



REPLY TO
ATTENTION OF

DEPARTMENT OF THE ARMY
U.S. ARMY CORPS OF ENGINEERS
441 G STREET, NW
WASHINGTON, DC 20314-1000

CECW-P

14 October 2015

MEMORANDUM FOR PLANNING COMMUNITY OF PRACTICE

SUBJECT: Economic Guidance Memorandum, 16-01, Federal Interest Rates for Corps of Engineers Projects for Fiscal Year 2016

The enclosed information is provided for immediate use. Please note that the interest rate to prioritize for budget development is discussed in the annual Program Development Guidance issued by the Programs Integration Division, not this EGM.

Questions related to this memorandum should be addressed to Mr. Jeremy LaDart, CECW-PC, at jeremy.m.ladart@usace.army.mil or by telephone at (202) 734-1861.

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5 Enclosures

1. Federal Discount Rate
2. Deferred Payment Interest Rates
3. Water Supply Interest Rates
4. Hydropower Interest Rate
5. Delinquent Payment Collection Rate

Federal Discount Rate for Fiscal Year 2016

Project Evaluation and Formulation Rate (Discount Rate): FY 2016 – 3.125%

The Principles and Guidelines states: "Discounting is to be used to convert future monetary values to present values. Calculate present values using the discount rate established annually for the formulation and economic evaluation of plans for water and related land resources." (Section 1.4.11)

The interest rate for discounting, that is, converting benefits and costs to a common time basis, is set each fiscal year in accordance with Section 80 of Public Law 93-251. HQUSACE obtains the rate from U.S. Department of the Treasury, which computes it as the average market yields on interest-bearing marketable securities of the United States that have 15 or more years remaining to maturity. The computed rate is effective as of 1 October of each year. It is based on yield data for the entire previous fiscal year, and thus the discount rate for the fiscal year above is based on average yields during the previous fiscal year. According to law the rate may not be raised or lowered more than one quarter of one percentage point in any year.

The table below shows the discount rate historical series going back to 1957. Column headings identify the source of authority for the rates, and not necessarily the organization that actually computed the rates.

Federal Discount Rate for Fiscal Year 2016

FEDERAL DISCOUNT RATES FOR PROJECT FORMULATION AND EVALUATION					
Fiscal Year	Bureau of the Budget (now OMB) Circular A-47	Senate Document No. 97 (1962)	Water Resources Council (WRC) (1968)	Principles & Standards (WRC) 1973)	Section 80 WRDA 1974 (Public Law 93-251)
1957-60	2.500%				
1961	2.625%				
1962	2.625%	2.625%			
1963		2.875%			
1964		3.000%			
1965-67		3.125%			
1968		3.250%			
1969		3.250%	4.625%		
1970			4.875%		
1971			5.125%		
1972			5.375%		
1973			5.500%		
1974			5.625%	6.875%	5.625%
1975					5.875%
1976					6.125%
1977					6.375%
1978					6.625%
1979					6.875%
1980					7.125%
1981					7.375%
1982					7.625%
1983					7.875%
1984					8.125%
1985					8.375%
1986					8.625%
1987					8.875%
1988					8.625%
1989					8.875%
1990					8.875%
1991					8.750%
1992					8.500%
1993					8.250%
1994					8.000%
1995					7.750%
1996					7.625%
1997					7.375%
1998					7.125%
1999					6.875%
2000					6.625%
2001					6.375%
2002					6.125%
2003					5.875%
2004					5.625%
2005					5.375%
2006					5.125%
2007					4.875%
2008					4.875%
2009					4.625%
2010					4.375%
2011					4.125%
2012					4.000%
2013					3.750%
2014					3.500%
2015					3.375%
2016					3.125%

Deferred Payment Interest Rates Fiscal Year 2016

Deferred Payment Interest Rates and Payment Calculations for Fiscal Year 2016

Normally a non-Federal sponsor is expected to provide its cost share as the funds are needed, that is, as construction proceeds. Under some conditions, a sponsor may seek to defer payment until after construction completion. When payments are deferred, they are made with interest. This enclosure provides interest rates to use in determining the deferred payments, and instructions for computing them.

The necessary conditions for formally seeking deferred payments are verifiable sponsor need and prior concurrence by the ASA (CW). In principle, deferred payments are available for all project authorities (purposes). In practice, because of Corps budget constraints that preclude it from making what are, in effect, loans to sponsors, the Corps finds it difficult to participate in many projects with deferred payments.

There is some flexibility to accommodate limited deferred payments for harbor improvement projects; deferred payments are limited to the 'additional' ten percent sponsor obligation for General Navigation Features (GNF) costs. This 'additional' ten percent GNF cost share is typically a minor portion of a sponsor's total project cost share.

Authority for sponsor-deferred payments is PL 99-662 (WRDA '86). Provision for deferred payments for flood control and most other project purposes are in Section 103, paragraphs (a)(4), (b), and (k). Authority for deferral of 'additional' ten percent GNF costs is in Section 101, paragraph (a)(2).

In the table below, "Interest Rates for Computing Non-Federal Repayments", the interest rates are based on Section 106 of WRDA '86, which says that the interest rate applicable to deferred payments will be the yield on Treasury securities having a remaining period to maturity the same as the repayment period selected (and agreed to by ASA (CW)). Thus, if the agreed upon repayment period is twelve years the repayment interest rate will be the yield on securities with twelve years left until maturity.

A detailed discussion of deferred payments and cost sharing is in [ER 1165-2-131](#), Local Cooperation Agreements for New Start Construction Projects. This ER implements the cost sharing provisions of WRDA '86, and the instructions below, which are continued from previous editions of this EGM, presume knowledge of the ER.

Deferred Payment Interest Rates Fiscal Year 2016

I. Interest on Deferred Payments

A. **Deferred payment reimbursed during the construction period.** Interest will be charged on each Federal expenditure made in lieu of non-Federal contributions for the period between the expenditure and the reimbursement, except as noted in paragraph E. below.

B. **Deferred payments reimbursed over a period of time following completion of construction** (reference Sections 103(a)(4), 103(b), and 103(k) of P.L.99-662). Interest will be charged for each Federal expenditure (first costs) made in lieu of non-Federal contributions for the period between the expenditure and the end of construction. The first costs plus this interest will then be amortized over the selected repayment period.

C. **Repayment under section 101(a)(2) of P.L.99-662.** Repayment of up to 10 percent required under this section will not include any interest for the construction period only.

D. **Interest Computation.** Expenditures each month will be totaled and interest computed as though all the expenditures were made at the mid-point of the month. Interest will be compounded annually on the anniversary of the expenditure. Periods of less than one year will be converted to a fraction of a year (interest charge = principal at beginning of period x interest rate x fraction of a year).

E. **Delay of initial payment under sections 101(d) and 103(l) of P.L.99-662.** Delayed initial payments for up to one year approved by the ASA (CW) shall be assessed interest for one-half the period of delay.

II. Rate of interest to be applied to deferred payments

A. **Reimbursements during the construction period.** The interest rate will be determined by using the formula specified in section 106 of P.L.99-662. The maturity period shall be equal to length of time between the Federal expenditure and the reimbursement.

B. **Reimbursement after completion of construction.** The rate of interest to be used in computing interest for the construction period and to amortize the total obligation at the start of the repayment period (first cost plus interest) will be the rate determined using the formula in section 106 of P.L.99-662. For example, when the repayment period is 30 years, the interest rate shall be determined by the Secretary of the Treasury, taking into consideration the average market yields on outstanding marketable obligations of the United States with remaining periods of maturity of 30 years during the month preceding the fiscal year in which costs for the construction of the project are first incurred **plus a premium of one-eighth of one percentage point for transaction costs.**

Deferred Payment Interest Rates Fiscal Year 2016

III. Payment Schedule. The payments, where reimbursement is made after completion of construction, shall be in equal consecutive annual installments, the first of which shall be due and payable within 30 days after the non-Federal interest is notified by the District Commander that the project or project modification is completed and operational for the purpose(s) for which repayment is being made. Annual installments thereafter will be due and payable on the anniversary date of the date of notification. Except for the first payment, which will be applied solely to the retirement of principal, all installments shall include accrued interest on the unpaid balance at the rate provided above. The last installment shall be adjusted upward or downward when due to assure repayment of all of the indebtedness.

IV. Five-Year Recalculation of the Interest Rate Applicable to Deferred Payments. The formula used to determine the interest rate under paragraph II.B above will be used for each recalculation. For example, if the original maturity period is 30 years, then the interest rate for each recalculation will use the current Fiscal Year interest rate for 30 years. Annual payments, however, will be based on the remaining repayment period.

V. Expenditures between Feasibility Studies and Construction. Federal expenditures not covered by the FCSA for feasibility studies and made prior to the PCA for construction (PED) will be treated as first year construction costs subject to interest charges based on the preceding paragraphs as though the expenditures were made at the beginning of the first year of construction.

VI. Projects Authorized for Planning, Engineering, and Design. Planning and engineering will be cost shared 50-50 in accordance with Section 105(b) of P.L.99-662. Expenditures for design will be treated in accordance with paragraph V. above.

Deferred Payment Interest Rates Fiscal Year 2016

Interest Rates for Computing Non-Federal Repayments Fiscal Year 2016 (Section 106 of P.L. 99-662)

From and Including	Up To But Not Including	Rate
0 years - 3 months	0 years - 6 months	1/8%
0 years - 6 months	0 years - 10 months	1/4%
0 years - 10 months	1 year - 2 months	3/8%
1 year - 2 months	1 year - 7 months	1/2%
1 year - 7 months	2 years - 0 months	5/8%
2 years - 0 months	2 years - 4 months	3/4%
2 years - 4 months	2 years - 9 months	7/8%
2 years - 9 months	3 years - 2 months	1%
3 years - 2 months	3 years - 8 months	1-1/8%
3 years - 8 months	4 years - 2 months	1-1/4%
4 years - 2 months	4 years - 9 months	1-3/8%
4 years - 9 months	5 years - 3 months	1-1/2%
5 years - 3 months	5 years - 10 months	1-5/8%
5 years - 10 months	6 years - 6 months	1-3/4%
6 years - 6 months	7 years - 5 months	1-7/8%
7 years - 5 months	8 years - 7 months	2%
8 years - 7 months	10 years - 2 months	2-1/8%
10 years - 2 months	12 years - 0 months	2-1/4%
12 years - 0 months	14 years - 7 months	2-3/8%
14 years - 7 months	18 years - 5 months	2-1/2%
18 years - 5 months	21 years - 11 months	2-5/8%
21 years - 11 months	24 years - 7 months	2-3/4%
24 years - 7 months	30 years - 1 day	2-7/8%

Note: The above interest rates do not include the one-eighth (1/8%) of one-percentage point for transaction costs required by Section 106 of P.L.99-662.

Water Supply Interest Rates for Fiscal Year 2016

The Water Supply Act of 1958 (PL 85-500) established that the Federal government may cooperate with non-Federal interests in their water supply development efforts. This Act established a repayment period of 50 years and a repayment interest rate equal to the nominal interest rate of outstanding Treasury securities of suitable periods to maturity. Section 932 of the Water Resources Development Act of 1986 (PL99-662) amended the repayment period to 30 years and the interest rate to the yield rate, plus a premium of one-eighth of one percentage point for transactions costs.

I. Water Supply Interest Rates based on PL 99-662 – 2.750% (2.625% + 1/8%)

This interest is relevant for a 30-year repayment period as established in Section 932 of PL 99-662. This rate is used for agreements for storage not “grandfathered” (see following section III), for new storage reallocated to M&I water supply, for surplus water agreements, and for new projects. Repayment amounts must be readjusted every five years using the then current interest rate. For repayment periods other than 30-years see Section II, which follows below.

Water Supply Interest Rates for Fiscal Year 2016

The following table shows an historical series since 1986 for this interest rate.

FISCAL YEAR	INTEREST RATE
1987	7.625%
1988	10.000%
1989	9.250%
1990	8.250%
1991	9.125%
1992	8.125%
1993	7.500%
1994	6.125%
1995	7.750%
1996	6.750%
1997	7.125%
1998	6.750%
1999	5.375%
2000	6.125%
2001	5.875%
2002	5.625%
2003	5.125%
2004	5.500%
2005	5.125%
2006	4.625%
2007	4.875%
2008	4.875%
2009	4.625%
2010	4.125%
2011	4.250%
2012	4.125%
2013	2.875%
2014	3.125%
2015	3.500%
2016	2.750%

Note: The authorized one-eighth of one percentage point for transactions costs is included in the rates in the values shown in this table.

Water Supply Interest Rates for Fiscal Year 2016

II. Water Supply Interest Rates – for Repayment Periods other than 30 Years

For repayment periods less than 30 years interest rates are the same as specified under Section 106 of PL 99-662, and shown in the table on page 4 of Enclosure 2. The rate is used for agreements for storage not “grandfathered” (see following Section III), for new storage reallocated to M & I water supply, for surplus water agreements, and for new projects. Repayment amounts must be readjusted every five years using the then current interest rate.

III. Water Supply Interest Rate based on PL 85-500 – 4.673%

These interest rates are determined by the Department of the Treasury in accordance with provisions of the Water Supply Act of 1958, Section 301 (b). They are based on the nominal interest rate – as opposed to the yield – of Treasury securities with 15 or more years to redemption. Although the Water Supply Act was amended for Corps projects by PL 99-662, this interest rate remains relevant for the Bureau of Reclamation projects and some “grandfathered” Corps projects, and thus Treasury continues to report it.

Authorized water supply storage space in projects completed or under construction prior to enactment of PL 99-662 (17 November 1986) are to utilize the rate as established in the 1958 Water Supply Act and are thus “grandfathered.” This rate is set at the time construction of the project was initiated. For FY 16 this rate is **4.673%**. While this “grandfathered” rate has no applicability for Corps projects after 1986, the following table shows the historic series.

FISCAL YEAR	INTEREST RATE	FISCAL YEAR	INTEREST RATE	FISCAL YEAR	INTEREST RATE
1959	2.670%	1980	7.250%	2000	8.542%
1960	2.699%	1981	8.605%	2001	8.469%
1961	2.632%	1982	9.352%	2002	8.315%
1962	2.742%	1983	10.051%	2003	8.270%
1963	2.936%	1984	10.403%	2004	8.209%
1964	3.046%	1985	10.898%	2005	8.077%
1965	3.137%	1986	11.070%	2006	7.892%
1966	3.222%	1987	10.693%	2007	7.652%
1967	3.225%	1988	10.371%	2008	7.457%
1968	3.253%	1989	10.250%	2009	7.095%
1969	3.256%	1990	10.075%	2010	6.568%
1970	3.342%	1991	9.920%	2011	6.081%
1971	3.463%	1992	9.737%	2012	5.769%
1972	3.502%	1993	9.503%	2013	5.357%
1973	3.649%	1994	9.319%	2014	5.101%
1974	4.012%	1995	9.226%	2015	4.934%
1975	4.371%	1996	9.134%	2016	4.673%
1976	5.116%	1997	9.012%		
1977	5.683%	1998	8.874%		
1978	6.063%	1999	8.703%		
1979	6.595%				

Hydropower Interest Rate for Fiscal Year 2016

Rate applicable to interest during construction, investment cost repayment, and capitalized O&M costs – 2.625%

This rate is determined by the Department of the Treasury under Secretarial Order RA 6120.2 Paragraph 11 (c) of the Secretary of Energy and Departmental Manual 730 DM 3, superseding Secretarial Order 2929 of the Secretary of the Interior. This rate shown has been adjusted to the nearest 1/8 of 1%.

The table below contains a historical series for the hydropower interest rate.

FISCAL YEAR	INTEREST RATE	FISCAL YEAR	INTEREST RATE
1973	5.500%	2000	5.750%
1974	6.625%	2001	6.250%
1975	6.125%	2002	5.625%
1976	6.625%	2003	5.500%
1977	7.000%	2004	4.875%
1978	7.000%	2005	5.125%
1979	7.500%	2006	4.625%
1980	8.000%	2007	4.875%
1981	8.500%	2008	4.875%
1982	9.000%	2009	4.500%
1983	9.500%	2010	4.000%
1984	10.750%	2011	4.125%
1985	12.375%	2012	4.000%
1986	11.375%	2013	2.750%
1987	8.875%	2014	3.000%
1988	8.500%	2015	3.375%
1989	9.250%	2016	2.625%
1990	8.875%		
1991	8.750%		
1992	8.500%		
1993	7.875%		
1994	7.125%		
1995	7.125%		
1996	7.625%		
1997	6.875%		
1998	6.875%		
1999	6.000%		

Delinquent Payment Collection Rate

Article XVI, ER 1165-2-131

Background - Paragraph a, Article XVI of [ER 1165-2-131](#) explains the procedures used to calculate the interest rate for delinquent payment collection, per the Water Resources Development Act of 1986, Section 912 (b) [42 USC 1962d5b note]. Review of this article indicated that the explanation of paragraph a, is not adequately clear for consistent determination of the rate. In addition, the paragraph suggests that the Secretary of the Treasury should determine the interest rate. After reviewing the article, the Department of Treasury has developed the following procedure for the calculation of interest rates.

Procedure - The interest rate used in the collection of delinquent payment under this Article will be equal to the equivalent coupon-issue yield for 13-week Treasury bills in the month immediately preceding the date that the payment became delinquent or auctioned immediately prior to the beginning of each additional three-month period if the delinquency exceeds three months. District offices may obtain the equivalent coupon-issue yield by the Office of Public Debt Accounting, Bureau of the Public Debt at (304) 480-5151. The rate obtained from this office will then be multiplied by 1.5 to determine the interest rate used for repayment of the delinquency. Questions concerning this procedure can be addressed to CECW-P staff as identified in the cover memo.
