. Except for the original execution thereof, this agreement shall be administered on behalf of the Department of the Army by the Chief of Engineers, representing the Corps of Engineers, and on behalf of the Department of Health, Education, and Welfare by the Surgeon General, representing the Public Health Service, or their duly authorized representatives. Normally, coordination between the two agencies which is necessary in the carrying out of this agreement will be accomplished between the District or Division offices of the Corps of Engineers and the regional offices of the Department of Health, Education, and Welfare.

d. The Public Health Service will obtain funds through its own budgeting procedures to provide the necessary staff and resources for normal cooperation under this agreement. The Corps of Engineers will make available to the Public Health Service, by transfer from its appropriations, such additional funds as are found by mutual agreement to be required for special studies necessitated by individual surveys, review investigations or authorized project investigations.

IN WITNESS WHEREOF, this memorandum has been executed on the date first above stated.

/s/ L. E. Burney  
Surgeon General, Public Health Service

/s/ E. C. Itschner  
Major General, U. S. Army  
Chief of Engineers

/s/ Arthur S. Flemming  
Secretary of Health, Education and  
Welfare

/s/ Wilber M. Brucker  
Secretary of the Army

Recor'd Rem 1201

THIS PAGE A-4 OF APP II CONSTITUTES CHANGE 5 to EM 1165-2-105, 18 Sep 61

EM 1165-2-105  
Change 5, APP II  
21 July 66

APPENDIX II

INTEREST TABLE  
APPLICABLE TO WATER SUPPLY

Fiscal Year	Interest Rate i	Sinking Fund Factor** $\frac{i}{(1+i)^{n-1}}$	Capital Recovery Factor** $\frac{i(1+i)^n}{(1+i)^{n-1}}$
1950	2.544	0.010129	0.035569
1951	2.544	0.010129	0.035569
1952	2.561	0.010079	0.035689
1953	2.553	0.010102	0.035632
1954	2.584	0.010012	0.035852
1955	2.584	0.010012	0.035852
1956	2.585	0.010009	0.035859
1957	2.591	0.009992	0.035902
1958	2.587	0.010004	0.035874
1959	2.670	0.009766	0.036466
1960	2.699	0.009684	0.036674
1961	2.632	0.009875	0.036195
1962	2.742	0.009563	0.036983
1963	2.936	0.009035	0.038395
1964	3.046	0.008747	0.039207
1965	3.137	0.008513	0.039883
1966	3.222	0.008300	0.040520
* 1967	3.225	0.008293	0.040543

\*\*Based on 50-year period.

APPENDIX III

ASSURANCES ON WATER SUPPLY

WHEREAS, the Flood Control Act of \_\_\_\_\_ (Public Law \_\_\_\_\_, \_\_\_\_\_ Congress, \_\_\_\_\_ Session) authorized the construction of \_\_\_\_\_ Reservoir for flood control and other purposes: and

WHEREAS, under the provisions of the Water Supply Act of 1958 (Title III, P.L. 85-500), as amended by Section 10 of P.L. 87-88, approved July 20, 1961, water supply storage for municipal or industrial uses may be included in any reservoir project planned by the Corps of Engineers, provided that before construction or modification of any project including water supply provisions for present demand is initiated, State or local interests shall agree to pay for the cost of such provisions, and provided further that not to exceed 30 percentum of the total estimated cost of any project may be allocated to anticipated future demands where State or local interest give reasonable assurances, and there is reasonable evidence, that such demand for the use of such storage will be made within a period of time which will permit paying out the cost allocated to water supply within the life of the project; and,

WHEREAS, the provisions of the Water Supply Act of 1958, as amended, are recognized as being applicable to the authorized \_\_\_\_\_ project; and,

WHEREAS, The City of \_\_\_\_\_, \_\_\_\_\_, considers that the \_\_\_\_\_ Reservoir on the \_\_\_\_\_ River is a desirable source of future water supply; and,

WHEREAS, The City of \_\_\_\_\_ has filed an application with the \_\_\_\_\_ to appropriate \_\_\_\_\_ of water from the \_\_\_\_\_ River.

NOW, THEREFORE, BE IT RESOLVED BY THE \_\_\_\_\_ of the City of \_\_\_\_\_:

1. That the City of \_\_\_\_\_ is fully cognizant of the provisions of the Water Supply Act of 1958, as amended, and the requirements for payment of the allocated costs of the water supply storage, including interest during construction and interest on the unpaid balance, annual operation and maintenance costs, and replacement costs.

2. That the City is fully cognizant of the plan for the construction and operation of the \_\_\_\_\_ project insofar as water supply provisions are concerned and the water supply services to be provided by the project. It agrees that projections of future water needs are concerned in and are consistent with local projections and that the City's plan for future water supply will be directed toward utilizing the project water supply services under suitable repayment arrangements.

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3. That the City of \_\_\_\_\_ does hereby request the Corps of Engineers, U.S. Army, to include \_\_\_\_\_ acre-feet of water supply storage in the project which is estimated to yield \_\_\_\_\_ million gallons per day at the project site for its future water supply needs.

4. That the City of \_\_\_\_\_ recognizes the responsibility of repayment to the United States of all costs allocated to the requested water supply storage.

5. That the City hereby gives assurance that demand for the use of such storage will be made within a period of time which will permit paying out the costs allocated to water supply within the life of the project.

IN WITNESS WHEREOF, THE \_\_\_\_\_ of the City of \_\_\_\_\_ has adopted this Resolution this \_\_\_\_\_ day of \_\_\_\_\_, 1961

/s/

\_\_\_\_\_  
Mayor

/s/

\_\_\_\_\_  
Commissioner

/s/

\_\_\_\_\_  
Commissioner

Attest:

/s/ \_\_\_\_\_  
City Clerk

(SEAL)

18 Sep 61

## APPENDIX IV

WATER SUPPLY ACT OF 1958, TITLE III, PUBLIC LAW 85-500  
AS AMENDED BY PUBLIC LAW 87-88  
(43 USC 390b)

Sec. 301. (a) It is hereby declared to be the policy of the Congress to recognize the primary responsibilities of the States and local interests in developing water supplies for domestic, municipal, industrial, and other purposes and that the Federal Government should participate and cooperate with States and local interests in developing such water supplies in connection with the construction, maintenance, and operation of Federal navigation, flood control, irrigation, or multiple-purpose projects.

(b) In carrying out the policy set forth in this section, it is hereby provided that storage may be included in any reservoir project surveyed, planned, constructed or to be planned, surveyed and/or constructed by the Corps of Engineers or the Bureau of Reclamation to impound water for present or anticipated future demand or need for municipal or industrial water, and the reasonable value thereof may be taken into account in estimating the economic value of the entire project: Provided, That the cost of any construction or modification authorized under provisions of this section shall be determined on the basis that all authorized purposes served by the project shall share equitably in the benefits of multiple-purpose construction, as determined by the Secretary of the Army or the Secretary of the Interior as the case may be: Provided further, That before construction or modification of any project including water supply provisions for present demand is initiated, State or local interests shall agree to pay for the cost of such provisions in accordance with the provisions of this section: And provided further, That not to exceed 30 per centum of the total estimated cost of any project may be allocated to anticipated future demands where State or local interests give reasonable assurances, and there is reasonable evidence, that such demands for the use of such storage will be made within a period of time which will permit paying out the costs allocated to water supply within the life of the project: And provided further, That the entire amount of the construction costs, including interest during construction, allocated to water supply shall be repaid within the life of the project but in no event to exceed fifty years after the project is first used for the storage of water for water supply purposes, except that (1) no payment need be made with respect to storage for future water supply until such supply is first used, and (2) no interest shall be charged on such cost until such supply is first used, but in no case shall the interest-free period exceed ten years. The interest rate used

for purposes of computing interest during construction and interest on the unpaid balance shall be determined by the Secretary of the Treasury, as of the beginning of the fiscal year in which construction is initiated, on the basis of the computed average interest rate payable by the Treasury upon its outstanding marketable public obligations, which are neither due nor callable for redemption for fifteen years from date of issue. The provisions of this subsection insofar as they relate to the Bureau of Reclamation and the Secretary of the Interior shall be alternative to and not a substitute for the provisions of the Reclamation Projects Act of 1939 (53 Stat. 1187) relating to the same subject.

(c) The provisions of this section shall not be construed to modify the provisions of section 1 and section 8 of the Flood Control Act of 1944 (58 Stat. 887), as amended and extended, or the provisions of section 8 of the Reclamation Act of 1902 (32 Stat. 390).

(d) Modifications of a reservoir project heretofore authorized, surveyed, planned, or constructed to include storage as provided in subsection (b), which would seriously affect the purposes for which the project was authorized, surveyed, planned, or constructed, or which would involve major structural or operational changes shall be made only upon the approval of Congress as now provided by law.

Sec. 302. Title III of this Act may be cited as the "Water Supply Act of 1958."

Approved July 3, 1958, as amended July 20, 1961.