

BP-16 Rate Proceeding

Power Revenue Requirement Study Documentation

BP-16-FS-BPA-02A

July 2015



Revenue Requirement Documentation

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COMMONLY USED ACRONYMS AND SHORT FORMS

ACNR	Accumulated Calibrated Net Revenue
ACS	Ancillary and Control Area Services
AF	Advance Funding
aMW	average megawatt(s)
ANR	Accumulated Net Revenues
ASC	Average System Cost
BAA	Balancing Authority Area
BiOp	Biological Opinion
BPA	Bonneville Power Administration
Btu	British thermal unit
CDQ	Contract Demand Quantity
CGS	Columbia Generating Station
CHWM	Contract High Water Mark
CIR	Capital Investment Review
COE	U.S. Army Corps of Engineers
COI	California-Oregon Intertie
Commission	Federal Energy Regulatory Commission
Corps	U.S. Army Corps of Engineers
COSA	Cost of Service Analysis
COU	consumer-owned utility
Council	Northwest Power and Conservation Council
CP	Coincidental Peak
CRAC	Cost Recovery Adjustment Clause
CSP	Customer System Peak
CT	combustion turbine
CY	calendar year (January through December)
DDC	Dividend Distribution Clause
<i>dec</i>	decrease, decrement, or decremental
DERBS	Dispatchable Energy Resource Balancing Service
DFS	Diurnal Flattening Service
DNR	Designated Network Resource
DOE	Department of Energy
DOI	Department of Interior
DSI	direct-service industrial customer or direct-service industry
DSO	Dispatcher Standing Order
EE	Energy Efficiency
EIS	Environmental Impact Statement
EN	Energy Northwest, Inc.
ESA	Endangered Species Act
ESS	Energy Shaping Service
e-Tag	electronic interchange transaction information
FBS	Federal base system
FCRPS	Federal Columbia River Power System
FCRTS	Federal Columbia River Transmission System

FELCC	firm energy load carrying capability
FORS	Forced Outage Reserve Service
FPS	Firm Power and Surplus Products and Services
FPT	Formula Power Transmission
FY	fiscal year (October through September)
G&A	general and administrative (costs)
GARD	Generation and Reserves Dispatch (computer model)
GMS	Grandfathered Generation Management Service
GSR	Generation Supplied Reactive
GRSPs	General Rate Schedule Provisions
GTA	General Transfer Agreement
GWh	gigawatthour
HLH	Heavy Load Hour(s)
HOSS	Hourly Operating and Scheduling Simulator (computer model)
HYDSIM	Hydrosystem Simulator (computer model)
IE	Eastern Intertie
IM	Montana Intertie
<i>inc</i>	increase, increment, or incremental
IOU	investor-owned utility
IP	Industrial Firm Power
IPR	Integrated Program Review
IR	Integration of Resources
IRD	Irrigation Rate Discount
IRM	Irrigation Rate Mitigation
IRMP	Irrigation Rate Mitigation Product
IS	Southern Intertie
kcfs	thousand cubic feet per second
kW	kilowatt
kWh	kilowatthour
LDD	Low Density Discount
LLH	Light Load Hour(s)
LPP	Large Project Program
LPTAC	Large Project Targeted Adjustment Charge
Maf	million acre-feet
Mid-C	Mid-Columbia
MMBtu	million British thermal units
MRNR	Minimum Required Net Revenue
MW	megawatt
MWh	megawatthour
NCP	Non-Coincidental Peak
NEPA	National Environmental Policy Act
NERC	North American Electric Reliability Corporation
NFB	National Marine Fisheries Service (NMFS) Federal Columbia River Power System (FCRPS) Biological Opinion (BiOp)
NIFC	Northwest Infrastructure Financing Corporation
NLSL	New Large Single Load

NMFS	National Marine Fisheries Service
NOAA Fisheries	National Oceanographic and Atmospheric Administration Fisheries
NORM	Non-Operating Risk Model (computer model)
Northwest Power Act	Pacific Northwest Electric Power Planning and Conservation Act
NP-15	North of Path 15
NPCC	Pacific Northwest Electric Power and Conservation Planning Council
NPV	net present value
NR	New Resource Firm Power
NRFS	NR Resource Flattening Service
NT	Network Integration
NTSA	Non-Treaty Storage Agreement
NUG	non-utility generation
NWPP	Northwest Power Pool
OATT	Open Access Transmission Tariff
O&M	operation and maintenance
OATI	Open Access Technology International, Inc.
OMP	Oversupply Management Protocol
OS	Oversupply
OY	operating year (August through July)
PDCI	Pacific DC Intertie
Peak	Peak Reliability
PF	Priority Firm Power
PFIA	Projects Funded in Advance
PFp	Priority Firm Public
PFx	Priority Firm Exchange
PNCA	Pacific Northwest Coordination Agreement
PNRR	Planned Net Revenues for Risk
PNW	Pacific Northwest
POD	Point of Delivery
POI	Point of Integration or Point of Interconnection
POR	Point of Receipt
Project Act	Bonneville Project Act
PRS	Power Rates Study
PS	Power Services
PSC	power sales contract
PSW	Pacific Southwest
PTP	Point to Point
PUD	public or people's utility district
PW	WECC and Peak Service
RAM	Rate Analysis Model (computer model)
RD	Regional Dialogue
REC	Renewable Energy Certificate
Reclamation	U.S. Bureau of Reclamation
REP	Residential Exchange Program
REPSIA	REP Settlement Implementation Agreement

RevSim	Revenue Simulation Model
RFA	Revenue Forecast Application (database)
RHWM	Rate Period High Water Mark
ROD	Record of Decision
RPSA	Residential Purchase and Sale Agreement
RR	Resource Replacement
RRS	Resource Remarketing Service
RSC	Resource Shaping Charge
RSS	Resource Support Services
RT1SC	RHWM Tier 1 System Capability
SCD	Scheduling, System Control, and Dispatch rate
SCS	Secondary Crediting Service
SDD	Short Distance Discount
SILS	Southeast Idaho Load Service
Slice	Slice of the System (product)
T1SFCO	Tier 1 System Firm Critical Output
TCMS	Transmission Curtailment Management Service
TGT	Townsend-Garrison Transmission
TOCA	Tier 1 Cost Allocator
TPP	Treasury Payment Probability
TRAM	Transmission Risk Analysis Model
Transmission System Act	Federal Columbia River Transmission System Act
Treaty	Columbia River Treaty
TRL	Total Retail Load
TRM	Tiered Rate Methodology
TS	Transmission Services
TSS	Transmission Scheduling Service
UAI	Unauthorized Increase
UFT	Use of Facilities Transmission
UIC	Unauthorized Increase Charge
ULS	Unanticipated Load Service
USACE	U.S. Army Corps of Engineers
USBR	U.S. Bureau of Reclamation
USFWS	U.S. Fish & Wildlife Service
VERBS	Variable Energy Resources Balancing Service
VOR	Value of Reserves
VR1-2014	First Vintage Rate of the BP-14 rate period (PF Tier 2 rate)
VR1-2016	First Vintage Rate of the BP-16 rate period (PF Tier 2 rate)
WECC	Western Electricity Coordinating Council
WSPP	Western Systems Power Pool

1. GENERATION REVENUE REQUIREMENTS

1.1 Introduction

This chapter documents how Bonneville Power Administration's (BPA) annual generation revenue requirements are determined. Two tables are presented for each year of the rate period (FY 2016-2017). On the first table, revenue requirements for FY 2016-2017 are projected in an income statement format. The second table, a statement of annual cash flows, determines the minimum required net revenues and presents the annual cash flows available for risk mitigation. These revenue requirements form the basis of the program.

1.2 Income Statement

Below is a line-by-line description of the components in the Table 1A, Income Statement

Power System Generation Resources (Line 2). This category encompasses the costs associated with power generated by Federal hydroelectric facilities operated by the Corps and Reclamation and power obtained through contracts for non-Federal resources and through energy conservation. This category includes lines 3 through 10, described below. *See* Documentation, BP-16-FS-BPA-02A, Chapter 3.

Operating Generation Resources (Line 3). This category includes the operations and maintenance expenses associated with power-producing resources including the CGS, Reclamation, and Corps, and the annual expenses associated with long-term contract generating projects. *Id.*

Operating Generation Settlement Payments (Line 4). A settlement agreement between the Confederated Tribes of the Colville Reservation and the United States was signed in 2004 concerning the construction of Grand Coulee Dam. The Settlement Act (Public Law 103-436) ratifying the settlement agreement authorizes BPA to make annual payments to the Tribes for the use of tribal lands for power production at the Columbia Basin project. *Id.*

Non-Operating Generation (Line 5). This category includes the decommissioning costs of the Trojan nuclear plant and the unfinished WNP-1 and WNP-3 nuclear plants. *Id.*

Contracted Power Purchases (Line 6). This category includes short-term (balancing) power purchases and hedging/mitigation. *Id.*

Augmentation Power Purchases (Line 7). This category includes augmentation power purchases and the PNCA headwater benefit. Augmentation power purchase costs reflect the energy that BPA purchases in order to satisfy its obligation to meet the load requirements for public utilities. The PNCA headwater benefit refers to the costs associated with benefits BPA receives from storage projects in Canada. *Id.*

Exchanges and Settlements (Line 8). This category represents the benefits for qualifying public utilities and IOUs that are calculated as part of the Residential Exchange Program. *Id.*

Renewable Generation (Line 9). This category reflects the operating expenses of several generating projects fueled by renewable energy resources, such as wind, geothermal, methane gas, solar, and “fish-friendly small hydro projects.” *Id.*

Generation Conservation (Line 10). This category includes the cost of conservation programs including Marketing Development, which are reimbursable contracts with equal and offsetting revenues; Market Transformation; Legacy Conservation programs; Technology Leadership; and Low-Income Weatherization. *Id.*

Power Non-Generation Operations (Line 11). This category reflects Power Services’ internal costs associated with supporting the power function. It includes the costs of activities such as generation oversight, weather and stream flow forecasting, system operations planning, schedule planning, pre-scheduling, after-the-fact accounting of power transactions, power billing, customer account executives and customer service support staff, development and administration of power sales contracts, PS strategy development, PS financial reporting, analysis and budgeting, risk management, and PS human resources management. *Id.*

PS Transmission Acquisition and Ancillary Services (Line 12). This category includes the annual expenses associated with Power Services’ Transmission Acquisition program. It represents costs associated with services necessary to deliver energy from resources to markets or loads. This includes transmission, ancillary services, and real power losses, as purchased from BPA's Transmission Services business unit (TS) or non-Federal entities; TS embedded costs for the facilities that integrate power from Corps and Reclamation projects onto the transmission system; and metering and communication requirements. *Id.*

F&W/USF&W/Planning Council/Environmental Requirements (Line 13). BPA funds projects designed to protect, mitigate and enhance fish and wildlife affected by the FCRPS in a manner consistent with the NPCC Columbia River Basin Fish and Wildlife Program, and to implement commitments made pursuant to Biological Opinions (BiOps) issued by NOAA Fisheries and the U.S. Fish and Wildlife Service regarding species listed under the Endangered Species Act. This line item includes the expense portion of BPA’s Fish and Wildlife direct program, including staff costs and operating expenses of fish and wildlife activities. These activities include measures to implement the fish and wildlife mitigation consistent with the NPCC Fish and Wildlife Program as well BiOps issued by the NOAA Fisheries for listed salmon and steelhead and the U.S. Fish and Wildlife Service for listed bull trout and sturgeon. *Id.*

General and Administrative/Shared Services (Line 14). This category represents the allocated portion of BPA’s Corporate General and Administrative costs, which are allocated to the business lines. Major functions besides the Executive Office are Corporate Communication, Finance, Diversity, and Safety. This category includes costs for the Civil Service Retirement System (CSRS) expense; information technology services; infrastructure and maintenance; building rent, maintenance and security; mail services; personnel services; library and printing services; internal training; purchasing; and furniture. CSRS reflects the costs for the unfunded liability of the Civil Service Retirement and Disability Fund, the Employees Health Benefit Fund, and the Employees Life Insurance Fund. *Id.*

Other Income, Expenses, and Adjustments (Line 15). This category would include costs for items that do not fit in any other category. For this proposal, it includes an undistributed expense reduction identified in the IPR, an undistributed reduction for potential non-Federal debt extension, and the use of cash freed up by refinancing certain non-Federal debt to offset the expensing of energy efficiency investments.. *Id.*, Chapter 3, Tables 3A and 3H

Non-Federal Debt Service (Line 16). This category consists of third-party debt service or payment costs associated with capitalized contracts and other long-term, fixed contractual obligations. Debt service costs associated with EN projects (WNP-1, CGS, and WNP-3) make up the majority of these costs. *Id.*, Chapter 8

Depreciation (Line 17). Depreciation is the annual capital recovery expense associated with FCRPS plant-in-service. Reclamation and Corps (including Lower Snake River Fish and Wildlife Compensation Plan (LSRCP)) plant, including assets for fish and wildlife recovery, is depreciated by the straight-line method of calculation, using the composite service life of all projects, 75 years. Capital equipment (office furniture and fixtures, data processing hardware and software, and communications equipment) is also depreciated by the straight-line method using the average service lives for the particular categories of capital investment. *Id.*, Chapter 4.

Amortization (Line 18). Amortization is the annual capital recovery expense associated with non-revenue-producing assets. Conservation acquisition investments beginning in FY 2011 are amortized using a straight-line, twelve-year life. Beginning in 2016, BPA will expense rather than capitalize such investments *Id.*

Total Operating Expenses (Line 19). Total Operating Expenses is the sum of the above expenses (Lines 2 through 18).

Interest on Appropriated Funds (Line 23). Interest on Appropriated Funds includes interest on Corps and Reclamation appropriations, as calculated in the generation repayment studies. *Id.*, Chapters 4 and 6. *Id.*, Chapter 3.

Capitalization Adjustment (Line 24). Implementation of the Refinancing Act entailed a change in capitalization on BPA's financial statements. Outstanding appropriations were reduced as a result of the refinancing by \$2,142 million in the generation function. The reduction is recognized annually over the remaining repayment period of the refinanced appropriations. The annual recognition of this adjustment is based on the increase in annual interest expense resulting from implementation of the Refinancing Act, as shown in repayment studies for the year of the refinancing transaction (1997). The capitalization adjustment is included on the income statement as a non-cash contra-expense. *Id.*

Interest on Bonds Issued to U.S. Treasury (Line 25). Interest on long-term debt includes interest on bonds that BPA issues to the U.S. Treasury to fund investments in capital equipment, conservation, and fish and wildlife, and to fund Reclamation and Corps investments under the Energy Policy Act of 1992 (EPA-92) (P.L. No. 102-486, 1992 U.S. Code Cong. & Admin. News, 106 Stat. 2776). The interest expense is calculated in the generation repayment studies. Any payments of call premiums for bonds projected to be amortized are included in this line. *Id.*

Amortization of Capitalized Bond Premiums (Line 26). When a bond issued to the U.S. Treasury is refinanced, any call premium resulting from early retirement of the original bond is capitalized and included in the principal of the new bond. The capitalized call premium is then amortized over the term of the new bond. The annual amortization is a non-cash component of interest expense. No capitalized bond premiums are anticipated in the rate period.

Non-Federal Interest (Line 27). This line recognizes the interest component of the annual credits associated with the prepay program. *Id.*

Allowance for Funds Used During Construction (AFUDC) (Line 28). AFUDC is a credit against interest costs on long-term debt (Line 20). This reduction to gross interest reflects an estimate of interest on the funds used during the construction period of facilities that have yet to be placed in service. AFUDC is capitalized along with other construction costs and is recovered through rates over the expected service life of the related plant as part of the depreciation expense after the facilities are placed in service. AFUDC, which is calculated outside the generation repayment studies, is associated with the Corps and Reclamation capital investments direct-funded by BPA, and BPA capital equipment. *Id.*

Interest Credit on Cash Reserves (Line 29). An interest income credit is also computed on the projected year-end cash balance in the BPA fund attributable to Power Services that carries over into the next year. Also included is an interest income credit calculated in the generation repayment studies on funds to be collected during each year for payments of Federal interest and amortization at the end of the fiscal year. Interest income is credited against bond interest. *Id.*, Chapter 5.

Net Interest Expense (Line 30). Net Interest Expense is computed as the sum of Interest on Appropriated Funds (Line 22), Capitalization Adjustment (Line 23), Interest on Bonds Issued to U.S. Treasury (Line 24), Amortization of Capitalized Bond Premiums (Line 25), AFUDC (Line 26), and Interest Credit (Line 27).

Total Expenses (Line 31). Total Expenses are the sum of Total Operating Expenses (Line 19) and Net Interest Expense (Line 30).

Minimum Required Net Revenues (Line 34). MRNR, an input from Line 2 of the Statement of Cash Flows (Table 1B), may be necessary to cover cash requirements in excess of accrued expenses.

Planned Net Revenues for Risk (PNRR) (Line 35). PNRR are the amount of net revenues to be included in rates for financial risk mitigation. PNRR, starting reserves, the cash-flow when non-cash expenses exceed cash payments, the CRAC, and other risk mitigation tools are available to mitigate risk in FY 2016-2017, as discussed in the Power Risk and Market Price Study, BP-16-FS-BPA-03.

Planned Net Revenues, Total (Line 36). Planned Net Revenues is the sum of Minimum Required Net Revenues (Line 34) and PNRR (Line 35).

Total Revenue Requirement (Line 38). Total Revenue Requirement is the sum of Total Expenses (Line 32) and Total Planned Net Revenues (Line 36).

1.3 Statement of Cash Flows

Below is a line-by-line description of each of the components in the Table 1B, Statement of Cash Flows.

Minimum Required Net Revenues (Line 2). Determination of this line is a result of annual cash inflows and outflows shown on the Statement of Cash Flows. MRNR may be necessary so that the cash provided from operating activities will be sufficient to cover the planned amortization and irrigation assistance payments without causing the Annual Increase (Decrease) in Cash (Line 21) to be negative. The MRNR amount determined in the Statement of Cash Flows is incorporated in the Income Statement (Line 31).

Non-Federal Interest (Line 4). The interest component of the prepay credits is a non-cash item.

Depreciation and Amortization (Line 5). Depreciation and Amortization are from the Income Statement (Table 1A), lines 17 and 18 respectively. They are included in computing Cash Provided By Operating Activities (Line 9) because they are non-cash expenses of the FCRPS.

Amortization of Capitalized Bond Premiums (Line 6). Amortization of capitalized bond premiums is from the Income Statement (Table 1A, line 26). It is included in computing Cash Provided By Operating Activities (Line 9) because it is a non-cash expense of the FCRPS.

Capitalization Adjustment (Line 7). Capitalization Adjustment is from the Income Statement (Table 1A, Line 24). It is a non-cash contra-expense.

Non-Cash Revenues (Line 8). Revenues are associated with settlement agreements reached in prior periods as well as the credits associated with the prepay program. The annual non-cash revenues, which are part of the total revenues recovering the FCRPS revenue requirement, are included here as an adjustment to cash from current operations.

Cash Provided By Operating Activities (Line 9). Cash Provided By Current Operations, the sum of Lines 2, 4, 5, 6, 7, and 8, is available for the year to satisfy cash requirements.

Investment in Federal Utility Plant (Including AFUDC) (Line 13). Investment in Utility Plant represents the annual increase in additions to appropriated plant-in-service and to capital expenditures for COE, Reclamation, and BPA construction work-in-progress funded by bonds.

Investment in Conservation (Line 14). Investment in Conservation represents the annual increase in capital expenditures associated with Conservation programs.

Investment in Fish and Wildlife (Line 15). Investment in Fish and Wildlife represents the annual increase in BPA's capital expenditures to fund projects for the protection, mitigation, and

enhancement of fish and wildlife affected by the FCRPS in a manner consistent with the NPCC's Columbia River Basin Fish and Wildlife Program and the BiOp issued by NMFS and USFWS.

Cash Used for Investment Activities (Line 16). Cash Used for Investment Activities is the sum of Lines 13, 14, and 15.

Increase in Treasury Borrowings (Line 19). This category reflects the new bonds issued by BPA to the U.S. Treasury to fund capital equipment, conservation, and fish and wildlife capital programs and to direct-fund Reclamation and COE investments under the EPA-92. *Id.*, Chapter 7.

Repayment of Treasury Borrowings (Line 20). This is BPA's planned repayment of outstanding bonds issued by BPA to the U.S. Treasury as determined in the generation repayment studies. *Id.*, Chapter 6.

Increase in Federal Construction Appropriations (Line 21). Increase in Congressional Capital Appropriations represents congressional appropriations projected to be received during the year for COE and Reclamation capital projects. *Id.*, Chapter 4.

Repayment of Federal Construction Appropriations (Line 22). Repayment of Capital Appropriations represents projected amortization of outstanding COE and Reclamation appropriations as determined in the generation repayment studies. *Id.*, Chapter 6.

Customer Proceeds (Line 23). The prepay funds are a source of cash for capital investment. This line recognizes the drawdown of prepay funds as they are used to finance capital investments. *See* Chapter 3.

Payment of Irrigation Assistance (Line 24). Payment of Irrigation Assistance represents the payment of appropriated capital construction costs of Reclamation irrigation facilities that have been determined to be beyond the ability of the irrigators to pay and allocated to generation revenues for repayment. *Id.*, Chapter 9.

Cash Provided by Borrowing and Appropriations (Line 25). Cash Provided by Borrowing and Appropriations is the sum of Lines 19 through 24. This is the net cash-flow resulting from increases in cash from new long-term debt and capital appropriations and decreases in cash from repayment of long-term debt and capital appropriations.

Annual Increase (Decrease) in Cash (Line 27). Annual Increase (Decrease) in Cash is the sum of Lines 8, 14, and 22 and reflects the annual net cash-flow from current operations and investing and financing activities. Revenue requirements are set to meet all projected annual cash-flow requirements, as included on the Statement of Cash Flows. A decrease shown in this line would indicate that annual revenues would be insufficient to cover the year's cash requirements. In such cases, Minimum Required Net Revenues are included to offset such decrease.

Planned Net Revenues for Risk (PNRR) (Line 29). PNRR reflects the amounts included in revenue requirements to meet BPA's risk mitigation objectives from Table 1A, Line 35.

Total Annual Increase (Decrease) in Cash (Line 31). Total Annual Increase (Decrease) in Cash is the sum of Lines 23 and 24. It is the total annual cash that is projected to be available to add to BPA's cash reserves.

Table 1A

**GENERATION REVENUE REQUIREMENT
INCOME STATEMENT
(\$000s)**

	A	B
	<u>2016</u>	<u>2017</u>
1 OPERATING EXPENSES		
2 POWER SYSTEM GENERATION RESOURCES		
3 OPERATING GENERATION RESOURCES	685,954	748,609
4 OPERATING GENERATION SETTLEMENT PAYMENTS	19,323	19,651
5 NON-OPERATING GENERATION	1,600	1,863
6 CONTRACTED POWER PURCHASES	48,400	81,843
7 AUGMENTATION POWER PURCHASES	0	20,947
8 EXCHANGES & SETTLEMENTS	295,513	295,540
9 RENEWABLE GENERATION	40,987	41,641
10 GENERATION CONSERVATION	136,649	131,665
11 POWER NON-GENERATION OPERATIONS	96,542	99,836
12 PS TRANSMISSION ACQUISITION AND ANCILLARY SERVICES	186,998	195,831
13 F&W/USF&W/PLANNING COUNCIL	310,539	318,395
14 GENERAL AND ADMINISTRATIVE/SHARED SERVICES	72,281	74,646
15 OTHER INCOME, EXPENSES AND ADJUSTMENTS	(97,577)	(129,463)
16 NON-FEDERAL DEBT SERVICE	594,308	594,839
17 DEPRECIATION	140,201	143,468
18 AMORTIZATION	<u>82,350</u>	<u>85,034</u>
19 TOTAL OPERATING EXPENSES	2,614,069	2,724,346
20		
21 INTEREST EXPENSE:		
22 INTEREST		
23 APPROPRIATED FUNDS	189,757	186,051
24 CAPITALIZATION ADJUSTMENT	(45,937)	(45,937)
25 BONDS ISSUED TO U.S. TREASURY	56,935	69,299
26 AMORTIZATION OF CAPITALIZED BOND PREMIUMS	0	0
27 NON-FEDERAL INTEREST	13,273	12,469
28 ALLOWANCE FOR FUNDS USED DURING CONSTRUCTION	(10,731)	(11,360)
29 INTEREST CREDIT ON CASH RESERVES	(11,542)	(18,320)
30 NET INTEREST EXPENSE	191,755	192,202
31		
32 TOTAL EXPENSES	2,805,824	2,916,547
33		
34 MINIMUM REQUIRED NET REVENUE 1/	-	0
35 PLANNED NET REVENUE FOR RISK	-	-
36 PLANNED NET REVENUE, TOTAL (30+31)	-	0
37		
38 TOTAL REVENUE REQUIREMENT	2,805,824	2,916,548

1/ SEE NOTE ON TABLE 1B

Table 1B

**GENERATION REVENUE REQUIREMENT
STATEMENT OF CASH FLOWS
(\$000s)**

	<u>A</u>	<u>B</u>
	2016	2017
1 CASH FROM OPERATING ACTIVITIES		
2 MINIMUM REQUIRED NET REVENUE 1/	0	0
3 NON-CASH ITEMS:		
4 NON-FEDERAL INTEREST	13,273	12,469
5 DEPRECIATION AND AMORTIZATION	222,551	228,502
6 AMORTIZATION OF CAPITALIZED BOND PREMIUMS	0	0
7 CAPITALIZATION ADJUSTMENT	(45,937)	(45,937)
8 NON-CASH REVENUES	(34,124)	(34,124)
9 CASH PROVIDED BY OPERATING ACTIVITIES	155,763	160,911
10		
11 CASH FROM INVESTMENT ACTIVITIES		
12 INVESTMENT IN:		
13 UTILITY PLANT (INCLUDING AFUDC)	(211,153)	(403,151)
14 ENERGY EFFICIENCY	0	0
15 FISH & WILDLIFE	(55,000)	(50,000)
16 CASH USED FOR INVESTMENT ACTIVITIES	(266,153)	(453,151)
17		
18 CASH FROM BORROWING AND APPROPRIATIONS:		
19 INCREASE IN BONDS ISSUED TO U.S. TREASURY	150,494	323,700
20 REPAYMENT OF BONDS ISSUED TO U.S. TREASURY	(10,500)	(35,150)
21 INCREASE IN FEDERAL CONSTRUCTION APPROPRIATIONS	52,353	129,451
22 REPAYMENT OF FEDERAL CONSTRUCTION APPROPRIATIONS	(84,197)	(74,279)
23 CUSTOMER PROCEEDS	63,306	0
24 PAYMENT OF IRRIGATION ASSISTANCE	(61,066)	(51,482)
25 CASH PROVIDED BY BORROWING AND APPROPRIATIONS	110,390	292,241
26		
27 ANNUAL INCREASE (DECREASE) IN CASH	0	0
28		
29 PLANNED NET REVENUE FOR RISK	0	0
30		
31 TOTAL ANNUAL INCREASE (DECREASE) IN CASH	0	0

1/ Line 26 must be greater than or equal to zero to indicate that cash cost recovery requirements are being achieved. If not, net revenues (MRNR) are added so that net cash flows for the year (Line 21) are zero.

2. COST ANALYSES

2.1 Introduction

This chapter documents the development of the costs necessary for ratemaking from the annual generation revenue requirements. For Cost of Service Analysis (COSA), net interest expense and planned net revenues are assigned to each Federal Columbia River Power System (FCRPS) resource pool according to the necessary level of detail. The interbusiness unit embedded costs, generation inputs to ancillary services, synchronous condensing and Corps and Reclamation transmission, are developed from the COSA data.

Data development for the COSA and interbusiness unit embedded costs are derived from the annual costs identified in Table 1A - Generation Income Statement. For the COSA, net interest expenses and planned net revenues, which are first split between Federal hydro projects and the remainder of generation by the use of equivalent annual costs (defined below). The generation portions are then divided between Fish & Wildlife, Conservation and BPA generation programs based on average net investment. These allocations, in turn, form the basis for the association of net interest expenses and MRNR with the interbusiness unit embedded costs.

2.2 Annual Capital-Related Cost Components of COSA Resource Pools

Equivalent Annual Costs: Equivalent annual costs are used to prorate net interest expense and planned net revenues between Federal Hydro and the remainder of generation. They compensate for the differences in Federal Hydro of a 75-year service life, but a 50-year repayment period, whereas the other capital areas have the same service lives and repayment periods.

Consequently, net investment, the typical allocator, is distorted for Hydro. Equivalent annual costs are calculated as levelized principal and interest payments (mortgage basis) using gross plant investment and projected additions. A weighted average interest rate is used for the historical plant and projected interest rates are used for additions. The prorating is based on the sum of all calculated proxy-payments for Corps and Reclamation (Federal Hydro), and BPA plant, BPA fish and wildlife investment and all BPA conservation investments (all other generation). The non-Hydro portion is then allocated based on average net plant investment.

2.3 Interbusiness Unit Embedded Costs

All tables related to the development of interbusiness unit costs have been deleted because generation inputs rates were settled and did not depend on these embedded costs as would be typical if the rates were contested.

Table 2A

Generation Revenue Requirements by Resource Pool
PROGRAM CASE
(\$000s)

FY 2016	A	B	C		D	E	F
	<u>Investment Base</u>	<u>Net Interest</u>	<u>Net Revenues</u>		<u>COE/USBR</u>	<u>All Other</u>	<u>Total Generation</u>
1. GENERATION COSTS							
2. FEDERAL BASE SYSTEM				Equivalent Annual Costs	548,931	113,050	661,982
3. HYDRO		159,008	0	Percent	83%	17%	100%
4. FISH AND WILDLIFE	299,800	14,239	0				
5. TROJAN				Net Interest Expense	159,008	32,747	191,755
6. WNP #1							
7. CGS				Planned Net Revenues	-	-	-
8. WNP #3							
9. SYSTEM AUGMENTATION							
10. BALANCING POWER PURCHASES							
11. TOTAL FEDERAL BASE SYSTEM	299,800	173,247	0				
12. NEW RESOURCES							
13. IDAHO FALLS							
14. COWLITZ FALLS							
15. OTHER LONG-TERM POWER PURCHASES							
16. TOTAL NEW RESOURCES							
17. RESIDENTIAL EXCHANGE							
18. CONSERVATION	349,181	16,583	0				
19. OTHER GENERATION COSTS							
20. BPA PROGRAMS	40,542	1,925	0				
21. WNP #3 PLANT							
22. TOTAL OTHER GENERATION COSTS	40,542	1,925	0				
23. TOTAL GENERATION COSTS	689,523	191,755	0				
24. TRANSMISSION COSTS							
25. TBL TRANSMISSION/ANCILLARY SERVICES							
26. 3RD PARTY TRANS/ANCILLARY SERVICES							
27. GENERAL TRANSFER AGREEMENTS							
28. TOTAL TRANSMISSION COSTS							
29. TOTAL PBL REVENUE REQUIREMENT		191,755	0				

Table 2A

Generation Revenue Requirements by Resource Pool
PROGRAM CASE
(\$000s)

FY 2017

	A	B	C		D	E	F
	<u>Investment</u> <u>Base</u>	<u>Net</u> <u>Interest</u>	<u>Net</u> <u>Revenues</u>		<u>Hydro</u>	<u>All Other</u>	<u>Total</u> <u>Generation</u>
1. GENERATION COSTS							
2. FEDERAL BASE SYSTEM				Equivalent Annual Costs	563,105	115,193	678,298
3. HYDRO		159,561	0	Percent	83%	17%	100%
4. FISH AND WILDLIFE	308,118	15,559	0				
5. TROJAN				Net Interest Expense	159,561	32,641	192,202
6. WNP #1							
7. CGS				Planned Net Revenues	-	-	-
8. WNP #3							
9. SYSTEM AUGMENTATION							
10. BALANCING POWER PURCHASES							
11. TOTAL FEDERAL BASE SYSTEM	308,118	175,120	0				
12. NEW RESOURCES							
13. IDAHO FALLS							
14. COWLITZ FALLS							
15. OTHER LONG-TERM POWER PURCHASES							
16. TOTAL NEW RESOURCES							
17. RESIDENTIAL EXCHANGE							
18. CONSERVATION	309,385	15,623	0				
19. OTHER GENERATION COSTS							
20. BPA PROGRAMS	28,892	1,459	0				
21. WNP #3 PLANT							
22. TOTAL OTHER GENERATION COSTS	28892	1,459	0				
23. TOTAL GENERATION COSTS	646,395	192,202	0				
24. TRANSMISSION COSTS							
25. TBL TRANSMISSION/ANCILLARY SERVICES							
26. 3RD PARTY TRANS/ANCILLARY SERVICES							
27. GENERAL TRANSFER AGREEMENTS							
28. TOTAL TRANSMISSION COSTS							
29. TOTAL PBL REVENUE REQUIREMENT		192,202	0				

Table 2B

Equivalent Annual Costs
(\$000s)

	A	B	C	D	E	F	G
	<u>AVG LIFE</u>	<u>COMP PLANT 9/30/2016</u>	<u>WT AV INT RATE</u>	<u>2014 EQ ANN COSTS</u>	<u>COMP PLANT 9/30/2017</u>	<u>WT AV INT RATE</u>	<u>2015 EQ ANN COSTS</u>
1 Corps of Engineers/Bureau of Reclamation	50	9,847,593	5.11%	\$548,931	10,209,414	5.04%	\$563,105
2 BPA F&W							
3 PBL General Plant	15	523,037	3.37%	44,997	547,696	3.50%	47,567
4 CONSERVATION	6	123,843	1.62%	21,859	132,283	1.84%	21,474
5 Sub-Total	13	477,532	0	46,194	477,532	0	46,152
				113,050			115,193
	<u>WTD LIFE</u>	<u>INV. BASE AS OF 9/30/2014</u>	<u>ANNUAL DEPR/AMORT</u>	<u>AVG LIFE</u>	<u>INV. BASE AS OF 9/30/2015</u>	<u>ANNUAL DEPR/AMORT</u>	
6 OFFICE FURNITURE & FIXTURES							
7 DATA PROCESSING EQUIPMENT							
8 DATA PROCESSING SOFTWARE							
9 TOTAL GENERAL PLANT - PBL CONSERVATION	6	123,843	20,670	7	132,283	20,048	
10 LEGACY							
11 CONAUG							
12 CONSERVATION ACQUISITION							
13 TOTAL CONSERVATION	12	477,532	39,795	12	477,532	39,795	

3. GENERATION EXPENSES

3.1 Introduction

This chapter compiles the expenses that are the basis for cost recovery in determination of generation revenue requirements for the rate approval period and the outyears.

3.2 Expenses

Table 3A displays the expenses used in the revenue requirement income statement and statement of cash flows of the Study. Revenue Requirement Study, BP-16-FS-BPA-02, Tables 4 and 5.

O&M program expenses are from the Integrated Program Review with revisions. *Id.* Federal Projects Depreciation calculations are found in Chapter 4 of this document. Interest expense is summarized here from the results of the annual generation repayment studies. The calculation of AFUDC is also shown in this chapter.

Debt service for Energy Northwest (EN) projects are based on the tables found in Chapter 8, Capitalized Contract Obligations, of this document.

Corps and Reclamation O&M must be functionalized between generation and the transmission component that will be included in transmission rates.

Depreciation expense, calculated using the straight-line method, is functionalized according to the associated investment used in the calculations as identified in Chapter 4 of this document.

Interest expense is calculated in the repayment studies for generation using the generation capital appropriations and BPA revenue bonds issued to Treasury at individual interest rates. Generation AFUDC is associated with BPA's direct funding of Corps and Reclamation power-related capital projects.

Table 3A

**Power Services Program Spending Levels
(\$000s)**

	A	B
	Rate Period	
	<u>2016</u>	<u>2017</u>
1 Power System Generation Resources		
2 Operating Generation		
3 COLUMBIA GENERATING STATION	262,948	322,473
4 BUREAU OF RECLAMATION	156,818	158,121
5 CORPS OF ENGINEERS	243,885	250,981
6 LONG-TERM CONTRACT GENERATING PROJECTS	<u>22,303</u>	<u>17,034</u>
7 Sub-Total	685,954	748,609
8 Operating Generation Settlements and Other Payments		
9 COLVILLE GENERATION SETTLEMENT	19,323	19,651
10 SPOKANE LEGISLATION PAYMENT	<u>0</u>	<u>0</u>
11 Sub-Total	19,323	19,651
12 Non-Operating Generation		
13 TROJAN DECOMMISSIONING	800	800
14 WNP-1&3 DECOMMISSIONING	<u>800</u>	<u>1,063</u>
15 Sub-Total	1,600	1,863
16 Gross Contracted Power Purchases (excluding bookout adjustments) <Note 1		
17 DSI MONETIZED POWER SALES	0	0
18 PNCA HEADWATER BENEFITS	3,000	3,000
19 HEDGING/MITIGATION	8,711	38,438
20 OTHER POWER PURCHASES - (e.g. Short-Term)	14,631	13,823
21 TIER 2 PURCHASES	<u>22,058</u>	<u>26,582</u>
22 Sub-Total	48,400	81,843
23 Bookout Adjustments to Contracted Power Purchases <Note 1	0	0
24 Augmentation Power Purchases (includes IOU Load Reduc. and Buy Backs)		
25 AUGMENTATION POWER PURCHASES	-	20,947
26 CONSERVATION AUGMENTATION	<u>0</u>	<u>0</u>
27 Sub-Total	-	20,947
28 Exchanges & Settlements		
29 RESIDENTIAL EXCHANGE PROGRAM	295,513	295,540
31 OTHER SETTLEMENTS	<u>0</u>	<u>0</u>
32 Sub-Total	295,513	295,540
33 Renewable Generation		
34 RENEWABLES	<u>40,987</u>	<u>41,641</u>
36 Sub-Total	40,987	41,641
37 Generation Conservation		
38 LEGACY	605	605
39 MARKET TRANSFORMATION	12,531	12,691
40 ENERGY EFFICIENCY DEVELOPMENT	15,000	7,000
41 LOW INCOME WEATHERIZATION & TRIBAL	5,336	5,422
42 CONSERVATION ACQUISITION	101,932	104,702
43 DR & SMART GRID	<u>1,245</u>	<u>1,245</u>
44 Sub-Total	<u>136,649</u>	<u>131,665</u>
45 Power System Generation Sub-Total	1,228,426	1,341,759

Table 3A

Power Services Program Spending Levels
(\$000s)

	A	B
	Rate Period	
	<u>2016</u>	<u>2017</u>
46		
47	Power Non-Generation Operations	
48	Power Services System Operations	
49	INFORMATION TECHNOLOGY	5,805 5,910
50	GENERATION PROJECT COORDINATION	7,735 7,845
51	SLICE IMPLEMENTATION	<u>1,101</u> <u>1,131</u>
52	Sub-Total	14,642 14,886
53	Power Services Scheduling	
54	OPERATIONS SCHEDULING	10,307 10,496
55	OPERATIONS PLANNING	<u>7,100</u> <u>7,255</u>
56	Sub-Total	17,406 17,751
57	Power Services Marketing and Business Support	
58	POWER R&D	6,033 6,046
59	SALES & SUPPORT	22,139 24,854
60	STRATEGY, FINANCE & RISK MGMT	22,538 22,166
61	EXECUTIVE AND ADMINISTRATIVE SERVICES	4,326 4,402
62	CONSERVATION SUPPORT	<u>9,456</u> <u>9,731</u>
63	Sub-Total	64,494 67,199
64	Power Non-Generation Operations Sub-Total	96,542 99,836
65		
66	Power Services Transmission Acquisition and Ancillary Services	
67	PBL Transmission Acquisition and Ancillary Services	
68	POWER SERVICES TRANSMISSION & ANCILLARY SERVICES	108,908 104,808
69	3RD PARTY GTA WHEELING	63,567 76,521
70	POWER SERVICES - 3RD PARTY TRANS & ANCILLARY SVCS	2,381 2,428
71	GENERATION INTEGRATION / TS WIT	<u>12,142</u> <u>12,074</u>
72	Power Svcs Trans Acquisition and Ancillary Services Sub-Total	186,998 195,831
73		
74		
75	Fish and Wildlife/USF&W/Planning Council/Environmental Req	
76	BPA Fish and Wildlife (includes F&W Shared Services)	
77	Fish & Wildlife	267,000 274,000
78	USF&W Lower Snake Hatcheries	32,303 32,949
79	Planning Council	<u>11,236</u> <u>11,446</u>
80	Fish and Wildlife/USF&W/Planning Council Sub-Total	310,539 318,395
81		
82		
83	BPA Internal Support	
84	Additional Post-Retirement Contribution	19,143 19,478
85	Agency Services G&A (excludes direct project support)	<u>53,138</u> <u>55,168</u>
86	BPA Internal Support Sub-Total	72,281 74,646
87		
88		

Table 3A

Power Services Program Spending Levels
(\$000s)

	A	B
	Rate Period	
	<u>2016</u>	<u>2017</u>
89 Bad Debt Expense	0	0
90 Other Income, Expenses, Adjustments	(29,700)	(29,700)
105		
106		
107 Disaggregation of Selected Expenses From Revenue Requirement to RAM Cost Table		
108 RENEWABLES (line 34)	<u>40,987</u>	<u>41,641</u>
109 Tier 1 Augmentation Resource (i.e. Klondike III)	10,048	10,158
110 Renewable Generation (excl. Klondike III)	30,939	31,483
111		
112 POWER R&D (line 58)	<u>6,033</u>	<u>6,046</u>
113 Renewables R&D	1,819	1,823
114 Generation Conservation R&D	4,214	4,223
115		
116 POWER SERVICES TRANSMISSION & ANCILLARY SERVICES (line 68)	<u>108,908</u>	<u>104,808</u>
117 Transmission & Ancillary Services	73,093	69,735
118 Transmission & Ancillary Services (sys. oblig.)	35,815	35,073
119		

Table 3B

**Summary of Generation Repayment Study Data
(\$000s)**

	A	B
	<u>2016</u>	<u>2017</u>
1 INTEREST EXPENSE (GROSS)		
2 APPROPRIATIONS	189,757	186,051
3 BONDS ISSUED TO TREASURY	<u>56,935</u>	<u>69,299</u>
4 TOTAL INTEREST EXPENSE	246,692	255,350
5		
6 PLANNED AMORTIZATION		
7 APPROPRIATIONS	84,197	74,279
8 BONDS ISSUED TO TREASURY	<u>10,500</u>	<u>35,150</u>
9 TOTAL GENERATION AMORTIZATION	94,697	109,429
10 IRRIGATION ASSISTANCE	<u>61,066</u>	<u>51,482</u>
11 TOTAL AMORTIZATION/IRRIGATION	155,763	160,911

Table 3C

**Federal Projects Depreciation Summary
(\$000s)**

	A	B
	<u>2016</u>	<u>2017</u>
1 BPA (Power + CORP GP)	20,670	20,048
2 Corps 1/ 2/	93,505	96,451
3 Reclamation	<u>26,026</u>	<u>26,969</u>
4 Total Depreciation	140,201	143,468
5 Amortization of Legacy Conservation	-	-
6 Amortization of Conservation Acquisitions	39,795	39,795
7 Amortization of CRFM Intangible Investment	9,414	9,414
8 Amortization of Fish & Wildlife	<u>33,141</u>	<u>35,825</u>
9 Total Amortization	82,350	85,034
10 Total Federal Projects Depreciation	222,551	228,502
1/ Excludes depreciation from investments paid for by BPA-TS	23	23
2/ Includes US Fish & Wildlife	3,228	3,228

Table 3D
Separation of Residential Exchange Program Support Costs
from Power Non-Generating Operations
(\$000s)

	A	B
	<u>2016</u>	<u>2017</u>
1 Strategy, Finance, & Risk Mgmt	22,538	22,166
2 Residential Exchange Program Support portion	<u>910</u>	<u>625</u>
3 Net to Power Non-Generating Operations (ln 1 - ln 2)	21,628	21,541
4 Executive & Administrative Svc	4,326	4,402
5 Residential Exchange Program Support portion	<u>10</u>	<u>10</u>
6 Net to Power Non-Generating Operations (ln 4 - ln 5)	4,317	4,392
7 Residential Exchange Program Support (ln 2 + ln 5)	920	635
8 Strategy, Finance, & Risk Mgmt (to Pwr NonGen Ops) (ln 3)	21,628	21,541
9 Executive & Administrative Svc (to Pwr NonGen Ops) (ln 6)	4,317	4,392

Table 3E
Power Services Regulatory Assets
(\$000s)

		<u>A</u>	<u>B</u>
		<u>2016</u>	<u>2017</u>
1	Terminated Nuclear Facilities	401,465	410,984
2	REP Refunds	-	-
3	Columbia River Fish Mitigation amortization	9,414	9,414
4	Conservation Measures		
5	Additions	-	-
6	Amortization	39,795	39,795
7	Direct Service Industries' benefit 1/	-	-
8	Fish and Wildlife Measures		
9	Additions	54,807	30,795
10	Amortization	33,141	35,825
11	Settlements	19,323	19,651
12	FECA 2/	-	-
13	Sponsored Conservation	-	-
14	Trojan Decommissioning/Restoration	800	800
15	Terminated Hydro Facilities	1,407	1,431
16	Capitalized Bond Premiums	-	-

1/ This is now modeled in the rate case as a power sale with offsetting augmentation purchases if needed.

2/ Not specifically broken out in expenses

Table 3F
Allowance for Funds Used During Construction
(\$000s)

	<u>A</u> <u>2016</u>	<u>B</u> <u>2017</u>
Direct Funding Projects		
1 capital expenditures	240,790	269,908
2 plant-in-service	266,073	262,902
3 SOY CWIP Balance	323,860	308,817
4 EOY CWIP Balance	298,578	315,823
5 Average CWIP Balance	311,219	312,320
6 AFUDC Rate	3.29%	3.49%
7 Total Direct Funding AFUDC	10,239	10,900
	18,325	18,875
Capital Equipment		
8 Power IT (lapsed)	5,617	4,547
9 Corporate (IT unlapsed/facilities lapsed)	9,152	7,064
10 Total Capital Equipment AFUDC	492	460
11 Total PS AFUDC	10,731	11,360

Table 3G
Prepay Program Cost Components
(\$000s)

	A	B	C	D
		<u>Interest</u>	<u>Principal</u>	<u>Total Credit</u>
1	2013	7,653	7,647	15,300
2	2014	14,775	15,825	30,600
3	2015	14,041	16,559	30,600
4	2016	13,273	17,327	30,600
5	2017	12,469	18,131	30,600
6	2018	11,628	18,972	30,600
7	2019	10,747	19,853	30,600
8	2020	9,826	20,774	30,600
9	2021	8,863	21,737	30,600
10	2022	7,854	22,746	30,600
11	2023	6,799	23,801	30,600
12	2024	5,694	24,906	30,600
13	2025	4,539	26,061	30,600
14	2026	3,329	27,271	30,600
15	2027	2,064	28,536	30,600
16	2028	<u>740</u>	<u>29,860</u>	<u>30,600</u>
17	Total	134,294	340,006	474,300

Table 3H
Calculation of Undistributed Reduction for EN Debt Extension
(\$000s)

	A	B	C	D
	Final Proposal, No EN Debt Extension		Final Proposal, W/ EN Debt Extension	
	<u>2016</u>	<u>2017</u>	<u>2016</u>	<u>2017</u>
1 Non-Federal Debt Service	594,308	594,839	215,666	226,807
2 Depreciation	140,201	143,468	140,201	143,468
3 Amortization	82,350	85,034	82,350	85,034
4 Federal Net Interest	191,755	192,202	187,198	142,016
5 Expense Offset	(71,542)	(67,685)	(305,085)	(168,185)
6 MRNR	-	0	620,408	486,641
7 Total	937,072	947,858	940,738	915,781
8				
9				
10 Difference				
11				
12	<u>2016</u>	<u>2017</u>		
13 Non-Federal Debt Service	(378,642)	(368,032)		
14 Depreciation	-	-		
15 Amortization	-	-		
16 Federal Net Interest	(4,557)	(50,186)		
17 Expense Offset	(233,543)	(100,500)		
18 MRNR	620,408	486,640		
19 Net Change for Undistributed Reduction	3,665	(32,078)		

Table 3I
Calculating the EN Debt Extension Revenue Requirement
(\$000s)

	A	B
	<u>2016</u>	<u>2017</u>
Input from Repayment Study		
1 Non-Federal Principal	(415)	20,496
2 Non-Federal Interest	216,081	206,312
3 Federal Principal	715,105	596,069
4 Bond Premiums	-	-
5 Bond Discounts	-	-
6 Federal Interest	239,378	200,114
7 Irrigation Assistance	<u>61,066</u>	<u>51,482</u>
8 Total Repayment Debt Service	1,231,215	1,074,472
9		
10 Calculation of Revenue Requirement		
11 Expense	-	-
12 Non-Federal Debt Service (Ln 1 + Ln 2)	215,666	226,807
13 Depreciation	140,201	143,468
14 Amortization	82,350	85,034
15 Expense Offset	(305,085)	(168,185)
16 Federal Net Interest 1/	187,198	142,016
17 MRNR 2/	<u>620,408</u>	<u>486,641</u>
18 Total Revenue Requirement	940,738	915,781
19		
20		
21		
22		
23 1/ Net Interest Calculation		
24 Gross Federal Interest	239,378	200,114
25 Prepay Interest	13,273	12,469
26 AFUDC	(10,731)	(11,360)
27 Capitalization Adjustment	(45,937)	(45,937)
28 Interest Credit	<u>(8,786)</u>	<u>(13,270)</u>
29 Net interest	187,198	142,016
30		
31 Calculation of Interest Credit		
32 Beginning cash reserves	690,306	497,000
33 Cash Flow	0	0
34 ending cash reserves	497,000	497,000
35 Average cash reserves	593,653	497,000
36 Income Rates (melded)	1.48%	2.67%
37 Interest credit on reserves	8,786	13,270
38 Prepay Program Interest Earnings	-	-
39 Total interest credit	8,786	13,270
40		
41		
42 2/ Calculation of MRNR		
43 Depreciation	140,201	143,468
44 Amortization	82,350	85,034
45 Capitalization Adjustment	(45,937)	(45,937)
46 Prepay Interest	13,273	12,469
47 Prepay Credits	(30,600)	(30,600)
48 Non-Cash Revenues	(3,524)	(3,524)
49 Federal Principal Payments	(715,105)	(596,069)
50 Irrigation Assistance Payments	<u>(61,066)</u>	<u>(51,482)</u>
51 MRNR	620,408	486,640

Table 3J
Agency Services G&A Allocators

	A	B			C			D	E			F	G	H	I
	COST POOL	POWER	F&W	TRAN	POWER	F&W	TRAN	POWER	F&W	TRAN	DRIVERS	COMMENTS			
1	G&A EXEC/PLANNING/ GOVERNANCE	50%		50%	50%		50%				This is a 50-50% cost pool.	50-50% pools serve the general purposes of the agency. There is no consistent measurable method of assigning support costs directly to the beneficiary, they are not directly affected by changes in traditional cost drivers, and there is a lack of causal relationship.			
2	G&A APPLICATION SYSTEM SUPPORT	35%		65%	35%		65%				Preset IT application pool with WOs assigned to the pool based on BL benefits	There are two other cost pools for IT applications- one which applies a 50-50% rate and the other which applies a 100-100% rate. Applications put into this cost pool should benefit Power and Transmission 35-65%, respectively. The WO's in this pool are reviewed by the IT CMO office.			
3	G&A SECURITY SERVICES	10%	2%	88%	10%	2%	88%				Security* Tier 3 Dept support for Power and Trans	Allocation percents by department are provided by the Security Office. The percents by department are weighted by actual dollars spent by security departments.			
4	G&A LEGAL SERVICES	50%		50%	50%		50%				This is a 50-50% cost pool.	Legal Services direct charges a large portion of their costs. Costs not direct charged are posted to this cost pool.			
5	G&A HUMAN RESOURCE SERVICES	22%	2%	76%	20%	2%	78%				FTE count by Deptld by function	Update based on FTE count by Deptld. Dept FTE are assigned to Power and Transmission based on functions performed. FTE data comes from HR.			
6	G&A ACCOUNTING & FINANCE	45%		55%	45%		55%				Generally 50-50%; exceptions are Budget and Disbursements	Most Finance functions are allocated 50-50%. Exceptions are Budget and Disbursements. For these Depts, costs are allocated based on Power and Trans support by FTE for Budgets, headcount for Payroll, and number of Vouchers for Accounts Payable.			
7	G&A SAFETY	18%		82%	13%		87%				Allocation by Safety Office employee	Safety Office provides a list of employees and the percent of time they spend supporting Power, Transmission and Corporate.			
8	STRATEGIC INTEGRATION	50%		50%	50%		50%				This is a 50-50% cost pool.	As projects mature, they are passed to either Power or Transmission.			
9	RISK MANAGEMENT	60%		40%	60%		40%				CRO sets rate based on workload	Allocation percents by department are provided by the Risk Office.			
10	G&A IT ADMINISTRATION	31%		69%	34%		66%				Underlying IT cost pools	This cost pool is based on all other IT cost pools.			
11/12	DEDICATED IT PROJECTS	100%		100%	100%		100%				Dedicated IT projects	There are two cost pools for Dedicated IT Projects--one exclusively for Power and the other one for Transmission.			
13	G&A IT INFRASTRUCTURE	23%	2%	75%	24%	2%	74%				Number of IT devices by Deptld/employee by function	IT provides a detailed list of devices by Deptld by Employee. These are assigned to high level agency functions in support of Power, F&W and Transmission.			
14	G&A CROSS AGENCY IT PROJECTS	50%		50%	50%		50%				Preset pool with WOs assigned to the pool based on BL benefits	Very few projects are charged to this 50-50% pool.			
15	G&A WORKPLACE SERVICES	42%	5%	53%	38%	4%	58%				Square feet for space, FTE for other services	Includes GSA and other leases. Other services include printing, mail services, employee services, space management, office supplies, and office furniture.			
16	SUPPLY CHAIN ADMINISTRATION	7%		93%	7%		93%				Underlying Supply Chain cost pools	Rate is based on the underlying rates for all other Supply Chain cost pools.			
17	G&A PUBLIC AFFAIRS	45%	5%	50%	45%	5%	50%				This is a 50-50% cost pool.	Allocation percents by department are provided by the Office of Public Affairs.			
18	SUPPLY CHAIN PURCHASING SERVICES	39%	27%	34%	41%	26%	33%				Work Orders charged	The rate is determined by Work Order costs in this cost pool charged specifically to IT, EF&W, Power, etc.			
19	TECHNOLOGY INNOVATION	50%		50%	50%		50%				This is a 50-50% cost pool.	As projects mature, they are passed to either Power or Transmission.			
21/22	G&A WORKPLACE DIRECT PROJECTS	100%		100%	100%		100%				Dedicated workplace services projects	There are two cost pools for Workplace Direct Projects--one exclusively for Power and the other one for Transmission.			
23	BILLING & METERING SERVICES	47%		53%	52%		48%				Number of bills and metering support	Study looks at drivers such as the number of bills, complexity of bills, and metering services.			
24	CONTRACTING & FORECASTING SRVC	54%		46%	53%		47%				Number of contacts tasks and activities/ forecasts	Based on manager analysis and input in support of contracting and forecasting.			

4. FCRPS GENERATION INVESTMENT BASE

4.1 Introduction

This chapter documents the development of the FCRPS generation investment base by year for the rate approval period and the outyears. The investment data are the source of depreciation calculations and provide certain inputs to the generation repayment studies. It is also the basis for allocations of net interest expense and planned net revenues in the development of the COSA tables and the generation inputs to ancillary services.

4.2 Methodology

The FCRPS plant investment information is separately compiled for the Corps, Reclamation, and BPA, including BPA conservation and fish and wildlife investments. BPA generation (general) plant investment consists of office furniture and fixtures and data processing software and hardware associated with the Power Business Line, including the Energy Efficiency Group. Historical investment data are taken from the supporting documents of FCRPS financial statements. All plant investment is depreciated and intangible plant is amortized using the straight-line method.

For BPA facilities, forecasted depreciation expense is calculated consistent with the group concept methodology used for plant accounting records. For general plant categories, average service lives incorporate an adjustment for salvage applicable to the individual groups. Both historical investment and forecast additions are depreciated according to their adjusted group life.

BPA conservation investments made after 2011 are amortized over 12 years. A investments made prior to 2011 have been fully amortized and no longer appear in the revenue requirement. Beginning in 2016, BPA will expense rather than capitalize future conservation investments.

BPA fish and wildlife investments are amortized over 15 years.

Corps and Reclamation investments are depreciated according to the weighted-average service lives of the projects. Depreciation forecasts factor in plant retirements using the 5-year average of plant retirement by project

Projected investments and projected depreciation expenses are accumulated with historical amounts to provide projected cumulative investments and accumulated depreciation for each forecasted year.

The investment base is calculated for each year of the rate period and outyears as an annual average.

Table 4A

**FCRPS Investment Base
FY 2016
(\$000s)**

	A	B	C
	BALANCE-AS-OF		AVERAGE
	<u>9/30/2015</u>	<u>9/30/2016</u>	<u>2016</u>
1 CORPS OF ENGINEERS			
2 COMPLETED PLANT			
3 HYDROELECTRIC GEN	7,622,048	7,865,321	7,743,684
4 TRANSMISSION	<u>2,700</u>	<u>2,700</u>	<u>2,700</u>
5 TOTAL COMPLETED PLANT	7,624,748	7,868,021	7,746,384
6 ACCUMULATED DEPRECIATION			
7 HYDROELECTRIC GEN	2,932,442	3,035,348	2,983,895
8 TRANSMISSION	<u>894</u>	<u>930</u>	<u>912</u>
9 TOTAL ACCUMULATED DEPRECIATION	2,933,336	3,036,278	2,984,807
10 NET COMPLETED PLANT			
11 HYDROELECTRIC GEN	4,689,606	4,829,973	4,759,789
12 TRANSMISSION	<u>1,806</u>	<u>1,770</u>	<u>1,788</u>
13 TOTAL NET COMPLETED PLANT	4,691,412	4,831,743	4,761,577
14 BUREAU OF RECLAMATION			
15 COMPLETED PLANT			
16 HYDROELECTRIC GEN	1,837,157	1,892,139	1,864,648
17 TRANSMISSION	<u>87,434</u>	<u>87,434</u>	<u>87,434</u>
18 TOTAL COMPLETED PLANT	1,924,591	1,979,573	1,952,082
19 ACCUMULATED DEPRECIATION			
20 HYDROELECTRIC GEN	597,904	622,765	610,335
21 TRANSMISSION	<u>88,599</u>	<u>89,764</u>	<u>89,182</u>
22 TOTAL ACCUM DEPRECIATION	686,503	712,529	699,517
23 NET COMPLETED PLANT			
24 HYDROELECTRIC GEN	1,239,253	1,269,374	1,254,313
25 TRANSMISSION	<u>-1,165</u>	<u>-2,330</u>	<u>-1,748</u>
26 TOTAL NET COMPLETED PLANT	1,238,088	1,267,044	1,252,565
27 CONSERVATION			
28 CUMULATIVE INVESTMENT	624,299	477,532	550,916
29 ACCUM PREPAID EXPENSE	255,221	148,249	201,735
30 NET CONSERVATION	369,078	329,283	349,181
31 FISH AND WILDLIFE			
32 CUMULATIVE INVESTMENT	471,051	523,037	497,044
33 ACCUM PREPAID EXPENSE	182,084	212,404	197,244
34 NET FISH AND WILDLIFE	288,967	310,633	299,800
35 BPA PLANT (PBL)			
36 CUMULATIVE INVESTMENT	117,105	123,843	120,474
37 ACCUMULATED DEPRECIATION	70,400	89,464	79,932
38 NET BPA PLANT INVESTMENT	46,705	34,379	40,542
39 TOTAL NET PLANT INVESTMENT	6,634,249	6,773,081	6,703,665

Table 4B

**FCRPS Investment Base
FY 2017
(\$000s)**

	A	B	C
	BALANCE-AS-OF		AVERAGE
	<u>9/30/2013</u>	<u>9/30/2014</u>	<u>2016</u>
1 CORPS OF ENGINEERS			
2 COMPLETED PLANT			
3 HYDROELECTRIC GEN	7,865,321	8,140,771	8,003,046
4 TRANSMISSION	<u>2,700</u>	<u>2,700</u>	<u>2,700</u>
5 TOTAL COMPLETED PLANT	7,868,021	8,143,471	8,005,746
6 ACCUMULATED DEPRECIATION			
7 HYDROELECTRIC GEN	3,035,348	3,141,200	3,088,274
8 TRANSMISSION	<u>930</u>	<u>966</u>	<u>948</u>
9 TOTAL ACCUMULATED DEPRECIATION	3,036,278	3,142,166	3,089,222
10 NET COMPLETED PLANT			
11 HYDROELECTRIC GEN	4,829,973	4,999,571	4,914,772
12 TRANSMISSION	<u>1,770</u>	<u>1,734</u>	<u>1,752</u>
13 TOTAL NET COMPLETED PLANT	4,831,743	5,001,305	4,916,524
14 BUREAU OF RECLAMATION			
15 COMPLETED PLANT			
16 HYDROELECTRIC GEN	1,892,139	1,978,509	1,935,324
17 TRANSMISSION	<u>87,434</u>	<u>87,434</u>	<u>87,434</u>
18 TOTAL COMPLETED PLANT	1,979,573	2,065,943	2,022,758
19 ACCUMULATED DEPRECIATION			
20 HYDROELECTRIC GEN	622,765	648,569	635,667
21 TRANSMISSION	<u>89,764</u>	<u>90,929</u>	<u>90,347</u>
22 TOTAL ACCUM DEPRECIATION	712,529	739,498	726,014
23 NET COMPLETED PLANT			
24 HYDROELECTRIC GEN	1,269,374	1,329,940	1,299,657
25 TRANSMISSION	<u>-2,330</u>	<u>-3,495</u>	<u>-2,913</u>
26 TOTAL NET COMPLETED PLANT	1,267,044	1,326,445	1,296,744
27 CONSERVATION			
28 CUMULATIVE INVESTMENT	477,532	477,532	477,532
29 ACCUM PREPAID EXPENSE	148,249	188,044	168,147
30 NET CONSERVATION	329,283	289,488	309,385
31 FISH AND WILDLIFE			
32 CUMULATIVE INVESTMENT	523,037	547,696	535,367
33 ACCUM PREPAID EXPENSE	212,404	242,093	227,249
34 NET FISH AND WILDLIFE	310,633	305,602	308,118
35 BPA PLANT (PBL)			
36 CUMULATIVE INVESTMENT	123,843	132,283	128,063
37 ACCUMULATED DEPRECIATION	89,464	108,878	99,171
38 NET BPA PLANT INVESTMENT	34,379	23,405	28,892
39 TOTAL NET PLANT INVESTMENT	6,773,081	6,946,245	6,859,663

Power General Plant Investments (Including Corporate Allocation)
(\$000s)

Table 4C
(\$000s)

FERC ACCOUNT 391.1 OFFICE FURNITURE AND FIXTURES
ASL, Remaining Life, Annual Percent=5.27% 9.9% as of FY 2006

	A	B	C	D	E	F	G	H
	<u>FY</u>	<u>INVEST</u>	<u>FIRST YEAR</u>	<u>FULL YEAR</u>	<u>ANNUAL DEPR</u>	<u>ACCUM DEPR</u>	<u>CUMUL INVEST</u>	<u>NET INVEST</u>
1	2015	-	-	-	95	1,622	1,910	288
2	2016	-	-	-	95	1,717	1,910	193
3	2017	-	-	-	95	1,812	1,910	98

Table 4D
(\$000s)

FERC ACCOUNT 391.2 DATA PROCESSING EQUIPMENT
ASL, Remaining Life, Annual Percent=20% 18.07% as of FY 2006

	A	B	C	D	E	F	G	H
	<u>FY</u>	<u>INVEST</u>	<u>FIRST YEAR</u>	<u>FULL YEAR</u>	<u>ANNUAL DEPR</u>	<u>ACCUM DEPR</u>	<u>CUMUL INVEST</u>	<u>NET INVEST</u>
1	2015		-	-	2,712	12,738	16,089	3,351
2	2016				2,712	15,450	16,089	639
3	2017				639	16,089	16,089	-

Power General Plant Investments (Including Corporate Allocation)
(\$000s)

Table 4E
(\$000s)

FERC ACCOUNT 391.3 DATA PROCESSING SOFTWARE
ASL, Remaining Life, Annual Percent=20% 18.33% as of FY 2006

A	B	C	D	E	F	G	H	I	J
<u>FY</u>	<u>INVEST</u>	<u>FIRST YEAR</u>	<u>FULL YEAR</u>	<u>ANNUAL DEPR</u>	<u>ACCUM DEPR</u>	<u>CUMUL INVEST</u>	<u>NET INVEST</u>	<u>CORP ADDITNS</u>	<u>PS ADDITNS</u>
1 2015	15,117	1,512	3,023	15,413	52,588	88,638	36,050	10,201	4,916
2 2016	14,769	1,477	2,954	17,281	68,263	95,376	27,113	9,152	5,617
3 2017	11,611	1,161	2,322	18,732	86,361	103,816	17,455	7,064	4,547

Table 4F
(\$000s)

FERC ACCOUNT 397/398 COMMUNICATION/MISC EQUIPMENT
ASL, Remaining Life, Annual Percent=6.70%

A	B	C	D	E	F	G	H
<u>FY</u>	<u>INVEST</u>	<u>FIRST YEAR</u>	<u>FULL YEAR</u>	<u>ANNUAL DEPR</u>	<u>ACCUM DEPR</u>	<u>CUMUL INVEST</u>	<u>NET INVEST</u>
1 2015	0	-	0	582	3,452	8,685	5,233
2 2016	0	-	0	582	4,034	8,685	4,651
3 2017	0	-	0	582	4,616	8,685	4,069

Table 4G
(\$000s)

SUMMARY - PBL GENERAL PLANT

A	B	C	D	E
<u>FY</u>	<u>ANNUAL DEPR</u>	<u>ACCUM DEPR</u>	<u>CUMUL INVEST</u>	<u>NET INVEST</u>
1 2015	18,802	70,400	117,105	46,705
2 2016	20,670	89,464	123,843	34,379
3 2017	20,048	108,878	132,283	23,405

Table 4H

**BPA FISH & WILDLIFE INVESTMENT
(\$000s)**

	A	B	C	D	E	F	G	H
	<u>FY</u>	<u>INVEST</u>	<u>FIRST YEAR</u>	<u>FULL YEAR</u>	<u>ANNUAL AMORT</u>	<u>ACCUM AMORT</u>	<u>CUMUL INVEST</u>	<u>NET INVEST</u>
1	2015	32,000	1,067	2,133	29,949	182,084	471,051	288,967
2	2016	54,807	1,827	3,654	33,141	212,404	523,037	310,633
3	2017	30,795	1,026	2,053	35,825	242,093	547,696	305,602

Table 4I

**BPA CONSERVATION ACQUISITIONS INVESTMENT
12-year Life (post-2011 investments)
(\$000s)**

	A	B	C	D	E	F	G	H
	<u>FY</u>	<u>INVEST</u>	<u>FIRST YEAR</u>	<u>FULL YEAR</u>	<u>ANNUAL AMORT</u>	<u>ACCUM AMORT</u>	<u>CUMUL INVEST</u>	<u>NET INVEST</u>
1	2015	83,028	3,460	6,919	36,336	108,454	477,532	369,078
2	2016		-	-	39,795	148,249	477,532	329,283
3	2017		-	-	39,795	188,044	477,532	289,488

**Table 4J
Bureau of Reclamation:
Investment and Depreciation
(\$000s)**

	A	B	C	D	E	F	G	H	I	J	K
1											
2		5-Year		2016	2016	2016		2017	2017	2017	
3		Average	INVESTMENT	ADDTNS	DEPR	ACCUM	INVESTMENT	ADDTNS	DEPR	ACCUM	INVESTMENT
4		Retirements	9/30/15		EXP	DEPR	9/30/16		EXP	DEPR	9/30/17
5	BOISE										
6	GENERATION	1	32,863	26,144	612	12,124	59,007	23,844	946	13,070	82,850
7	COLUMBIA BASIN										
8	GENERATION	1,489	1,529,599	29,200	20,579	500,087	1,557,310	58,581	21,145	521,232	1,614,402
9	TRANSMISSION /DELIVERY		<u>84,549</u>		<u>1,127</u>	<u>86,803</u>	<u>84,549</u>		<u>1,127</u>	<u>87,930</u>	<u>84,549</u>
10	TOTAL		1,614,148		21,706	586,890	1,641,859		22,272	609,162	1,698,951
11	GREEN SPRINGS			-				-			
12	GENERATION	-	10,892		145	6,148	10,892		145	6,293	10,892
13	HUNGRY HORSE										
14	GENERATION	28	136,461		1,819	61,782	136,433		1,819	63,601	136,405
15	TRANSMISSION /DELIVERY		<u>1,745</u>		<u>23</u>	<u>1,791</u>	<u>1,745</u>		<u>23</u>	<u>1,814</u>	<u>1,745</u>
16	TOTAL		138,206	5,717	1,842	63,573	138,178	13,327	1,842	65,415	138,150
17	MINIDOKA-PALISADES										
18	GENERATION	3	113,141		1,509	37,907	113,138		1,508	39,415	113,135
19	TRANSMISSION /DELIVERY		<u>1,140</u>		<u>15</u>	<u>1,170</u>	<u>1,140</u>		<u>15</u>	<u>1,185</u>	<u>1,140</u>
20	TOTAL		114,281	5,760	1,524	39,077	114,278	1,394	1,523	40,600	114,275
21	YAKIMA										
22	GENERATION	-	14,201	1,158	197	4,717	15,359	5,466	241	4,958	20,826
23											
24	TOTAL USBR	1,521	1,924,591	38,779	26,026	712,529	1,979,573	44,031	26,969	739,498	2,065,943
25											
26	GENERATION		1,837,157		24,861	622,765	1,892,139		25,804	648,569	1,978,509
27	TRANSMISSION		<u>87,434</u>		<u>1,165</u>	<u>89,764</u>	<u>87,434</u>		<u>1,165</u>	<u>90,929</u>	<u>87,434</u>
28	TOTAL		1,924,591		26,026	712,529	1,979,573		26,969	739,498	2,065,943

Table 4K

Corps of Engineers: Investment and Depreciation
(\$000s)

	A	B	C	D	E	F	G	H	I	J	K	L
1			5-Year		2016	2016	2016		2017	2017	2017	
2			Average	INVESTMENT	ADDTNS	DEPR	ACCUM	INVESTMENT	ADDTNS	DEPR	ACCUM	INVESTMENT
3			Retirements	9/30/15		EXP	DEPR	9/30/16		EXP	DEPR	9/30/17
4		BONNEVILLE										
5		GENERATION	1,640	1,154,939	15,844	15,494	486,008	1,169,143	13,156	15,665	501,673	1,180,660
6		TRANSMISSION		<u>2,700</u>		<u>36</u>	<u>930</u>	<u>2,700</u>		<u>36</u>	<u>966</u>	<u>2,700</u>
7		TOTAL		1,157,639	15,844	15,530	486,938	1,171,843	13,156	15,701	502,639	1,183,360
8		OTHER PROJECTS										
9		(GENERATION ONLY)										
10		ALBENI FALLS	483	67,906	3,038	922	26,856	70,461	4,413	966	27,822	74,391
11		CHIEF JOSEPH	541	759,701	25,568	10,296	357,385	784,728	16,452	10,569	367,954	800,639
12		COUGAR	0	51,758	754	695	15,360	52,511	884	706	16,066	53,395
13		DETROIT-BIG CLIFF	84	99,158	2,760	1,340	38,391	101,834	2,331	1,373	39,764	104,081
14		DWORSHAK	107	313,572	5,676	4,218	140,501	319,142	6,716	4,299	144,800	325,751
15		GREEN PETER-FOSTER	7	66,740	6,412	933	29,693	73,145	5,693	1,013	30,706	78,831
16		HILLS CREEK	14	30,228	4,236	431	15,177	34,450	3,799	485	15,662	38,235
17		ICE HARBOR	37	208,887	23,427	2,941	102,805	232,277	34,397	3,326	106,131	266,637
18		JOHN DAY	42	564,689	15,975	7,635	274,449	580,623	14,794	7,840	282,289	595,375
19		LIBBY	215	454,726	6,730	6,106	197,144	461,240	1,164	6,156	203,300	462,189
20		LITTLE GOOSE	100	242,967	8,727	3,297	125,769	251,594	3,063	3,374	129,143	254,557
21		LOOKOUT POINT-DEXTER	781	127,433	4,754	1,726	47,875	131,406	569	1,751	49,626	131,194
22		LOST CREEK	50	35,043	4,021	494	16,094	39,014	1,522	530	16,624	40,486
23		LOWER GRANITE	381	408,771	11,653	5,525	178,477	420,043	838	5,604	184,081	420,499
24		LOWER MONUMENTAL	38	275,388	15,120	3,772	142,462	290,469	5,688	3,911	146,373	296,119
25		MCNARY	717	483,333	30,588	6,644	237,617	513,204	23,647	6,996	244,613	536,134
26		THE DALLES	852	484,634	12,812	6,542	252,037	496,595	14,047	6,709	258,746	509,789
27		LOWER SNAKE F&W		249,253		3,323	55,538	249,253		3,323	58,861	249,253
28		COLUMBIA R. FISH BYPASS	<u>1,084</u>	<u>1,542,919</u>	<u>52,353</u>	<u>20,572</u>	<u>295,710</u>	<u>1,594,188</u>	<u>129,451</u>	<u>21,256</u>	<u>316,966</u>	<u>1,722,555</u>
29		TOTAL OTHER		6,467,108	234,602	87,412	2,549,340	6,696,178	269,467	90,187	2,639,527	6,960,111
30												
31		TOTAL CORPS	7,173	7,624,748	250,446	102,942	3,036,278	7,868,021	282,623	105,888	3,142,166	8,143,471
32												
33		GENERATION		7,622,048		102,906	3,035,348	7,865,321		105,852	3,141,200	8,140,771
34		TRANSMISSION		<u>2,700</u>		<u>36</u>	<u>930</u>	<u>2,700</u>		<u>36</u>	<u>966</u>	<u>2,700</u>
35		TOTAL		7,624,748		102,942	3,036,278	7,868,021		105,888	3,142,166	8,143,471
36												
37		1/ Includes USFW Plant Investment		244,851		3,265	56,487	244,851		3,265	59,752	244,851
38		2/ Includes FAS 71 Intangible Asset		706,013		9,414	68,164	706,013		9,414	77,578	706,013

5. PROJECTED CASH BALANCES / INTEREST CREDITS

5.1 Introduction

This chapter documents the projection of the generation interest income (credited to interest expense) to be earned during the rate approval period and the outyears on BPA's projected cash balances and on funds attributable to generation to be returned to Treasury at year-end.

5.2 Interest credits on projected cash balances

The internal cash flows from revenue requirements are added to the ending rate period cash balances separately for the program and averaged. The projected interest earnings rate, the projected weighted average interest rate on outstanding bonds from the end of the previous year, is multiplied by the average cash balance to determine the annual interest income on the BPA Fund/Investments. The resulting interest income is applied as a credit against interest expense in the generation revenue requirements.

5.3 Interest credits on funds held for others

The expected draw down of funds held for others (FHFO) is added to the ending rate period FHFO cash balance and averaged with the starting cash balance. The expected drawdown of FHFO is due to forecast residential exchange payments and an anticipated decline in energy efficiency revenues. The projected interest earnings rate is multiplied by the FHFO average cash balance to determine the annual interest income. The resulting interest income on FHFO is applied as a credit against interest expense in the generation revenue requirement.

5.4 Interest credits on prepay funds

The funds generated by the prepay program are held in the Bonneville Fund and earn interest until they have been expended. The interest earnings reflect the expected drawdown of the funds. The method for calculating interest is the same as that used to calculate total interest income. As of this Initial Proposal, BPA expects to have spent all prepay funds prior to the beginning of the 2016-2017 rate period.

5.5 Interest income (repayment program calculation)

The interest income rates listed in this chapter are calculated and used in repayment studies to determine an interest income credit on funds collected during each year for year-end payment of amortization and interest on Corps and Reclamation appropriations and bonds BPA issued to Treasury. The repayment program assumes that cash accumulates at a uniform rate throughout the year, except for interest paid on bonds issued to Treasury at mid-year. In the repayment study output, such as in Table 11C of this document, the interest income is identified as the "float."

5.6 Allocation of Interest Credit

The interest credit is a component in the calculation of net interest, offsetting interest accrued on outstanding Treasury bonds and appropriations. The credit is allocated between the two cost pools. The Composite cost pool receives an interest credit based on \$495.6 million in reserves, the amount of reserves attributed to Power at the end of FY 2001, with adjustments. The amount of reserves has been adjusted for receipts/payments related to pre-2002 transactions that have not been distributed to Slice customers.

The Non-Slice cost pool receives a credit that is the net of the total annual credit calculated in the generation revenue requirement less the amount calculated for the Composite cost pool and the interest earned on the prepay funds. The Non-Slice allocation may be negative or positive depending on the relationship between the Composite cost pool allocation and the total annual credit.

TABLE 5A
Interest Income from Projected Cash Balances
Generation Revenue Requirement
(\$000s)

	A	B
	<u>2016</u>	<u>2017</u>
Calculation of Total Interest Income		
1 Cash flow generated	-	-
2		
3 SOY Cash Balance	438,000	438,000
4 EOY Cash Balance	438,000	438,000
5 Average Cash Balance	438,000	438,000
6		
7 Interest Income Rate	1.48%	2.67%
8 Interest on BPA Fund/Investments	6,482	11,695
9		
10 repayment study interest credit	2,756	5,050
11		
12 Funds Held for Others		
13 SOY Cash Balance	189,000	59,000
14 EOY Cash Balance	59,000	59,000
15 Average Cash Balance	124,000	59,000
16 Interest Income	1,835	1,575
17		
18 Prepayment Program Proceeds		
19 SOY Cash Balance	63,306	-
20 EOY Cash Balance	-	-
21 Average Cash Balance	31,653	-
22 Interest Income	468	-
23		
24 Total Interest Credit (In 8 + 10 + 16 + 22)	11,542	18,320
25		
26		
27 Allocation between TRM Cost Pools	<u>2016</u>	<u>2017</u>
28 Reserves Prior to FY 2002	570,255	570,255
29 Adjustments for pre-2002 Sales/Purchases	-	0
30 Other Adjustments	-	0
31 Total Composite Cost Pool Reserves (In 23 + In 24 + In 25)	570,255	570,255
32 Interest rate	1.48%	2.67%
33 Composite Pool interest credit (In 26 X In 27)	(8,440)	(15,226)
34 Total interest credit from Rev Req	(11,542)	(18,320)
35 Non-Slice Pool interest credit (In 29 - In 28)	(3,102)	(3,094)

Table 5B
Interest Income from Projected Cash Balances
Generation Current Revenue Test
(\$000s)

	A	B
	<u>2016</u>	<u>2017</u>
1 Annual Cash Surplus/(Deficit)	(41,905)	(129,025)
2		
3 Adjustments		
4		
5 Reserves for Risk		
6 SOY Cash Balance	438,000	396,095
7 EOY Cash Balance	396,095	267,071
8 Average Cash Balance	417,048	331,583
9		
10 Interest Income Rate	1.48%	2.67%
11 Interest on BPA Fund/Investments	6,172	8,853
12		
13 Repayment Study Interest Income	2,756	5,050
14		
15 Funds Held for Others		
16 SOY Cash Balance	189,000	59,000
17 EOY Cash Balance	59,000	59,000
18 Average Cash Balance	124,000	59,000
19 Interest Income	1,835	1,575
20		
21 Prepayment Program Proceeds		
22 SOY Cash Balance	63,306	-
23 EOY Cash Balance	-	-
24 Average Cash Balance	31,653	-
25 Interest Income	468	-
26		
27 Annual Interest Income	11,232	15,478

Table 5C
Interest Income from Projected Cash Balances
Generation Revised Revenue Test
(\$000s)

	A	B
	<u>2016</u>	<u>2017</u>
1 Annual Cash Surplus/(Deficit)	56,602	(27,923)
2		
3 Reserves for Risk		
4 SOY Cash Balance	438,000	494,602
5 EOY Cash Balance	494,602	466,680
6 Average Cash Balance	466,301	480,641
7		
8 Interest Income Rate	1.48%	2.67%
9 Interest on BPA Fund/Investments	6,901	12,833
10		
11 Repayment Study Interest Income	2,756	5,050
12		
13 Funds Held for Others		
14 SOY Cash Balance	189,000	59,000
15 EOY Cash Balance	59,000	59,000
16 Average Cash Balance	124,000	59,000
17 Interest Income	1,835	1,575
18		
19 Prepayment Program Proceeds		
20 SOY Cash Balance	63,306	-
21 EOY Cash Balance	-	-
22 Average Cash Balance	31,653	-
23 Interest Income	468	-
24		
25 Annual Interest Income	11,961	19,458

6. INTEREST RATES FOR TREASURY SOURCES OF CAPITAL AND PRICE DEFLATORS

6.1 Introduction

Interest rates on bonds issued by BPA to Treasury and interest rates for Corps and Reclamation appropriations are used in development of repayment studies and projections of Federal interest expense in revenue requirements. Price deflators are used for developing spending levels in revenue requirements.

6.2 Source of Forecasts

To project interest rates on bonds issued to Treasury, BPA uses Treasury yield curve forecasts provided by the Global Insights Group (GI). GI is also the source of price deflators that BPA treats as escalators for purposes of developing spending levels. GI develops the price deflators taking into account projections of Gross Domestic Product (GDP). The GDP consists of the sum of consumption, investment, government purchases and net exports, excluding transfers to foreigners.

6.3 Interest Rate Projections

Projected interest rates for BPA bonds issued to Treasury are based on GI's yield curve projections of Treasury market rates, plus a markup of up to 190 basis points depending on the length of time to maturity and call option. The markup estimate reflects an interagency agreement that Treasury price BPA bonds at a level comparable to securities (bonds) issued by U.S. government corporations. The markup estimate reflects the average basis point markup on recent intermediate and long-term bonds issued by BPA.

Interest rates on projected capital investments funded by appropriations are also based on GI's projections of Treasury yield curves. The yield curves used for appropriations do not include the basis point markup.

6.4 Deflators

The current and cumulative price deflator used to escalate midyear dollars are derived from the fiscal and calendar year price deflators provided by GI. They are calculated as follows:

$$[(FY1/100) \times 0.5] + 1 = \text{Cumulative Price Deflator}_1$$

The fiscal year GDP price deflator for the current year is divided by one hundred and multiplied by one half. The result, when added to one, yields the cumulative price deflator for the first year.

$$[1 + (FYt/100)] \times \text{Cumulative Price Deflator}_{-1} = \text{Cumulative Price Deflator}_t, \text{ when } t > 1$$

The fiscal year GDP price deflator for a future year is divided by one hundred and added to one. The result, when multiplied by the cumulative price deflator from the previous year, yields the cumulative price deflator for the each successive year.

To the extent deflators are used in developing the FY 2016-2017 spending levels they are based on the price deflators from the August 2014 GI Base Case forecast.

memorandum

DATE:

REPLY TO
ATTN OF: FTC-2

SUBJECT: FY 2015 Interest Rate and Inflation Forecast

TO: See Attached "cc:" List

Please see the attached BPA interest rate and inflation forecast for the period FY 2015 through 2044.

These forecasts provide an internally consistent basis for BPA decisions regarding debt management, budget formulation and other financial analyses, as well as capital budgeting and strategic planning efforts. The FY 2015 forecast is summarized in the following tables:

- Table 1: 30 Year Treasury Yields and BPA Borrowing Rates
- Table 2: Forecast Comparison – 30 Year BPA Borrowing Rate – Callable at Par
- Table 3: 20 Year Treasury Yields and BPA Borrowing Rates
- Table 4: 15 Year Treasury Yields and BPA Borrowing Rates
- Table 5: BPA FY 2015 Appropriation Borrowing Rate Forecast
- Table 6: BPA FY 2015 BPA Borrowing Rate – No Premium
- Table 7: BPA FY 2015 BPA Borrowing Rate – Coupon Scale-Down Redemption Premium
- Table 8: BPA FY 2015 BPA Borrowing Rate – Callable at Par
- Table 9: BPA FY 2015 Third-Party Taxable Borrowing Rate Forecast
- Table 10: BPA FY 2015 Third-Party Tax-Exempt Borrowing Rate Forecast
- Table 11: BPA FY 2015 FERC Borrowing Rate (Bank Prime) Forecast
- Table 12: BPA FY 2015 May 3-Month LIBOR Rate Forecast
- Table 13: Comparison of FY 2015 Inflation Forecast Components

Borrowing Rate Forecast Methodology

The FY 2015 forecast is based on the Global Insight (GI) Third Quarter August 2014 Long-Term Economic Outlook.

Tables 1, 3, and 4 illustrate the components of BPA's Treasury borrowing rate forecasts. GI calendar year (CY) projections of 30-year Treasury bond yields are shown in Column A. BPA fiscal year (FY) projections are shown in Column B. Column C, D, and E reflect BPA's Treasury borrowing rate options.

BPA borrowing rates from the U.S. Treasury reflect a mark-up over the Treasury yield curve. Table 6 is the Government Agency borrowing rate spread over the Treasury yield curve and reflects the rate BPA would borrow at without a call premium. The other two rates {Table 7 and Table 8} reflect the two additional borrowing options BPA

can exercise with Treasury: callable at par and coupon-scale down. A callable at par call option allows BPA to redeem the bond before maturity without paying a call premium at the time of the call. The cost of this call option results in a mark-up to the coupon rate, resulting in higher interest expense paid over the life of the bond. With a coupon scale down call option the call premium is determined at the time of bond issuance for each option call date over the bond's term; this call premium is only paid if the bond is called. In addition to paying a call premium at the time the bond is called, there is also a mark-up to the coupon rate for the coupon scale down option. The premium for these two call options are calculated using historical spread premiums.

Table Descriptions

Tables 1, 3, and 4: Shows the steps involved to arrive at the BPA borrowing rate.

Table 2: Shows the difference between the BPA borrowing rate - callable at par between last year and this year.

Table 5: Forecasts a rate equivalent to the Treasury yield curve.

Table 6: Forecasts the rate at which Bonneville would borrow from the U.S. Treasury for a bullet bond with no call option.

Table 7: Forecasts the rate at which Bonneville would borrow from the U.S. Treasury for a bullet bond with a callable at par call option.

Table 8: Forecasts the rate at which Bonneville would borrow from the U.S. Treasury for a bullet bond with a coupon scale-down call option.

Table 9: Forecasts the rate at which Bonneville would back third-party bonds on a taxable basis, as with the Lease Purchase Program.

Table 10: Forecasts the rate at which Bonneville would back third-party bonds on a tax-exempt basis, as with Bonneville-backed Energy Northwest bonds.

Table 11: Forecasts the Prime rate, the rate at which banks charge interest for their most creditworthy customers.

Table 12: Forecasts the 3-month LIBOR rate, the rate charged by London banks, used as a benchmark rate worldwide.

Table 13: Forecasts the projected change in the Gross Domestic Product (GDP) price deflator and compares to the FY 2014 inflation forecast. The table also forecasts future inflation rates.

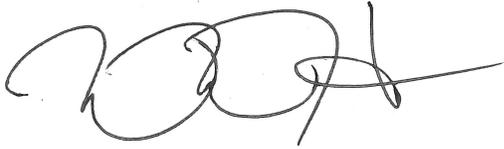
Inflation Forecast

BPA inflation assumptions reflect projected changes in the U.S. GDP Price Deflator. The GDP Price Deflator is the broadest measure of inflation in the U.S. economy. GDP reflects the value of all goods and services produced by domestic and foreign capital and labor within the United States. Major components of GDP include: total consumption, investment, government purchases, and net exports. The real GDP calculations reflect both the changing mix of the components in GDP and the relative price changes in these components.

This index assumes a base year of 2009. The projected change in the GDP price deflator and comparison with the FY 2014 inflation forecast is summarized in Table 13. Column A shows the projected trend in GDP inflation rates between 2015-2044 on a calendar year basis and in column B by BPA fiscal year. Column C provides the cumulative price

index projections. The forecast expresses fiscal year dollar values as mid-year dollar values.

If you have questions, or suggestions concerning the FY 2014 Interest Rate and Inflation Forecasts, please contact Bill Hendricks at (503) 230-5389.

A handwritten signature in black ink, appearing to be 'Bill Hendricks', written in a cursive style.

Bill Hendricks
Financial Analyst, Debt and Investment Management
Attachment

cc:

See Front List

Official File –

<http://internal.bpa.gov/finance/FT/FTC/Common%20Agency%20Assumptions/Forms/AllItems.aspx>

Table 1
30 Year Treasury Yields and BPA Borrowing Rates
 FY 2015 Forecast of BPA Borrowing Rates

Calendar/Fiscal Years 2015-2044

Year	A	B	C	D	E
	Bond Rate 1/ <u>Calendar Year</u>	Bond Rate 2/ <u>Fiscal Year</u>	BPA Rate 3/ No Premium <u>Fiscal Year</u>	BPA Rate 4/ Coupon Scale-Down <u>Fiscal Year</u>	BPA Rate 5/ Callable at Par <u>Fiscal Year</u>
2014	3.91				
2015	4.21	3.25	4.60	5.82	6.04
2016	4.48	4.42	4.93	6.15	6.38
2017	4.61	4.58	5.14	6.37	6.60
2018	4.61	4.61	5.22	6.45	6.69
2019	4.61	4.61	5.26	6.50	6.75
2020	4.61	4.61	5.26	6.51	6.76
2021	4.61	4.61	5.26	6.51	6.76
2022	4.61	4.61	5.26	6.51	6.76
2023	4.61	4.61	5.26	6.51	6.76
2024	4.61	4.61	5.26	6.51	6.76
2025	4.61	4.61	5.26	6.51	6.76
2026	4.61	4.61	5.26	6.51	6.76
2027	4.61	4.61	5.26	6.51	6.76
2028	4.61	4.61	5.26	6.51	6.76
2029	4.61	4.61	5.26	6.51	6.76
2030	4.61	4.61	5.26	6.51	6.76
2031	4.61	4.61	5.26	6.51	6.76
2032	4.61	4.61	5.26	6.51	6.76
2033	4.61	4.61	5.26	6.51	6.76
2034	4.61	4.61	5.26	6.51	6.76
2035	4.61	4.61	5.26	6.51	6.76
2036	4.61	4.61	5.26	6.51	6.76
2037	4.61	4.61	5.26	6.51	6.76
2038	4.61	4.61	5.26	6.51	6.76
2039	4.61	4.61	5.26	6.51	6.76
2040	4.61	4.61	5.26	6.51	6.76
2041	4.61	4.61	5.26	6.51	6.76
2042	4.61	4.61	5.26	6.51	6.76
2043	4.61	4.61	5.26	6.51	6.76
2044	4.61	4.61	5.26	6.51	6.76

1/ Global Insight: The U.S. Economy: 30-Year Focus, August 2014 Forecast, Base Case.

2/ FY 2015 Appropriation rates are determined in accordance with BPA Appropriations Refinancing Act, 16 U.S.C. 8381 enacted on April 26, 1996, and are independent of the Global Insight Treasury Yield forecasts.

3/ Column C = Column B + U.S. Treasury borrowing markup, no premium

4/ Column D = Column B + U.S. Treasury borrowing markup + Coupon Scale-Down premium

5/ Column E = Column B + U.S. Treasury borrowing markup + Callable at Par premium

Table 2
Forecast Comparison - 30 Year BPA Borrowing Rate - Callable at Par
 BPA FY 2015 vs. BPA FY 2014

Fiscal Years 2015-2044

<u>Year</u>	A FY 2015 Forecast BPA Rate 1/ <u>Callable at Par</u>	B FY 2014 Forecast BPA Rate 2/ <u>Callable at Par</u>	C Difference <u>(A-B)</u>
2015	6.04	6.13	-0.08
2016	6.38	6.47	-0.09
2017	6.60	6.65	-0.04
2018	6.69	6.66	0.03
2019	6.75	6.67	0.08
2020	6.76	6.67	0.10
2021	6.76	6.67	0.10
2022	6.76	6.67	0.10
2023	6.76	6.67	0.10
2024	6.76	6.67	0.10
2025	6.76	6.67	0.10
2026	6.76	6.67	0.10
2027	6.76	6.67	0.10
2028	6.76	6.67	0.10
2029	6.76	6.67	0.10
2030	6.76	6.67	0.10
2031	6.76	6.67	0.10
2032	6.76	6.67	0.10
2033	6.76	6.67	0.10
2034	6.76	6.67	0.10
2035	6.76	6.67	0.10
2036	6.76	6.67	0.10
2037	6.76	6.67	0.10
2038	6.76	6.67	0.10
2039	6.76	6.67	0.10
2040	6.76	6.67	0.10
2041	6.76	6.67	0.10
2042	6.76	6.67	0.10
2043	6.76	6.67	0.10
2044	6.76	6.67	0.10

1/ Global Insight: The U.S. Economy: 30-Year Focus, August 2014 Forecast, Base Case.

2/ Global Insight: The U.S. Economy: 30-year Focus, September 2013 Forecast, Base Case.

Table 3
20 Year Treasury Yields and BPA Borrowing Rates
 FY 2015 Forecast of BPA Borrowing Rates

Fiscal Years 2015-2044

Year	A	B	C	D	E
	Bond Rate 1/ <u>Calendar Year</u>	Bond Rate 2/ <u>Fiscal Year</u>	BPA Rate 3/ No Premium <u>Fiscal Year</u>	BPA Rate 4/ Coupon Scale-Down <u>Fiscal Year</u>	BPA Rate 5/ Callable at Par <u>Fiscal Year</u>
2014	3.41				
2015	3.74	3.00	4.15	5.18	5.39
2016	4.11	4.01	4.53	5.58	5.79
2017	4.41	4.33	4.88	5.94	6.16
2018	4.41	4.41	4.99	6.06	6.28
2019	4.41	4.41	5.02	6.10	6.33
2020	4.41	4.41	5.02	6.11	6.35
2021	4.41	4.41	5.02	6.11	6.35
2022	4.41	4.41	5.02	6.11	6.35
2023	4.41	4.41	5.02	6.11	6.35
2024	4.41	4.41	5.02	6.11	6.35
2025	4.41	4.41	5.02	6.11	6.35
2026	4.41	4.41	5.02	6.11	6.35
2027	4.41	4.41	5.02	6.11	6.35
2028	4.41	4.41	5.02	6.11	6.35
2029	4.41	4.41	5.02	6.11	6.35
2030	4.41	4.41	5.02	6.11	6.35
2031	4.41	4.41	5.02	6.11	6.35
2032	4.41	4.41	5.02	6.11	6.35
2033	4.41	4.41	5.02	6.11	6.35
2034	4.41	4.41	5.02	6.11	6.35
2035	4.41	4.41	5.02	6.11	6.35
2036	4.41	4.41	5.02	6.11	6.35
2037	4.41	4.41	5.02	6.11	6.35
2038	4.41	4.41	5.02	6.11	6.35
2039	4.41	4.41	5.02	6.11	6.35
2040	4.41	4.41	5.02	6.11	6.35
2041	4.41	4.41	5.02	6.11	6.35
2042	4.41	4.41	5.02	6.11	6.35
2043	4.41	4.41	5.02	6.11	6.35
2044	4.41	4.41	5.02	6.11	6.35

1/ Global Insight: The U.S. Economy: 30-Year Focus, August 2014 Forecast, Base Case.

2/ FY 2015 Appropriation rates are determined in accordance with BPA Appropriations Refinancing Act, 16 U.S.C. 8381 enacted on April 26, 1996, and are independent of the Global Insight Treasury Yield forecasts.

3/ Column C = Column B + U.S. Treasury borrowing markup, no premium

4/ Column D = Column B + U.S. Treasury borrowing markup + Coupon Scale-Down premium

5/ Column E = Column B + U.S. Treasury borrowing markup + Callable at Par premium

Table 4
15 Year Treasury Yields and BPA Borrowing Rates
 FY 2015 Forecast of BPA Borrowing Rates

Fiscal Years 2015-2044

Year	A	B	C	D	E
	Bond Rate 1/ <u>Calendar Year</u>	Bond Rate 2/ <u>Fiscal Year</u>	BPA Rate 3/ No Premium <u>Fiscal Year</u>	BPA Rate 4/ Coupon Scale-Down <u>Fiscal Year</u>	BPA Rate 5/ Callable at Par <u>Fiscal Year</u>
2014	3.16				
2015	3.50	2.84	3.92	4.86	5.06
2016	3.92	3.81	4.34	5.29	5.50
2017	4.30	4.21	4.75	5.72	5.93
2018	4.31	4.31	4.87	5.86	6.08
2019	4.31	4.31	4.90	5.89	6.12
2020	4.31	4.31	4.90	5.90	6.14
2021	4.31	4.31	4.90	5.90	6.14
2022	4.31	4.31	4.90	5.90	6.14
2023	4.31	4.31	4.90	5.90	6.14
2024	4.31	4.31	4.90	5.90	6.14
2025	4.31	4.31	4.90	5.90	6.14
2026	4.31	4.31	4.90	5.90	6.14
2027	4.31	4.31	4.90	5.90	6.14
2028	4.31	4.31	4.90	5.90	6.14
2029	4.31	4.31	4.90	5.90	6.14
2030	4.31	4.31	4.90	5.90	6.14
2031	4.31	4.31	4.90	5.90	6.14
2032	4.31	4.31	4.90	5.90	6.14
2033	4.31	4.31	4.90	5.90	6.14
2034	4.31	4.31	4.90	5.90	6.14
2035	4.31	4.31	4.90	5.90	6.14
2036	4.31	4.31	4.90	5.90	6.14
2037	4.31	4.31	4.90	5.90	6.14
2038	4.31	4.31	4.90	5.90	6.14
2039	4.31	4.31	4.90	5.90	6.14
2040	4.31	4.31	4.90	5.90	6.14
2041	4.31	4.31	4.90	5.90	6.14
2042	4.31	4.31	4.90	5.90	6.14
2043	4.31	4.31	4.90	5.90	6.14
2044	4.31	4.31	4.90	5.90	6.14

1/ Global Insight: The U.S. Economy: 30-Year Focus, August 2014 Forecast, Base Case.

2/ FY 2015 Appropriation rates are determined in accordance with BPA Appropriations Refinancing Act, 16 U.S.C. 8381 enacted on April 26, 1996, and are independent of the Global Insight Treasury Yield forecasts.

3/ Column C = Column B + U.S. Treasury borrowing markup, no premium

4/ Column D = Column B + U.S. Treasury borrowing markup + Coupon Scale-Down premium

5/ Column E = Column B + U.S. Treasury borrowing markup + Callable at Par premium

Table 5
BPA FY 2015 Appropriation Borrowing Rate Forecast 1/

Fiscal Years 2015-2044
 (continued on next page)

Maturity

<u>Year</u>	<u>1 Year</u>	<u>2 Year</u>	<u>3 Year</u>	<u>4 Year</u>	<u>5 Year</u>	<u>6 Year</u>	<u>7 Year</u>	<u>8 Year</u>	<u>9 Year</u>	<u>10 Year</u>	<u>11 Year</u>	<u>12 Year</u>	<u>13 Year</u>	<u>14 Year</u>	<u>15 Year</u>
2015	0.29	0.77	1.21	1.57	1.86	2.08	2.24	2.36	2.46	2.50	2.63	2.65	2.75	2.75	2.84
2016	1.93	2.22	2.39	2.57	2.75	2.92	3.09	3.27	3.44	3.61	3.65	3.69	3.73	3.77	3.81
2017	3.28	3.45	3.55	3.66	3.76	3.82	3.89	3.95	4.02	4.08	4.10	4.13	4.16	4.18	4.21
2018	3.60	3.74	3.83	3.93	4.03	4.06	4.10	4.14	4.17	4.21	4.23	4.25	4.27	4.29	4.31
2019	3.61	3.74	3.84	3.94	4.03	4.07	4.11	4.14	4.18	4.21	4.23	4.25	4.27	4.29	4.31
2020	3.61	3.74	3.84	3.94	4.03	4.07	4.11	4.14	4.18	4.21	4.23	4.25	4.27	4.29	4.31
2021	3.61	3.74	3.84	3.94	4.03	4.07	4.11	4.14	4.18	4.21	4.23	4.25	4.27	4.29	4.31
2022	3.61	3.74	3.84	3.94	4.03	4.07	4.11	4.14	4.18	4.21	4.23	4.25	4.27	4.29	4.31
2023	3.61	3.74	3.84	3.94	4.03	4.07	4.11	4.14	4.18	4.21	4.23	4.25	4.27	4.29	4.31
2024	3.61	3.74	3.84	3.94	4.03	4.07	4.11	4.14	4.18	4.21	4.23	4.25	4.27	4.29	4.31
2025	3.61	3.74	3.84	3.94	4.03	4.07	4.11	4.14	4.18	4.21	4.23	4.25	4.27	4.29	4.31
2026	3.61	3.74	3.84	3.94	4.03	4.07	4.11	4.14	4.18	4.21	4.23	4.25	4.27	4.29	4.31
2027	3.61	3.74	3.84	3.94	4.03	4.07	4.11	4.14	4.18	4.21	4.23	4.25	4.27	4.29	4.31
2028	3.61	3.74	3.84	3.94	4.03	4.07	4.11	4.14	4.18	4.21	4.23	4.25	4.27	4.29	4.31
2029	3.61	3.74	3.84	3.94	4.03	4.07	4.11	4.14	4.18	4.21	4.23	4.25	4.27	4.29	4.31
2030	3.61	3.74	3.84	3.94	4.03	4.07	4.11	4.14	4.18	4.21	4.23	4.25	4.27	4.29	4.31
2031	3.61	3.74	3.84	3.94	4.03	4.07	4.11	4.14	4.18	4.21	4.23	4.25	4.27	4.29	4.31
2032	3.61	3.74	3.84	3.94	4.03	4.07	4.11	4.14	4.18	4.21	4.23	4.25	4.27	4.29	4.31
2033	3.61	3.74	3.84	3.94	4.03	4.07	4.11	4.14	4.18	4.21	4.23	4.25	4.27	4.29	4.31
2034	3.61	3.74	3.84	3.94	4.03	4.07	4.11	4.14	4.18	4.21	4.23	4.25	4.27	4.29	4.31
2035	3.61	3.74	3.84	3.94	4.03	4.07	4.11	4.14	4.18	4.21	4.23	4.25	4.27	4.29	4.31
2036	3.61	3.74	3.84	3.94	4.03	4.07	4.11	4.14	4.18	4.21	4.23	4.25	4.27	4.29	4.31
2037	3.61	3.74	3.84	3.94	4.03	4.07	4.11	4.14	4.18	4.21	4.23	4.25	4.27	4.29	4.31
2038	3.61	3.74	3.84	3.94	4.03	4.07	4.11	4.14	4.18	4.21	4.23	4.25	4.27	4.29	4.31
2039	3.61	3.74	3.84	3.94	4.03	4.07	4.11	4.14	4.18	4.21	4.23	4.25	4.27	4.29	4.31
2040	3.61	3.74	3.84	3.94	4.03	4.07	4.11	4.14	4.18	4.21	4.23	4.25	4.27	4.29	4.31
2041	3.61	3.74	3.84	3.94	4.03	4.07	4.11	4.14	4.18	4.21	4.23	4.25	4.27	4.29	4.31
2042	3.61	3.74	3.84	3.94	4.03	4.07	4.11	4.14	4.18	4.21	4.23	4.25	4.27	4.29	4.31
2043	3.61	3.74	3.84	3.94	4.03	4.07	4.11	4.14	4.18	4.21	4.23	4.25	4.27	4.29	4.31
2044	3.61	3.74	3.84	3.94	4.03	4.07	4.11	4.14	4.18	4.21	4.23	4.25	4.27	4.29	4.31

1/ Global Insight: The U.S. Economy: 30-Year Focus, August 2014 Forecast, Base Case.

2/ FY 2015 Appropriation rates are determined in accordance with BPA Appropriations Refinancing Act, 16 U.S.C. 8381 enacted on April 26, 1996, and are independent of the Global Insight Treasury Yield forecasts.

Table 5
BPA FY 2015 Appropriation Borrowing Rate Forecast 1/

Fiscal Years 2015-2044

Maturity

<u>16 Year</u>	<u>17 Year</u>	<u>18 Year</u>	<u>19 Year</u>	<u>20 Year</u>	<u>21 Year</u>	<u>22 Year</u>	<u>23 Year</u>	<u>24 Year</u>	<u>25 Year</u>	<u>26 Year</u>	<u>27 Year</u>	<u>28 Year</u>	<u>29 Year</u>	<u>30 Year</u>	<u>50 Year</u>	<u>Year</u>
2.88	2.88	2.96	3.00	3.00	3.00	3.08	3.13	3.13	3.13	3.15	3.25	3.25	3.25	3.25	3.25	2015
3.85	3.89	3.93	3.97	4.01	4.05	4.09	4.13	4.17	4.21	4.25	4.29	4.33	4.38	4.42	4.42	2016
4.23	4.26	4.28	4.31	4.33	4.36	4.38	4.41	4.43	4.46	4.48	4.51	4.53	4.56	4.58	4.58	2017
4.33	4.35	4.37	4.39	4.41	4.43	4.45	4.47	4.49	4.51	4.53	4.55	4.57	4.59	4.61	4.61	2018
4.33	4.35	4.37	4.39	4.41	4.43	4.45	4.47	4.49	4.51	4.53	4.55	4.57	4.59	4.61	4.61	2019
4.33	4.35	4.37	4.39	4.41	4.43	4.45	4.47	4.49	4.51	4.53	4.55	4.57	4.59	4.61	4.61	2020
4.33	4.35	4.37	4.39	4.41	4.43	4.45	4.47	4.49	4.51	4.53	4.55	4.57	4.59	4.61	4.61	2021
4.33	4.35	4.37	4.39	4.41	4.43	4.45	4.47	4.49	4.51	4.53	4.55	4.57	4.59	4.61	4.61	2022
4.33	4.35	4.37	4.39	4.41	4.43	4.45	4.47	4.49	4.51	4.53	4.55	4.57	4.59	4.61	4.61	2023
4.33	4.35	4.37	4.39	4.41	4.43	4.45	4.47	4.49	4.51	4.53	4.55	4.57	4.59	4.61	4.61	2024
4.33	4.35	4.37	4.39	4.41	4.43	4.45	4.47	4.49	4.51	4.53	4.55	4.57	4.59	4.61	4.61	2025
4.33	4.35	4.37	4.39	4.41	4.43	4.45	4.47	4.49	4.51	4.53	4.55	4.57	4.59	4.61	4.61	2026
4.33	4.35	4.37	4.39	4.41	4.43	4.45	4.47	4.49	4.51	4.53	4.55	4.57	4.59	4.61	4.61	2027
4.33	4.35	4.37	4.39	4.41	4.43	4.45	4.47	4.49	4.51	4.53	4.55	4.57	4.59	4.61	4.61	2028
4.33	4.35	4.37	4.39	4.41	4.43	4.45	4.47	4.49	4.51	4.53	4.55	4.57	4.59	4.61	4.61	2029
4.33	4.35	4.37	4.39	4.41	4.43	4.45	4.47	4.49	4.51	4.53	4.55	4.57	4.59	4.61	4.61	2030
4.33	4.35	4.37	4.39	4.41	4.43	4.45	4.47	4.49	4.51	4.53	4.55	4.57	4.59	4.61	4.61	2031
4.33	4.35	4.37	4.39	4.41	4.43	4.45	4.47	4.49	4.51	4.53	4.55	4.57	4.59	4.61	4.61	2032
4.33	4.35	4.37	4.39	4.41	4.43	4.45	4.47	4.49	4.51	4.53	4.55	4.57	4.59	4.61	4.61	2033
4.33	4.35	4.37	4.39	4.41	4.43	4.45	4.47	4.49	4.51	4.53	4.55	4.57	4.59	4.61	4.61	2034
4.33	4.35	4.37	4.39	4.41	4.43	4.45	4.47	4.49	4.51	4.53	4.55	4.57	4.59	4.61	4.61	2035
4.33	4.35	4.37	4.39	4.41	4.43	4.45	4.47	4.49	4.51	4.53	4.55	4.57	4.59	4.61	4.61	2036
4.33	4.35	4.37	4.39	4.41	4.43	4.45	4.47	4.49	4.51	4.53	4.55	4.57	4.59	4.61	4.61	2037
4.33	4.35	4.37	4.39	4.41	4.43	4.45	4.47	4.49	4.51	4.53	4.55	4.57	4.59	4.61	4.61	2038
4.33	4.35	4.37	4.39	4.41	4.43	4.45	4.47	4.49	4.51	4.53	4.55	4.57	4.59	4.61	4.61	2039
4.33	4.35	4.37	4.39	4.41	4.43	4.45	4.47	4.49	4.51	4.53	4.55	4.57	4.59	4.61	4.61	2040
4.33	4.35	4.37	4.39	4.41	4.43	4.45	4.47	4.49	4.51	4.53	4.55	4.57	4.59	4.61	4.61	2041
4.33	4.35	4.37	4.39	4.41	4.43	4.45	4.47	4.49	4.51	4.53	4.55	4.57	4.59	4.61	4.61	2042
4.33	4.35	4.37	4.39	4.41	4.43	4.45	4.47	4.49	4.51	4.53	4.55	4.57	4.59	4.61	4.61	2043
4.33	4.35	4.37	4.39	4.41	4.43	4.45	4.47	4.49	4.51	4.53	4.55	4.57	4.59	4.61	4.61	2044

1/ Global Insight: The U.S. Economy: 30-Year Focus, August 2014 Forecast, Base Case.

2/ FY 2015 Appropriation rates are determined in accordance with BPA Appropriations Refinancing Act, 16 U.S.C. 8381 enacted on April 26, 1996, and are independent of the Global Insight Treasury Yield forecasts.

Table 6
BPA FY 2015 BPA Borrowing Rate - No Premium 1/

Fiscal Years 2015-2044
 (continued on next page)

Maturity

<u>Year</u>	<u>1 Year</u>	<u>2 Year</u>	<u>3 Year</u>	<u>4 Year</u>	<u>5 Year</u>	<u>6 Year</u>	<u>7 Year</u>	<u>8 Year</u>	<u>9 Year</u>	<u>10 Year</u>	<u>11 Year</u>	<u>12 Year</u>	<u>13 Year</u>	<u>14 Year</u>	<u>15 Year</u>
2015	0.56	0.90	1.30	1.70	2.10	2.42	2.74	3.06	3.38	3.70	3.74	3.79	3.83	3.88	3.92
2016	2.06	2.36	2.58	2.80	3.02	3.25	3.47	3.70	3.92	4.14	4.18	4.22	4.26	4.30	4.34
2017	3.45	3.65	3.80	3.95	4.09	4.20	4.31	4.41	4.52	4.62	4.65	4.67	4.70	4.72	4.75
2018	3.81	3.98	4.13	4.27	4.42	4.49	4.56	4.62	4.69	4.76	4.78	4.81	4.83	4.85	4.87
2019	3.85	4.04	4.19	4.33	4.48	4.54	4.60	4.66	4.72	4.77	4.80	4.82	4.85	4.87	4.90
2020	3.85	4.04	4.19	4.33	4.48	4.54	4.60	4.66	4.72	4.77	4.80	4.82	4.85	4.87	4.90
2021	3.85	4.04	4.19	4.33	4.48	4.54	4.60	4.66	4.72	4.77	4.80	4.82	4.85	4.87	4.90
2022	3.85	4.04	4.19	4.33	4.48	4.54	4.60	4.66	4.72	4.77	4.80	4.82	4.85	4.87	4.90
2023	3.85	4.04	4.19	4.33	4.48	4.54	4.60	4.66	4.72	4.77	4.80	4.82	4.85	4.87	4.90
2024	3.85	4.04	4.19	4.33	4.48	4.54	4.60	4.66	4.72	4.77	4.80	4.82	4.85	4.87	4.90
2025	3.85	4.04	4.19	4.33	4.48	4.54	4.60	4.66	4.72	4.77	4.80	4.82	4.85	4.87	4.90
2026	3.85	4.04	4.19	4.33	4.48	4.54	4.60	4.66	4.72	4.77	4.80	4.82	4.85	4.87	4.90
2027	3.85	4.04	4.19	4.33	4.48	4.54	4.60	4.66	4.72	4.77	4.80	4.82	4.85	4.87	4.90
2028	3.85	4.04	4.19	4.33	4.48	4.54	4.60	4.66	4.72	4.77	4.80	4.82	4.85	4.87	4.90
2029	3.85	4.04	4.19	4.33	4.48	4.54	4.60	4.66	4.72	4.77	4.80	4.82	4.85	4.87	4.90
2030	3.85	4.04	4.19	4.33	4.48	4.54	4.60	4.66	4.72	4.77	4.80	4.82	4.85	4.87	4.90
2031	3.85	4.04	4.19	4.33	4.48	4.54	4.60	4.66	4.72	4.77	4.80	4.82	4.85	4.87	4.90
2032	3.85	4.04	4.19	4.33	4.48	4.54	4.60	4.66	4.72	4.77	4.80	4.82	4.85	4.87	4.90
2033	3.85	4.04	4.19	4.33	4.48	4.54	4.60	4.66	4.72	4.77	4.80	4.82	4.85	4.87	4.90
2034	3.85	4.04	4.19	4.33	4.48	4.54	4.60	4.66	4.72	4.77	4.80	4.82	4.85	4.87	4.90
2035	3.85	4.04	4.19	4.33	4.48	4.54	4.60	4.66	4.72	4.77	4.80	4.82	4.85	4.87	4.90
2036	3.85	4.04	4.19	4.33	4.48	4.54	4.60	4.66	4.72	4.77	4.80	4.82	4.85	4.87	4.90
2037	3.85	4.04	4.19	4.33	4.48	4.54	4.60	4.66	4.72	4.77	4.80	4.82	4.85	4.87	4.90
2038	3.85	4.04	4.19	4.33	4.48	4.54	4.60	4.66	4.72	4.77	4.80	4.82	4.85	4.87	4.90
2039	3.85	4.04	4.19	4.33	4.48	4.54	4.60	4.66	4.72	4.77	4.80	4.82	4.85	4.87	4.90
2040	3.85	4.04	4.19	4.33	4.48	4.54	4.60	4.66	4.72	4.77	4.80	4.82	4.85	4.87	4.90
2041	3.85	4.04	4.19	4.33	4.48	4.54	4.60	4.66	4.72	4.77	4.80	4.82	4.85	4.87	4.90
2042	3.85	4.04	4.19	4.33	4.48	4.54	4.60	4.66	4.72	4.77	4.80	4.82	4.85	4.87	4.90
2043	3.85	4.04	4.19	4.33	4.48	4.54	4.60	4.66	4.72	4.77	4.80	4.82	4.85	4.87	4.90
2044	3.85	4.04	4.19	4.33	4.48	4.54	4.60	4.66	4.72	4.77	4.80	4.82	4.85	4.87	4.90

1/ Global Insight: The U.S. Economy: 30-Year Focus, August 2014 Forecast, Base Case.

Table 6
BPA FY 2015 BPA Borrowing Rate - No Premium 1/

Fiscal Years 2015-2044

Maturity

<u>16 Year</u>	<u>17 Year</u>	<u>18 Year</u>	<u>19 Year</u>	<u>20 Year</u>	<u>21 Year</u>	<u>22 Year</u>	<u>23 Year</u>	<u>24 Year</u>	<u>25 Year</u>	<u>26 Year</u>	<u>27 Year</u>	<u>28 Year</u>	<u>29 Year</u>	<u>30 Year</u>	<u>50 Year</u>	<u>Year</u>
3.97	4.01	4.06	4.10	4.15	4.19	4.24	4.28	4.33	4.37	4.42	4.47	4.51	4.56	4.60	4.60	2015
4.38	4.42	4.46	4.50	4.53	4.57	4.61	4.65	4.69	4.73	4.77	4.81	4.85	4.89	4.93	4.93	2016
4.78	4.80	4.83	4.85	4.88	4.91	4.93	4.96	4.98	5.01	5.04	5.06	5.09	5.11	5.14	5.14	2017
4.90	4.92	4.94	4.97	4.99	5.01	5.03	5.06	5.08	5.10	5.13	5.15	5.17	5.19	5.22	5.22	2018
4.92	4.95	4.97	4.99	5.02	5.04	5.07	5.09	5.12	5.14	5.17	5.19	5.21	5.24	5.26	5.26	2019
4.92	4.95	4.97	4.99	5.02	5.04	5.07	5.09	5.12	5.14	5.17	5.19	5.21	5.24	5.26	5.26	2020
4.92	4.95	4.97	4.99	5.02	5.04	5.07	5.09	5.12	5.14	5.17	5.19	5.21	5.24	5.26	5.26	2021
4.92	4.95	4.97	4.99	5.02	5.04	5.07	5.09	5.12	5.14	5.17	5.19	5.21	5.24	5.26	5.26	2022
4.92	4.95	4.97	4.99	5.02	5.04	5.07	5.09	5.12	5.14	5.17	5.19	5.21	5.24	5.26	5.26	2023
4.92	4.95	4.97	4.99	5.02	5.04	5.07	5.09	5.12	5.14	5.17	5.19	5.21	5.24	5.26	5.26	2024
4.92	4.95	4.97	4.99	5.02	5.04	5.07	5.09	5.12	5.14	5.17	5.19	5.21	5.24	5.26	5.26	2025
4.92	4.95	4.97	4.99	5.02	5.04	5.07	5.09	5.12	5.14	5.17	5.19	5.21	5.24	5.26	5.26	2026
4.92	4.95	4.97	4.99	5.02	5.04	5.07	5.09	5.12	5.14	5.17	5.19	5.21	5.24	5.26	5.26	2027
4.92	4.95	4.97	4.99	5.02	5.04	5.07	5.09	5.12	5.14	5.17	5.19	5.21	5.24	5.26	5.26	2028
4.92	4.95	4.97	4.99	5.02	5.04	5.07	5.09	5.12	5.14	5.17	5.19	5.21	5.24	5.26	5.26	2029
4.92	4.95	4.97	4.99	5.02	5.04	5.07	5.09	5.12	5.14	5.17	5.19	5.21	5.24	5.26	5.26	2030
4.92	4.95	4.97	4.99	5.02	5.04	5.07	5.09	5.12	5.14	5.17	5.19	5.21	5.24	5.26	5.26	2031
4.92	4.95	4.97	4.99	5.02	5.04	5.07	5.09	5.12	5.14	5.17	5.19	5.21	5.24	5.26	5.26	2032
4.92	4.95	4.97	4.99	5.02	5.04	5.07	5.09	5.12	5.14	5.17	5.19	5.21	5.24	5.26	5.26	2033
4.92	4.95	4.97	4.99	5.02	5.04	5.07	5.09	5.12	5.14	5.17	5.19	5.21	5.24	5.26	5.26	2034
4.92	4.95	4.97	4.99	5.02	5.04	5.07	5.09	5.12	5.14	5.17	5.19	5.21	5.24	5.26	5.26	2035
4.92	4.95	4.97	4.99	5.02	5.04	5.07	5.09	5.12	5.14	5.17	5.19	5.21	5.24	5.26	5.26	2036
4.92	4.95	4.97	4.99	5.02	5.04	5.07	5.09	5.12	5.14	5.17	5.19	5.21	5.24	5.26	5.26	2037
4.92	4.95	4.97	4.99	5.02	5.04	5.07	5.09	5.12	5.14	5.17	5.19	5.21	5.24	5.26	5.26	2038
4.92	4.95	4.97	4.99	5.02	5.04	5.07	5.09	5.12	5.14	5.17	5.19	5.21	5.24	5.26	5.26	2039
4.92	4.95	4.97	4.99	5.02	5.04	5.07	5.09	5.12	5.14	5.17	5.19	5.21	5.24	5.26	5.26	2040
4.92	4.95	4.97	4.99	5.02	5.04	5.07	5.09	5.12	5.14	5.17	5.19	5.21	5.24	5.26	5.26	2041
4.92	4.95	4.97	4.99	5.02	5.04	5.07	5.09	5.12	5.14	5.17	5.19	5.21	5.24	5.26	5.26	2042
4.92	4.95	4.97	4.99	5.02	5.04	5.07	5.09	5.12	5.14	5.17	5.19	5.21	5.24	5.26	5.26	2043
4.92	4.95	4.97	4.99	5.02	5.04	5.07	5.09	5.12	5.14	5.17	5.19	5.21	5.24	5.26	5.26	2044

1/ Global Insight: The U.S. Economy: 30-Year Focus, August 2014 Forecast, Base Case.

Table 7
BPA FY 2015 BPA Borrowing Rate - Coupon Scale-Down Redemption Premium 1/

Fiscal Years 2015-2044
 (continued on next page)

<u>Maturity</u>															
<u>Year</u>	<u>1 Year</u>	<u>2 Year</u>	<u>3 Year</u>	<u>4 Year</u>	<u>5 Year</u>	<u>6 Year</u>	<u>7 Year</u>	<u>8 Year</u>	<u>9 Year</u>	<u>10 Year</u>	<u>11 Year</u>	<u>12 Year</u>	<u>13 Year</u>	<u>14 Year</u>	<u>15 Year</u>
2015	0.65	1.07	1.55	2.04	2.52	2.93	3.33	3.74	4.14	4.55	4.61	4.67	4.74	4.80	4.86
2016	2.15	2.53	2.84	3.15	3.46	3.77	4.08	4.39	4.70	5.01	5.07	5.12	5.18	5.24	5.29
2017	3.54	3.82	4.06	4.30	4.54	4.73	4.92	5.12	5.31	5.50	5.55	5.59	5.63	5.68	5.72
2018	3.90	4.16	4.40	4.63	4.87	5.03	5.18	5.34	5.50	5.66	5.70	5.74	5.78	5.82	5.86
2019	3.94	4.22	4.46	4.70	4.94	5.09	5.24	5.39	5.54	5.69	5.73	5.77	5.81	5.85	5.89
2020	3.95	4.23	4.47	4.71	4.95	5.10	5.25	5.40	5.55	5.70	5.74	5.78	5.82	5.86	5.90
2021	3.95	4.23	4.47	4.71	4.95	5.10	5.25	5.40	5.55	5.70	5.74	5.78	5.82	5.86	5.90
2022	3.95	4.23	4.47	4.71	4.95	5.10	5.25	5.40	5.55	5.70	5.74	5.78	5.82	5.86	5.90
2023	3.95	4.23	4.47	4.71	4.95	5.10	5.25	5.40	5.55	5.70	5.74	5.78	5.82	5.86	5.90
2024	3.95	4.23	4.47	4.71	4.95	5.10	5.25	5.40	5.55	5.70	5.74	5.78	5.82	5.86	5.90
2025	3.95	4.23	4.47	4.71	4.95	5.10	5.25	5.40	5.55	5.70	5.74	5.78	5.82	5.86	5.90
2026	3.95	4.23	4.47	4.71	4.95	5.10	5.25	5.40	5.55	5.70	5.74	5.78	5.82	5.86	5.90
2027	3.95	4.23	4.47	4.71	4.95	5.10	5.25	5.40	5.55	5.70	5.74	5.78	5.82	5.86	5.90
2028	3.95	4.23	4.47	4.71	4.95	5.10	5.25	5.40	5.55	5.70	5.74	5.78	5.82	5.86	5.90
2029	3.95	4.23	4.47	4.71	4.95	5.10	5.25	5.40	5.55	5.70	5.74	5.78	5.82	5.86	5.90
2030	3.95	4.23	4.47	4.71	4.95	5.10	5.25	5.40	5.55	5.70	5.74	5.78	5.82	5.86	5.90
2031	3.95	4.23	4.47	4.71	4.95	5.10	5.25	5.40	5.55	5.70	5.74	5.78	5.82	5.86	5.90
2032	3.95	4.23	4.47	4.71	4.95	5.10	5.25	5.40	5.55	5.70	5.74	5.78	5.82	5.86	5.90
2033	3.95	4.23	4.47	4.71	4.95	5.10	5.25	5.40	5.55	5.70	5.74	5.78	5.82	5.86	5.90
2034	3.95	4.23	4.47	4.71	4.95	5.10	5.25	5.40	5.55	5.70	5.74	5.78	5.82	5.86	5.90
2035	3.95	4.23	4.47	4.71	4.95	5.10	5.25	5.40	5.55	5.70	5.74	5.78	5.82	5.86	5.90
2036	3.95	4.23	4.47	4.71	4.95	5.10	5.25	5.40	5.55	5.70	5.74	5.78	5.82	5.86	5.90
2037	3.95	4.23	4.47	4.71	4.95	5.10	5.25	5.40	5.55	5.70	5.74	5.78	5.82	5.86	5.90
2038	3.95	4.23	4.47	4.71	4.95	5.10	5.25	5.40	5.55	5.70	5.74	5.78	5.82	5.86	5.90
2039	3.95	4.23	4.47	4.71	4.95	5.10	5.25	5.40	5.55	5.70	5.74	5.78	5.82	5.86	5.90
2040	3.95	4.23	4.47	4.71	4.95	5.10	5.25	5.40	5.55	5.70	5.74	5.78	5.82	5.86	5.90
2041	3.95	4.23	4.47	4.71	4.95	5.10	5.25	5.40	5.55	5.70	5.74	5.78	5.82	5.86	5.90
2042	3.95	4.23	4.47	4.71	4.95	5.10	5.25	5.40	5.55	5.70	5.74	5.78	5.82	5.86	5.90
2043	3.95	4.23	4.47	4.71	4.95	5.10	5.25	5.40	5.55	5.70	5.74	5.78	5.82	5.86	5.90
2044	3.95	4.23	4.47	4.71	4.95	5.10	5.25	5.40	5.55	5.70	5.74	5.78	5.82	5.86	5.90

1/ Global Insight: The U.S. Economy: 30-Year Focus, August 2014 Forecast, Base Case.

Table 7
BPA FY 2015 BPA Borrowing Rate - Coupon Scale-Down Redemption Premium 1/

Fiscal Years 2015-2044

<u>Maturity</u>																
<u>16 Year</u>	<u>17 Year</u>	<u>18 Year</u>	<u>19 Year</u>	<u>20 Year</u>	<u>21 Year</u>	<u>22 Year</u>	<u>23 Year</u>	<u>24 Year</u>	<u>25 Year</u>	<u>26 Year</u>	<u>27 Year</u>	<u>28 Year</u>	<u>29 Year</u>	<u>30 Year</u>	<u>50 Year</u>	<u>Year</u>
4.93	4.99	5.05	5.12	5.18	5.25	5.31	5.37	5.44	5.50	5.56	5.63	5.69	5.75	5.82	5.82	2015
5.35	5.41	5.46	5.52	5.58	5.64	5.69	5.75	5.81	5.86	5.92	5.98	6.03	6.09	6.15	6.15	2016
5.76	5.81	5.85	5.89	5.94	5.98	6.02	6.06	6.11	6.15	6.19	6.24	6.28	6.32	6.37	6.37	2017
5.90	5.94	5.98	6.02	6.06	6.09	6.13	6.17	6.21	6.25	6.29	6.33	6.37	6.41	6.45	6.45	2018
5.93	5.97	6.01	6.05	6.10	6.14	6.18	6.22	6.26	6.30	6.34	6.38	6.42	6.46	6.50	6.50	2019
5.95	5.99	6.03	6.07	6.11	6.15	6.19	6.23	6.27	6.31	6.35	6.39	6.43	6.47	6.51	6.51	2020
5.95	5.99	6.03	6.07	6.11	6.15	6.19	6.23	6.27	6.31	6.35	6.39	6.43	6.47	6.51	6.51	2021
5.95	5.99	6.03	6.07	6.11	6.15	6.19	6.23	6.27	6.31	6.35	6.39	6.43	6.47	6.51	6.51	2022
5.95	5.99	6.03	6.07	6.11	6.15	6.19	6.23	6.27	6.31	6.35	6.39	6.43	6.47	6.51	6.51	2023
5.95	5.99	6.03	6.07	6.11	6.15	6.19	6.23	6.27	6.31	6.35	6.39	6.43	6.47	6.51	6.51	2024
5.95	5.99	6.03	6.07	6.11	6.15	6.19	6.23	6.27	6.31	6.35	6.39	6.43	6.47	6.51	6.51	2025
5.95	5.99	6.03	6.07	6.11	6.15	6.19	6.23	6.27	6.31	6.35	6.39	6.43	6.47	6.51	6.51	2026
5.95	5.99	6.03	6.07	6.11	6.15	6.19	6.23	6.27	6.31	6.35	6.39	6.43	6.47	6.51	6.51	2027
5.95	5.99	6.03	6.07	6.11	6.15	6.19	6.23	6.27	6.31	6.35	6.39	6.43	6.47	6.51	6.51	2028
5.95	5.99	6.03	6.07	6.11	6.15	6.19	6.23	6.27	6.31	6.35	6.39	6.43	6.47	6.51	6.51	2029
5.95	5.99	6.03	6.07	6.11	6.15	6.19	6.23	6.27	6.31	6.35	6.39	6.43	6.47	6.51	6.51	2030
5.95	5.99	6.03	6.07	6.11	6.15	6.19	6.23	6.27	6.31	6.35	6.39	6.43	6.47	6.51	6.51	2031
5.95	5.99	6.03	6.07	6.11	6.15	6.19	6.23	6.27	6.31	6.35	6.39	6.43	6.47	6.51	6.51	2032
5.95	5.99	6.03	6.07	6.11	6.15	6.19	6.23	6.27	6.31	6.35	6.39	6.43	6.47	6.51	6.51	2033
5.95	5.99	6.03	6.07	6.11	6.15	6.19	6.23	6.27	6.31	6.35	6.39	6.43	6.47	6.51	6.51	2034
5.95	5.99	6.03	6.07	6.11	6.15	6.19	6.23	6.27	6.31	6.35	6.39	6.43	6.47	6.51	6.51	2035
5.95	5.99	6.03	6.07	6.11	6.15	6.19	6.23	6.27	6.31	6.35	6.39	6.43	6.47	6.51	6.51	2036
5.95	5.99	6.03	6.07	6.11	6.15	6.19	6.23	6.27	6.31	6.35	6.39	6.43	6.47	6.51	6.51	2037
5.95	5.99	6.03	6.07	6.11	6.15	6.19	6.23	6.27	6.31	6.35	6.39	6.43	6.47	6.51	6.51	2038
5.95	5.99	6.03	6.07	6.11	6.15	6.19	6.23	6.27	6.31	6.35	6.39	6.43	6.47	6.51	6.51	2039
5.95	5.99	6.03	6.07	6.11	6.15	6.19	6.23	6.27	6.31	6.35	6.39	6.43	6.47	6.51	6.51	2040
5.95	5.99	6.03	6.07	6.11	6.15	6.19	6.23	6.27	6.31	6.35	6.39	6.43	6.47	6.51	6.51	2041
5.95	5.99	6.03	6.07	6.11	6.15	6.19	6.23	6.27	6.31	6.35	6.39	6.43	6.47	6.51	6.51	2042
5.95	5.99	6.03	6.07	6.11	6.15	6.19	6.23	6.27	6.31	6.35	6.39	6.43	6.47	6.51	6.51	2043
5.95	5.99	6.03	6.07	6.11	6.15	6.19	6.23	6.27	6.31	6.35	6.39	6.43	6.47	6.51	6.51	2044

1/ Global Insight: The U.S. Economy: 30-Year Focus, August 2014 Forecast, Base Case.

Table 8
BPA FY 2015 BPA Borrowing Rate - Callable at Par 1/

Fiscal Years 2015-2044
 (continued on next page)

<u>Maturity</u>															
<u>Year</u>	<u>1 Year</u>	<u>2 Year</u>	<u>3 Year</u>	<u>4 Year</u>	<u>5 Year</u>	<u>6 Year</u>	<u>7 Year</u>	<u>8 Year</u>	<u>9 Year</u>	<u>10 Year</u>	<u>11 Year</u>	<u>12 Year</u>	<u>13 Year</u>	<u>14 Year</u>	<u>15 Year</u>
2015	0.67	1.11	1.61	2.11	2.62	3.04	3.47	3.89	4.31	4.74	4.80	4.87	4.93	5.00	5.06
2016	2.17	2.57	2.90	3.23	3.56	3.89	4.22	4.55	4.88	5.21	5.26	5.32	5.38	5.44	5.50
2017	3.56	3.86	4.12	4.38	4.64	4.85	5.07	5.28	5.49	5.71	5.75	5.80	5.84	5.89	5.93
2018	3.92	4.21	4.46	4.72	4.97	5.15	5.33	5.51	5.69	5.87	5.91	5.95	5.99	6.03	6.08
2019	3.97	4.27	4.53	4.79	5.05	5.22	5.39	5.56	5.73	5.91	5.95	5.99	6.03	6.08	6.12
2020	3.97	4.27	4.53	4.80	5.06	5.23	5.41	5.58	5.76	5.93	5.97	6.01	6.05	6.10	6.14
2021	3.97	4.27	4.53	4.80	5.06	5.23	5.41	5.58	5.76	5.93	5.97	6.01	6.05	6.10	6.14
2022	3.97	4.27	4.53	4.80	5.06	5.23	5.41	5.58	5.76	5.93	5.97	6.01	6.05	6.10	6.14
2023	3.97	4.27	4.53	4.80	5.06	5.23	5.41	5.58	5.76	5.93	5.97	6.01	6.05	6.10	6.14
2024	3.97	4.27	4.53	4.80	5.06	5.23	5.41	5.58	5.76	5.93	5.97	6.01	6.05	6.10	6.14
2025	3.97	4.27	4.53	4.80	5.06	5.23	5.41	5.58	5.76	5.93	5.97	6.01	6.05	6.10	6.14
2026	3.97	4.27	4.53	4.80	5.06	5.23	5.41	5.58	5.76	5.93	5.97	6.01	6.05	6.10	6.14
2027	3.97	4.27	4.53	4.80	5.06	5.23	5.41	5.58	5.76	5.93	5.97	6.01	6.05	6.10	6.14
2028	3.97	4.27	4.53	4.80	5.06	5.23	5.41	5.58	5.76	5.93	5.97	6.01	6.05	6.10	6.14
2029	3.97	4.27	4.53	4.80	5.06	5.23	5.41	5.58	5.76	5.93	5.97	6.01	6.05	6.10	6.14
2030	3.97	4.27	4.53	4.80	5.06	5.23	5.41	5.58	5.76	5.93	5.97	6.01	6.05	6.10	6.14
2031	3.97	4.27	4.53	4.80	5.06	5.23	5.41	5.58	5.76	5.93	5.97	6.01	6.05	6.10	6.14
2032	3.97	4.27	4.53	4.80	5.06	5.23	5.41	5.58	5.76	5.93	5.97	6.01	6.05	6.10	6.14
2033	3.97	4.27	4.53	4.80	5.06	5.23	5.41	5.58	5.76	5.93	5.97	6.01	6.05	6.10	6.14
2034	3.97	4.27	4.53	4.80	5.06	5.23	5.41	5.58	5.76	5.93	5.97	6.01	6.05	6.10	6.14
2035	3.97	4.27	4.53	4.80	5.06	5.23	5.41	5.58	5.76	5.93	5.97	6.01	6.05	6.10	6.14
2036	3.97	4.27	4.53	4.80	5.06	5.23	5.41	5.58	5.76	5.93	5.97	6.01	6.05	6.10	6.14
2037	3.97	4.27	4.53	4.80	5.06	5.23	5.41	5.58	5.76	5.93	5.97	6.01	6.05	6.10	6.14
2038	3.97	4.27	4.53	4.80	5.06	5.23	5.41	5.58	5.76	5.93	5.97	6.01	6.05	6.10	6.14
2039	3.97	4.27	4.53	4.80	5.06	5.23	5.41	5.58	5.76	5.93	5.97	6.01	6.05	6.10	6.14
2040	3.97	4.27	4.53	4.80	5.06	5.23	5.41	5.58	5.76	5.93	5.97	6.01	6.05	6.10	6.14
2041	3.97	4.27	4.53	4.80	5.06	5.23	5.41	5.58	5.76	5.93	5.97	6.01	6.05	6.10	6.14
2042	3.97	4.27	4.53	4.80	5.06	5.23	5.41	5.58	5.76	5.93	5.97	6.01	6.05	6.10	6.14
2043	3.97	4.27	4.53	4.80	5.06	5.23	5.41	5.58	5.76	5.93	5.97	6.01	6.05	6.10	6.14
2044	3.97	4.27	4.53	4.80	5.06	5.23	5.41	5.58	5.76	5.93	5.97	6.01	6.05	6.10	6.14

1/ Global Insight: The U.S. Economy: 30-Year Focus, August 2014 Forecast, Base Case.

Table 8
BPA FY 2015 BPA Borrowing Rate - Callable at Par 1/

Fiscal Years 2015-2044

Maturity

<u>16 Year</u>	<u>17 Year</u>	<u>18 Year</u>	<u>19 Year</u>	<u>20 Year</u>	<u>21 Year</u>	<u>22 Year</u>	<u>23 Year</u>	<u>24 Year</u>	<u>25 Year</u>	<u>26 Year</u>	<u>27 Year</u>	<u>28 Year</u>	<u>29 Year</u>	<u>30 Year</u>	<u>50 Year</u>	<u>Year</u>
5.13	5.19	5.26	5.32	5.39	5.45	5.52	5.59	5.65	5.72	5.78	5.85	5.91	5.98	6.04	6.04	2015
5.56	5.62	5.68	5.73	5.79	5.85	5.91	5.97	6.03	6.09	6.14	6.20	6.26	6.32	6.38	6.38	2016
5.98	6.02	6.07	6.11	6.16	6.20	6.25	6.29	6.33	6.38	6.42	6.47	6.51	6.56	6.60	6.60	2017
6.12	6.16	6.20	6.24	6.28	6.32	6.36	6.41	6.45	6.49	6.53	6.57	6.61	6.65	6.69	6.69	2018
6.16	6.20	6.24	6.29	6.33	6.37	6.41	6.46	6.50	6.54	6.58	6.62	6.67	6.71	6.75	6.75	2019
6.18	6.22	6.26	6.30	6.35	6.39	6.43	6.47	6.51	6.55	6.60	6.64	6.68	6.72	6.76	6.76	2020
6.18	6.22	6.26	6.30	6.35	6.39	6.43	6.47	6.51	6.55	6.60	6.64	6.68	6.72	6.76	6.76	2021
6.18	6.22	6.26	6.30	6.35	6.39	6.43	6.47	6.51	6.55	6.60	6.64	6.68	6.72	6.76	6.76	2022
6.18	6.22	6.26	6.30	6.35	6.39	6.43	6.47	6.51	6.55	6.60	6.64	6.68	6.72	6.76	6.76	2023
6.18	6.22	6.26	6.30	6.35	6.39	6.43	6.47	6.51	6.55	6.60	6.64	6.68	6.72	6.76	6.76	2024
6.18	6.22	6.26	6.30	6.35	6.39	6.43	6.47	6.51	6.55	6.60	6.64	6.68	6.72	6.76	6.76	2025
6.18	6.22	6.26	6.30	6.35	6.39	6.43	6.47	6.51	6.55	6.60	6.64	6.68	6.72	6.76	6.76	2026
6.18	6.22	6.26	6.30	6.35	6.39	6.43	6.47	6.51	6.55	6.60	6.64	6.68	6.72	6.76	6.76	2027
6.18	6.22	6.26	6.30	6.35	6.39	6.43	6.47	6.51	6.55	6.60	6.64	6.68	6.72	6.76	6.76	2028
6.18	6.22	6.26	6.30	6.35	6.39	6.43	6.47	6.51	6.55	6.60	6.64	6.68	6.72	6.76	6.76	2029
6.18	6.22	6.26	6.30	6.35	6.39	6.43	6.47	6.51	6.55	6.60	6.64	6.68	6.72	6.76	6.76	2030
6.18	6.22	6.26	6.30	6.35	6.39	6.43	6.47	6.51	6.55	6.60	6.64	6.68	6.72	6.76	6.76	2031
6.18	6.22	6.26	6.30	6.35	6.39	6.43	6.47	6.51	6.55	6.60	6.64	6.68	6.72	6.76	6.76	2032
6.18	6.22	6.26	6.30	6.35	6.39	6.43	6.47	6.51	6.55	6.60	6.64	6.68	6.72	6.76	6.76	2033
6.18	6.22	6.26	6.30	6.35	6.39	6.43	6.47	6.51	6.55	6.60	6.64	6.68	6.72	6.76	6.76	2034
6.18	6.22	6.26	6.30	6.35	6.39	6.43	6.47	6.51	6.55	6.60	6.64	6.68	6.72	6.76	6.76	2035
6.18	6.22	6.26	6.30	6.35	6.39	6.43	6.47	6.51	6.55	6.60	6.64	6.68	6.72	6.76	6.76	2036
6.18	6.22	6.26	6.30	6.35	6.39	6.43	6.47	6.51	6.55	6.60	6.64	6.68	6.72	6.76	6.76	2037
6.18	6.22	6.26	6.30	6.35	6.39	6.43	6.47	6.51	6.55	6.60	6.64	6.68	6.72	6.76	6.76	2038
6.18	6.22	6.26	6.30	6.35	6.39	6.43	6.47	6.51	6.55	6.60	6.64	6.68	6.72	6.76	6.76	2039
6.18	6.22	6.26	6.30	6.35	6.39	6.43	6.47	6.51	6.55	6.60	6.64	6.68	6.72	6.76	6.76	2040
6.18	6.22	6.26	6.30	6.35	6.39	6.43	6.47	6.51	6.55	6.60	6.64	6.68	6.72	6.76	6.76	2041
6.18	6.22	6.26	6.30	6.35	6.39	6.43	6.47	6.51	6.55	6.60	6.64	6.68	6.72	6.76	6.76	2042
6.18	6.22	6.26	6.30	6.35	6.39	6.43	6.47	6.51	6.55	6.60	6.64	6.68	6.72	6.76	6.76	2043
6.18	6.22	6.26	6.30	6.35	6.39	6.43	6.47	6.51	6.55	6.60	6.64	6.68	6.72	6.76	6.76	2044

1/ Global Insight: The U.S. Economy: 30-Year Focus, August 2014 Forecast, Base Case.

Table 9
BPA FY 2015 Third-Party Taxable Borrowing Rate Forecast 1/

Fiscal Years 2015-2044
 (continued on next page)

Maturity

<u>Year</u>	<u>1 Year</u>	<u>2 Year</u>	<u>3 Year</u>	<u>4 Year</u>	<u>5 Year</u>	<u>6 Year</u>	<u>7 Year</u>	<u>8 Year</u>	<u>9 Year</u>	<u>10 Year</u>	<u>11 Year</u>	<u>12 Year</u>	<u>13 Year</u>	<u>14 Year</u>	<u>15 Year</u>
2015	1.19	1.25	1.68	2.11	2.54	2.88	3.22	3.57	3.91	4.25	4.33	4.41	4.49	4.57	4.64
2016	2.71	2.98	3.19	3.41	3.62	3.85	4.07	4.30	4.53	4.76	4.83	4.90	4.96	5.03	5.10
2017	4.42	4.64	4.75	4.85	4.95	5.04	5.12	5.21	5.29	5.38	5.43	5.48	5.52	5.57	5.62
2018	4.84	5.03	5.12	5.21	5.30	5.35	5.40	5.45	5.50	5.55	5.59	5.63	5.68	5.72	5.76
2019	4.85	5.03	5.13	5.22	5.31	5.36	5.41	5.46	5.51	5.55	5.60	5.64	5.68	5.72	5.77
2020	4.85	5.03	5.13	5.22	5.31	5.36	5.41	5.46	5.51	5.55	5.60	5.64	5.68	5.72	5.77
2021	4.85	5.03	5.13	5.22	5.31	5.36	5.41	5.46	5.51	5.55	5.60	5.64	5.68	5.72	5.77
2022	4.85	5.03	5.13	5.22	5.31	5.36	5.41	5.46	5.51	5.55	5.60	5.64	5.68	5.72	5.77
2023	4.85	5.03	5.13	5.22	5.31	5.36	5.41	5.46	5.51	5.55	5.60	5.64	5.68	5.72	5.77
2024	4.85	5.03	5.13	5.22	5.31	5.36	5.41	5.46	5.51	5.55	5.60	5.64	5.68	5.72	5.77
2025	4.85	5.03	5.13	5.22	5.31	5.36	5.41	5.46	5.51	5.55	5.60	5.64	5.68	5.72	5.77
2026	4.85	5.03	5.13	5.22	5.31	5.36	5.41	5.46	5.51	5.55	5.60	5.64	5.68	5.72	5.77
2027	4.85	5.03	5.13	5.22	5.31	5.36	5.41	5.46	5.51	5.55	5.60	5.64	5.68	5.72	5.77
2028	4.85	5.03	5.13	5.22	5.31	5.36	5.41	5.46	5.51	5.55	5.60	5.64	5.68	5.72	5.77
2029	4.85	5.03	5.13	5.22	5.31	5.36	5.41	5.46	5.51	5.55	5.60	5.64	5.68	5.72	5.77
2030	4.85	5.03	5.13	5.22	5.31	5.36	5.41	5.46	5.51	5.55	5.60	5.64	5.68	5.72	5.77
2031	4.85	5.03	5.13	5.22	5.31	5.36	5.41	5.46	5.51	5.55	5.60	5.64	5.68	5.72	5.77
2032	4.85	5.03	5.13	5.22	5.31	5.36	5.41	5.46	5.51	5.55	5.60	5.64	5.68	5.72	5.77
2033	4.85	5.03	5.13	5.22	5.31	5.36	5.41	5.46	5.51	5.55	5.60	5.64	5.68	5.72	5.77
2034	4.85	5.03	5.13	5.22	5.31	5.36	5.41	5.46	5.51	5.55	5.60	5.64	5.68	5.72	5.77
2035	4.85	5.03	5.13	5.22	5.31	5.36	5.41	5.46	5.51	5.55	5.60	5.64	5.68	5.72	5.77
2036	4.85	5.03	5.13	5.22	5.31	5.36	5.41	5.46	5.51	5.55	5.60	5.64	5.68	5.72	5.77
2037	4.85	5.03	5.13	5.22	5.31	5.36	5.41	5.46	5.51	5.55	5.60	5.64	5.68	5.72	5.77
2038	4.85	5.03	5.13	5.22	5.31	5.36	5.41	5.46	5.51	5.55	5.60	5.64	5.68	5.72	5.77
2039	4.85	5.03	5.13	5.22	5.31	5.36	5.41	5.46	5.51	5.55	5.60	5.64	5.68	5.72	5.77
2040	4.85	5.03	5.13	5.22	5.31	5.36	5.41	5.46	5.51	5.55	5.60	5.64	5.68	5.72	5.77
2041	4.85	5.03	5.13	5.22	5.31	5.36	5.41	5.46	5.51	5.55	5.60	5.64	5.68	5.72	5.77
2042	4.85	5.03	5.13	5.22	5.31	5.36	5.41	5.46	5.51	5.55	5.60	5.64	5.68	5.72	5.77
2043	4.85	5.03	5.13	5.22	5.31	5.36	5.41	5.46	5.51	5.55	5.60	5.64	5.68	5.72	5.77
2044	4.85	5.03	5.13	5.22	5.31	5.36	5.41	5.46	5.51	5.55	5.60	5.64	5.68	5.72	5.77

1/ Global Insight: The U.S. Economy: 30-Year Focus, August 2014 Forecast, Base Case.

Table 9
BPA FY 2015 Third-Party Taxable Borrowing Rate Forecast 1/

Fiscal Years 2015-2044

Maturity

<u>16 Year</u>	<u>17 Year</u>	<u>18 Year</u>	<u>19 Year</u>	<u>20 Year</u>	<u>21 Year</u>	<u>22 Year</u>	<u>23 Year</u>	<u>24 Year</u>	<u>25 Year</u>	<u>26 Year</u>	<u>27 Year</u>	<u>28 Year</u>	<u>29 Year</u>	<u>30 Year</u>	<u>50 Year</u>	<u>Year</u>
4.72	4.80	4.88	4.96	5.04	5.12	5.20	5.28	5.36	5.44	5.52	5.60	5.67	5.75	5.83	5.83	2015
5.17	5.24	5.31	5.37	5.44	5.51	5.58	5.65	5.71	5.78	5.85	5.92	5.99	6.06	6.12	6.12	2016
5.67	5.72	5.77	5.82	5.87	5.92	5.96	6.01	6.06	6.11	6.16	6.21	6.26	6.31	6.36	6.36	2017
5.80	5.85	5.89	5.93	5.97	6.02	6.06	6.10	6.15	6.19	6.23	6.27	6.32	6.36	6.40	6.40	2018
5.81	5.85	5.89	5.94	5.98	6.02	6.06	6.10	6.15	6.19	6.23	6.27	6.32	6.36	6.40	6.40	2019
5.81	5.85	5.89	5.94	5.98	6.02	6.06	6.10	6.15	6.19	6.23	6.27	6.32	6.36	6.40	6.40	2020
5.81	5.85	5.89	5.94	5.98	6.02	6.06	6.10	6.15	6.19	6.23	6.27	6.32	6.36	6.40	6.40	2021
5.81	5.85	5.89	5.94	5.98	6.02	6.06	6.10	6.15	6.19	6.23	6.27	6.32	6.36	6.40	6.40	2022
5.81	5.85	5.89	5.94	5.98	6.02	6.06	6.10	6.15	6.19	6.23	6.27	6.32	6.36	6.40	6.40	2023
5.81	5.85	5.89	5.94	5.98	6.02	6.06	6.10	6.15	6.19	6.23	6.27	6.32	6.36	6.40	6.40	2024
5.81	5.85	5.89	5.94	5.98	6.02	6.06	6.10	6.15	6.19	6.23	6.27	6.32	6.36	6.40	6.40	2025
5.81	5.85	5.89	5.94	5.98	6.02	6.06	6.10	6.15	6.19	6.23	6.27	6.32	6.36	6.40	6.40	2026
5.81	5.85	5.89	5.94	5.98	6.02	6.06	6.10	6.15	6.19	6.23	6.27	6.32	6.36	6.40	6.40	2027
5.81	5.85	5.89	5.94	5.98	6.02	6.06	6.10	6.15	6.19	6.23	6.27	6.32	6.36	6.40	6.40	2028
5.81	5.85	5.89	5.94	5.98	6.02	6.06	6.10	6.15	6.19	6.23	6.27	6.32	6.36	6.40	6.40	2029
5.81	5.85	5.89	5.94	5.98	6.02	6.06	6.10	6.15	6.19	6.23	6.27	6.32	6.36	6.40	6.40	2030
5.81	5.85	5.89	5.94	5.98	6.02	6.06	6.10	6.15	6.19	6.23	6.27	6.32	6.36	6.40	6.40	2031
5.81	5.85	5.89	5.94	5.98	6.02	6.06	6.10	6.15	6.19	6.23	6.27	6.32	6.36	6.40	6.40	2032
5.81	5.85	5.89	5.94	5.98	6.02	6.06	6.10	6.15	6.19	6.23	6.27	6.32	6.36	6.40	6.40	2033
5.81	5.85	5.89	5.94	5.98	6.02	6.06	6.10	6.15	6.19	6.23	6.27	6.32	6.36	6.40	6.40	2034
5.81	5.85	5.89	5.94	5.98	6.02	6.06	6.10	6.15	6.19	6.23	6.27	6.32	6.36	6.40	6.40	2035
5.81	5.85	5.89	5.94	5.98	6.02	6.06	6.10	6.15	6.19	6.23	6.27	6.32	6.36	6.40	6.40	2036
5.81	5.85	5.89	5.94	5.98	6.02	6.06	6.10	6.15	6.19	6.23	6.27	6.32	6.36	6.40	6.40	2037
5.81	5.85	5.89	5.94	5.98	6.02	6.06	6.10	6.15	6.19	6.23	6.27	6.32	6.36	6.40	6.40	2038
5.81	5.85	5.89	5.94	5.98	6.02	6.06	6.10	6.15	6.19	6.23	6.27	6.32	6.36	6.40	6.40	2039
5.81	5.85	5.89	5.94	5.98	6.02	6.06	6.10	6.15	6.19	6.23	6.27	6.32	6.36	6.40	6.40	2040
5.81	5.85	5.89	5.94	5.98	6.02	6.06	6.10	6.15	6.19	6.23	6.27	6.32	6.36	6.40	6.40	2041
5.81	5.85	5.89	5.94	5.98	6.02	6.06	6.10	6.15	6.19	6.23	6.27	6.32	6.36	6.40	6.40	2042
5.81	5.85	5.89	5.94	5.98	6.02	6.06	6.10	6.15	6.19	6.23	6.27	6.32	6.36	6.40	6.40	2043
5.81	5.85	5.89	5.94	5.98	6.02	6.06	6.10	6.15	6.19	6.23	6.27	6.32	6.36	6.40	6.40	2044

1/ Global Insight: The U.S. Economy: 30-Year Focus, August 2014 Forecast, Base Case.

Table 10
BPA FY 2015 Third-Party Tax-Exempt Borrowing Rate Forecast 1/

Fiscal Years 2015-2044
 (continued on next page)

<u>Maturity</u>															
<u>Year</u>	<u>1 Year</u>	<u>2 Year</u>	<u>3 Year</u>	<u>4 Year</u>	<u>5 Year</u>	<u>6 Year</u>	<u>7 Year</u>	<u>8 Year</u>	<u>9 Year</u>	<u>10 Year</u>	<u>11 Year</u>	<u>12 Year</u>	<u>13 Year</u>	<u>14 Year</u>	<u>15 Year</u>
2015	0.65	0.74	1.05	1.36	1.67	1.94	2.22	2.49	2.76	3.03	3.10	3.16	3.23	3.29	3.36
2016	1.72	1.90	2.07	2.25	2.42	2.63	2.84	3.05	3.26	3.47	3.53	3.60	3.66	3.72	3.78
2017	2.82	2.96	3.08	3.19	3.31	3.43	3.55	3.68	3.80	3.92	3.97	4.02	4.07	4.12	4.16
2018	3.09	3.20	3.32	3.43	3.54	3.64	3.75	3.85	3.95	4.05	4.09	4.14	4.18	4.22	4.27
2019	3.09	3.21	3.32	3.44	3.55	3.65	3.75	3.85	3.95	4.05	4.09	4.14	4.18	4.23	4.27
2020	3.09	3.21	3.32	3.44	3.55	3.65	3.75	3.85	3.95	4.05	4.09	4.14	4.18	4.23	4.27
2021	3.09	3.21	3.32	3.44	3.55	3.65	3.75	3.85	3.95	4.05	4.09	4.14	4.18	4.23	4.27
2022	3.09	3.21	3.32	3.44	3.55	3.65	3.75	3.85	3.95	4.05	4.09	4.14	4.18	4.23	4.27
2023	3.09	3.21	3.32	3.44	3.55	3.65	3.75	3.85	3.95	4.05	4.09	4.14	4.18	4.23	4.27
2024	3.09	3.21	3.32	3.44	3.55	3.65	3.75	3.85	3.95	4.05	4.09	4.14	4.18	4.23	4.27
2025	3.09	3.21	3.32	3.44	3.55	3.65	3.75	3.85	3.95	4.05	4.09	4.14	4.18	4.23	4.27
2026	3.09	3.21	3.32	3.44	3.55	3.65	3.75	3.85	3.95	4.05	4.09	4.14	4.18	4.23	4.27
2027	3.09	3.21	3.32	3.44	3.55	3.65	3.75	3.85	3.95	4.05	4.09	4.14	4.18	4.23	4.27
2028	3.09	3.21	3.32	3.44	3.55	3.65	3.75	3.85	3.95	4.05	4.09	4.14	4.18	4.23	4.27
2029	3.09	3.21	3.32	3.44	3.55	3.65	3.75	3.85	3.95	4.05	4.09	4.14	4.18	4.23	4.27
2030	3.09	3.21	3.32	3.44	3.55	3.65	3.75	3.85	3.95	4.05	4.09	4.14	4.18	4.23	4.27
2031	3.09	3.21	3.32	3.44	3.55	3.65	3.75	3.85	3.95	4.05	4.09	4.14	4.18	4.23	4.27
2032	3.09	3.21	3.32	3.44	3.55	3.65	3.75	3.85	3.95	4.05	4.09	4.14	4.18	4.23	4.27
2033	3.09	3.21	3.32	3.44	3.55	3.65	3.75	3.85	3.95	4.05	4.09	4.14	4.18	4.23	4.27
2034	3.09	3.21	3.32	3.44	3.55	3.65	3.75	3.85	3.95	4.05	4.09	4.14	4.18	4.23	4.27
2035	3.09	3.21	3.32	3.44	3.55	3.65	3.75	3.85	3.95	4.05	4.09	4.14	4.18	4.23	4.27
2036	3.09	3.21	3.32	3.44	3.55	3.65	3.75	3.85	3.95	4.05	4.09	4.14	4.18	4.23	4.27
2037	3.09	3.21	3.32	3.44	3.55	3.65	3.75	3.85	3.95	4.05	4.09	4.14	4.18	4.23	4.27
2038	3.09	3.21	3.32	3.44	3.55	3.65	3.75	3.85	3.95	4.05	4.09	4.14	4.18	4.23	4.27
2039	3.09	3.21	3.32	3.44	3.55	3.65	3.75	3.85	3.95	4.05	4.09	4.14	4.18	4.23	4.27
2040	3.09	3.21	3.32	3.44	3.55	3.65	3.75	3.85	3.95	4.05	4.09	4.14	4.18	4.23	4.27
2041	3.09	3.21	3.32	3.44	3.55	3.65	3.75	3.85	3.95	4.05	4.09	4.14	4.18	4.23	4.27
2042	3.09	3.21	3.32	3.44	3.55	3.65	3.75	3.85	3.95	4.05	4.09	4.14	4.18	4.23	4.27
2043	3.09	3.21	3.32	3.44	3.55	3.65	3.75	3.85	3.95	4.05	4.09	4.14	4.18	4.23	4.27
2044	3.09	3.21	3.32	3.44	3.55	3.65	3.75	3.85	3.95	4.05	4.09	4.14	4.18	4.23	4.27

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Table 10
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Fiscal Years 2015-2044

<u>Maturity</u>																
<u>16 Year</u>	<u>17 Year</u>	<u>18 Year</u>	<u>19 Year</u>	<u>20 Year</u>	<u>21 Year</u>	<u>22 Year</u>	<u>23 Year</u>	<u>24 Year</u>	<u>25 Year</u>	<u>26 Year</u>	<u>27 Year</u>	<u>28 Year</u>	<u>29 Year</u>	<u>30 Year</u>	<u>50 Year</u>	<u>Year</u>
3.42	3.49	3.55	3.62	3.68	3.75	3.81	3.88	3.94	4.01	4.07	4.14	4.20	4.26	4.33	4.33	2015
3.84	3.91	3.97	4.03	4.09	4.16	4.22	4.28	4.34	4.40	4.47	4.53	4.59	4.65	4.71	4.71	2016
4.21	4.26	4.31	4.36	4.41	4.46	4.50	4.55	4.60	4.65	4.70	4.75	4.80	4.84	4.89	4.89	2017
4.31	4.36	4.40	4.44	4.49	4.53	4.58	4.62	4.66	4.71	4.75	4.80	4.84	4.88	4.93	4.93	2018
4.31	4.36	4.40	4.45	4.49	4.53	4.58	4.62	4.66	4.71	4.75	4.80	4.84	4.88	4.93	4.93	2019
4.31	4.36	4.40	4.45	4.49	4.53	4.58	4.62	4.66	4.71	4.75	4.80	4.84	4.88	4.93	4.93	2020
4.31	4.36	4.40	4.45	4.49	4.53	4.58	4.62	4.66	4.71	4.75	4.80	4.84	4.88	4.93	4.93	2021
4.31	4.36	4.40	4.45	4.49	4.53	4.58	4.62	4.66	4.71	4.75	4.80	4.84	4.88	4.93	4.93	2022
4.31	4.36	4.40	4.45	4.49	4.53	4.58	4.62	4.66	4.71	4.75	4.80	4.84	4.88	4.93	4.93	2023
4.31	4.36	4.40	4.45	4.49	4.53	4.58	4.62	4.66	4.71	4.75	4.80	4.84	4.88	4.93	4.93	2024
4.31	4.36	4.40	4.45	4.49	4.53	4.58	4.62	4.66	4.71	4.75	4.80	4.84	4.88	4.93	4.93	2025
4.31	4.36	4.40	4.45	4.49	4.53	4.58	4.62	4.66	4.71	4.75	4.80	4.84	4.88	4.93	4.93	2026
4.31	4.36	4.40	4.45	4.49	4.53	4.58	4.62	4.66	4.71	4.75	4.80	4.84	4.88	4.93	4.93	2027
4.31	4.36	4.40	4.45	4.49	4.53	4.58	4.62	4.66	4.71	4.75	4.80	4.84	4.88	4.93	4.93	2028
4.31	4.36	4.40	4.45	4.49	4.53	4.58	4.62	4.66	4.71	4.75	4.80	4.84	4.88	4.93	4.93	2029
4.31	4.36	4.40	4.45	4.49	4.53	4.58	4.62	4.66	4.71	4.75	4.80	4.84	4.88	4.93	4.93	2030
4.31	4.36	4.40	4.45	4.49	4.53	4.58	4.62	4.66	4.71	4.75	4.80	4.84	4.88	4.93	4.93	2031
4.31	4.36	4.40	4.45	4.49	4.53	4.58	4.62	4.66	4.71	4.75	4.80	4.84	4.88	4.93	4.93	2032
4.31	4.36	4.40	4.45	4.49	4.53	4.58	4.62	4.66	4.71	4.75	4.80	4.84	4.88	4.93	4.93	2033
4.31	4.36	4.40	4.45	4.49	4.53	4.58	4.62	4.66	4.71	4.75	4.80	4.84	4.88	4.93	4.93	2034
4.31	4.36	4.40	4.45	4.49	4.53	4.58	4.62	4.66	4.71	4.75	4.80	4.84	4.88	4.93	4.93	2035
4.31	4.36	4.40	4.45	4.49	4.53	4.58	4.62	4.66	4.71	4.75	4.80	4.84	4.88	4.93	4.93	2036
4.31	4.36	4.40	4.45	4.49	4.53	4.58	4.62	4.66	4.71	4.75	4.80	4.84	4.88	4.93	4.93	2037
4.31	4.36	4.40	4.45	4.49	4.53	4.58	4.62	4.66	4.71	4.75	4.80	4.84	4.88	4.93	4.93	2038
4.31	4.36	4.40	4.45	4.49	4.53	4.58	4.62	4.66	4.71	4.75	4.80	4.84	4.88	4.93	4.93	2039
4.31	4.36	4.40	4.45	4.49	4.53	4.58	4.62	4.66	4.71	4.75	4.80	4.84	4.88	4.93	4.93	2040
4.31	4.36	4.40	4.45	4.49	4.53	4.58	4.62	4.66	4.71	4.75	4.80	4.84	4.88	4.93	4.93	2041
4.31	4.36	4.40	4.45	4.49	4.53	4.58	4.62	4.66	4.71	4.75	4.80	4.84	4.88	4.93	4.93	2042
4.31	4.36	4.40	4.45	4.49	4.53	4.58	4.62	4.66	4.71	4.75	4.80	4.84	4.88	4.93	4.93	2043
4.31	4.36	4.40	4.45	4.49	4.53	4.58	4.62	4.66	4.71	4.75	4.80	4.84	4.88	4.93	4.93	2044

1/ Global Insight: The U.S. Economy: 30-Year Focus, August 2014 Forecast, Base Case.

Table 11
BPA FY 2015 FERC Borrowing Rate (Bank Prime) Forecast 1/

Calendar/Fiscal Years 2015-2044

<u>Year</u>	<u>A</u> FERC Rate <u>Calendar Year</u>	<u>B</u> FERC Rate <u>Fiscal Year</u>
2015	3.37	3.34
2016	4.96	4.56
2017	6.59	6.18
2018	6.75	6.71
2019	6.75	6.75
2020	6.75	6.75
2021	6.75	6.75
2022	6.75	6.75
2023	6.75	6.75
2024	6.75	6.75
2025	6.75	6.75
2026	6.75	6.75
2027	6.75	6.75
2028	6.75	6.75
2029	6.75	6.75
2030	6.75	6.75
2031	6.75	6.75
2032	6.75	6.75
2033	6.75	6.75
2034	6.75	6.75
2035	6.75	6.75
2036	6.75	6.75
2037	6.75	6.75
2038	6.75	6.75
2039	6.75	6.75
2040	6.75	6.75
2041	6.75	6.75
2042	6.75	6.75
2043	6.75	6.75
2044	6.75	6.75

1/ Global Insight: The U.S. Economy: 30-Year Focus, August 2014 Forecast, Base Case.

Table 12

BPA FY 2015 May 3-Month LIBOR Rate Forecast 1/

Calendar/Fiscal Years 2015-2044

<u>Year</u>	<u>A</u> 3-Mo LIBOR <u>Calendar Year</u>	<u>B</u> 3-Mo LIBOR <u>Fiscal Year</u>
2015	0.57	0.50
2016	2.25	1.83
2017	3.85	3.45
2018	3.98	3.95
2019	3.98	3.98
2020	3.98	3.98
2021	3.98	3.98
2022	3.98	3.98
2023	3.98	3.98
2024	3.98	3.98
2025	3.98	3.98
2026	3.98	3.98
2027	3.98	3.98
2028	3.98	3.98
2029	3.98	3.98
2030	3.98	3.98
2031	3.98	3.98
2032	3.98	3.98
2033	3.98	3.98
2034	3.98	3.98
2035	3.98	3.98
2036	3.98	3.98
2037	3.98	3.98
2038	3.98	3.98
2039	3.98	3.98
2040	3.98	3.98
2041	3.98	3.98
2042	3.98	3.98
2043	3.98	3.98
2044	3.98	3.98

1/ Global Insight: The U.S. Economy: 30-Year Focus,
August 2014 Forecast, Base Case.

Table 13
Comparison of FY 2015 Inflation Forecast Components
 Calendar/Fiscal Year Forecasts 2015 vs. 2014

Calendar/Fiscal Years 2015-2044

<u>YEAR</u>	<u>A</u> CY 2015 1/ Calendar Year GDP Price <u>Deflator</u> (%)	<u>B</u> FY 2015 1/ Fiscal Year GDP Price <u>Deflator</u> (%)	<u>C</u> FY 2015 2/ Fiscal Year Cumulative <u>Price Deflator</u> (Base Year 2014)	<u>D</u> FY 2014 3/ Fiscal Year GDP Price <u>Deflator</u> (%)	<u>E</u> FY 2014 3/ Fiscal Year Cumulative <u>Price Deflator</u> (Base Year 2013)	<u>F</u> Change in the GDP Price <u>Deflator</u> (B-D)	<u>G</u> Change in the Cumulative <u>Price Deflator</u> (C-E)
2015	1.92%	1.84%	1.009	1.64%	1.024	0.20%	-0.015
2016	1.81%	1.84%	1.028	1.66%	1.041	0.18%	-0.013
2017	1.89%	1.87%	1.047	1.62%	1.058	0.25%	-0.011
2018	1.86%	1.87%	1.066	1.60%	1.075	0.26%	-0.009
2019	1.82%	1.83%	1.086	1.57%	1.092	0.26%	-0.007
2020	1.88%	1.86%	1.106	1.63%	1.110	0.24%	-0.003
2021	1.88%	1.88%	1.127	1.69%	1.128	0.19%	-0.001
2022	1.91%	1.90%	1.148	1.71%	1.147	0.19%	0.002
2023	1.93%	1.92%	1.171	1.72%	1.166	0.20%	0.004
2024	1.99%	1.98%	1.194	1.72%	1.186	0.25%	0.007
2025	2.01%	2.01%	1.218	1.74%	1.207	0.27%	0.011
2026	1.93%	1.95%	1.241	1.79%	1.228	0.16%	0.013
2027	1.93%	1.93%	1.265	1.84%	1.250	0.09%	0.015
2028	1.88%	1.89%	1.289	1.84%	1.273	0.05%	0.016
2029	1.87%	1.87%	1.313	1.85%	1.296	0.02%	0.017
2030	1.87%	1.87%	1.338	1.86%	1.320	0.01%	0.018
2031	1.93%	1.92%	1.363	1.91%	1.345	0.01%	0.019
2032	1.92%	1.92%	1.390	1.93%	1.370	-0.01%	0.019
2033	1.92%	1.92%	1.416	1.96%	1.397	-0.05%	0.019
2034	1.89%	1.90%	1.443	2.00%	1.424	-0.10%	0.019
2035	1.95%	1.94%	1.471	1.98%	1.453	-0.04%	0.018
2036	1.97%	1.96%	1.500	1.97%	1.481	-0.01%	0.019
2037	1.96%	1.96%	1.529	1.99%	1.511	-0.03%	0.019
2038	2.00%	1.99%	1.560	2.01%	1.541	-0.02%	0.019
2039	2.02%	2.02%	1.591	2.02%	1.572	0.00%	0.019
2040	2.00%	2.00%	1.623	2.01%	1.603	-0.01%	0.020
2041	1.98%	1.98%	1.655	2.01%	1.636	-0.03%	0.020
2042	2.03%	2.02%	1.689	2.01%	1.669	0.01%	0.020
2043	2.05%	2.04%	1.723	2.01%	1.702	0.03%	0.021
2044	2.09%	2.08%	1.759				

1/ Global Insight: The U.S. Economy: 30-Year Focus, August 2014 Forecast, Base Case.

2/ Fiscal Year Cumulative Price Deflator escalates to midyear dollars. The first year, 2015, is determined as follows: $1.009 = ((1.84/100) \cdot 0.5) + 1$. An example of subsequent year cumulative growth, such as in 2016, is found as: $1.028 = (1 + (1.84/100)) \cdot 1.009$

3/ Global Insight: The U.S. Economy: 30-year Focus, September 2013 Forecast, Base Case.

7. PROJECTED BONDS ISSUED TO TREASURY

7.1 Introduction

This chapter documents all the bonds that BPA has issued and those it projects it will issue to the U.S. Treasury to finance BPA capital investments and Reclamation/Corps investments that will be direct-funded by BPA.

7.2 Issuing Bonds

BPA primarily funds capital outlays by issuing new long-term debt in the form of bonds issued to the U.S. Treasury. BPA issues four types of bonds for Power Services: Construction, Conservation Fish and Wildlife/Environment, and Reclamation/Corps direct-funded. Construction bonds included in the generation study are the portions of bonds that fund furniture, information technology (IT) hardware and software for PS. (Construction bonds are also issued to fund capital expenditures of the transmission function including IT hardware and software and furniture.) Conservation bonds, which will no longer be issued after the conclusion of FY 2015, are used to fund investments in energy efficiency projects. Fish and Wildlife bonds are issued to fund the capital portion of BPA's Fish and Wildlife program. Environment bonds are issued to fund work done by the Transmission Business Line and are not included in the generation repayment study. BPA also issues bonds to fund Reclamation/Corps generation efficiency and reliability improvements. All bonds projected for issuance have been entered into the generation repayment study.

Beginning in 2016, BPA will no longer issue conservation bonds to fund the capital portion of BPA's conservation program. Instead, the program will be treated as a current year expense. As a result, no conservation bonds are projected to be issued after FY 2015.

Reclamation/Corps direct funding bonds have a maximum maturity of 30 years although they may be issued for shorter durations or refinanced up to 50 years which is the maximum repayment period for generation assets.. Construction bonds are given a maximum repayment period of 6 years. Conservation bonds, issued through FY 2015, have a maximum maturity of 12 years. Fish and Wildlife bonds are entered with a period to maturity of 15 years.

New bonds are based on projected BPA and Reclamation/Corps capital program outlays. Maturities reflect decisions about debt placement. The assignment practices for interest rates are discussed in Chapter 2 of the Study. The interest rates used are in Chapter 6 of this document.

Table 7A

BPA Projected Generation Federal Borrowing
FY 2015 - 2017
(\$000s)

	A	B	C	D
		Interest		Total
FY	Description	Rate	Term	Borrowing
1 2015	Power Agency Services	2.42%	6	4,900
2	Fish and Wildlife	3.88%	14	1,000
3	Conservation	2.42%	6	21,000
4	Conservation	2.74%	7	19,000
5	Bureau of Reclamation	4.06%	18	6,000
6	Corps of Engineers	4.06%	18	24,000
7	Technology	2.42%	6	7,000
8	TOTAL			82,900
9				
10 2016	Power Agency Services	3.25%	6	9,800
11	Fish and Wildlife	4.26%	13	21,000
12	Fish and Wildlife	4.30%	14	17,000
13	Fish and Wildlife	4.34%	15	17,000
14	Bureau of Reclamation	4.46%	18	15,000
15	Bureau of Reclamation	4.50%	19	11,000
16	Bureau of Reclamation	4.53%	20	11,000
17	Bureau of Reclamation	4.57%	21	10,000
18	Bureau of Reclamation	4.61%	22	16,000
19	Corps of Engineers	4.46%	18	23,000
20	Corps of Engineers	4.50%	19	18,000
21	Corps of Engineers	4.53%	20	25,000
22	Corps of Engineers	4.57%	21	22,000
23	Corps of Engineers	4.61%	22	21,000
24	Technology	3.25%	6	7,000
25	TOTAL			243,800
26				
27 2017	Power Agency Services	4.09%	5	7,700
28	Fish and Wildlife	4.70%	13	5,000
29	Fish and Wildlife	4.72%	14	5,000
30	Fish and Wildlife	4.75%	15	21,000
31	Bureau of Reclamation	4.93%	22	16,000
32	Bureau of Reclamation	4.96%	23	7,000
33	Bureau of Reclamation	4.98%	24	11,000
34	Bureau of Reclamation	5.01%	25	7,000
35	Bureau of Reclamation	5.04%	26	18,000
36	Bureau of Reclamation	5.06%	27	17,000
37	Bureau of Reclamation	5.11%	29	15,000
38	Bureau of Reclamation	5.14%	30	11,000
39	Corps of Engineers	4.93%	22	10,000
40	Corps of Engineers	4.96%	23	24,000
41	Corps of Engineers	4.98%	24	13,000
42	Corps of Engineers	5.01%	25	25,000
43	Corps of Engineers	5.04%	26	14,000
44	Corps of Engineers	5.06%	27	13,000
45	Corps of Engineers	5.09%	28	32,000
46	Corps of Engineers	5.11%	29	14,000
47	Corps of Engineers	5.14%	30	19,000
48	Technology	4.09%	5	5,000
49	TOTAL			309,700

1/ Bonds issued for this purpose are for direct funding efficiency and reliability.

8. CAPITALIZED CONTRACTS AND OTHER LONG TERM RESOURCE ACQUISITION OBLIGATIONS

8.1 Introduction

This chapter documents the data on third-party debt service or payment costs associated with capitalized contracts and other long-term, fixed contractual obligations. This chapter does not include replacements for the Columbia Generating Station (CGS). This information is included in Chapter 10 of this document.

8.2 Methodology

To determine debt service streams for EN Nuclear Projects WNP-1, CGS, and WNP-3, BPA uses a commercial municipal bond debt management model, DBC Debt Manager. All base debt service streams shown in Tables 8A are based on the amount of non-Federal debt outstanding. The debt service streams reflect all EN refinancings to date and projected CGS capital investments. CGS debt service is displayed net of anticipated revenues expected from the Tennessee Valley Authority for the purchase of nuclear fuel from EN. Debt service streams are derived from such sources as Official Statements, Agency agreements, Agency contracts, and budgetary data.

Table 8A
Capitalized Contracts
(\$000s)

	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O
	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029
1 WNP-1	88,691	257,743	206,549	15,746	15,746	15,746	15,746	15,746	15,746	31,378	78,287	92,655	117,679	47,537	-
2 WNP-1 Expenses	(532)	582	(4,745)	-	-	-	-	-	-	-	-	-	-	-	-
3 WNP-1 Total	88,160	258,325	201,804	15,746	15,746	15,746	15,746	15,746	15,746	31,378	78,287	92,655	117,679	47,537	-
4 CGS	131,720	129,954	190,936	407,464	520,519	449,901	438,309	412,552	360,297	286,877	58,919	59,698	70,631	144,064	214,695
5 CGS Adjustments	(4,387)	(4,387)	(4,387)	(4,387)	(4,387)	(4,331)	(4,102)	(3,859)	(3,484)	(2,201)	-	-	-	-	-
6 CGS Expenses	(413)	(280)	(202)	(627)	806	176	175	173	172	128	-	-	-	-	-
7 TVA Revenue Offset	(58,618)	(24,476)	(58,881)	(178,250)	(189,500)	(72,500)	(81,000)	(49,500)	-	-	-	-	-	-	-
8 CGS Total	68,301	100,810	127,466	224,200	327,438	373,246	353,382	359,366	356,984	284,803	58,919	59,698	70,631	144,064	214,695
9 WNP-3	100,325	222,728	263,218	355,276	7,345	7,345	7,345	7,345	7,345	16,441	43,738	33,707	21,692	56,958	-
10 WNP-3 Expenses	(887)	3,214	(6,886)	(2,187)	(627)	-	-	-	-	-	-	-	-	-	-
11 WNP-3 Total	99,437	225,942	256,332	353,089	6,717	7,345	7,345	7,345	7,345	16,441	43,738	33,707	21,692	56,958	-
12 CARES	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
13 Tacoma	318	-	-	-	-	-	-	-	-	-	-	-	-	-	-
14 Wasco	1,929	1,931	1,935	1,934	1,932	1,937	1,948	1,950	1,947	1,947	331	-	-	-	-
15 Cowlitz	7,300	7,300	7,303	7,302	7,304	7,301	7,300	7,299	7,303	7,301	7,302	7,300	7,304	7,299	7,229
16 Total	265,445	594,308	594,840	602,272	359,137	405,575	385,720	391,706	389,325	341,870	188,576	193,360	217,306	255,858	221,924

9. IRRIGATION ASSISTANCE

9.1 Introduction

This chapter documents the irrigation construction costs for Federal reclamation projects in the Pacific Northwest that the FCRPS has an obligation to repay. These payments, known as irrigation assistance, have been included in the repayment study.

9.2 Background

In an effort to encourage settlement of the arid and semiarid lands of the Western United States, the 1902 Reclamation Act created the Reclamation to develop water resources for irrigation. The 1902 Reclamation Act provided that irrigators using the reclamation projects had 10 years to repay the construction costs of such projects. Title to the reclamation projects, however, remained with the Federal government even after all construction costs were repaid.

By the 1920s, a 10-year repayment period for irrigators was determined to be economically unrealistic. After several leniency acts and extensions, Congress passed the 1939 Reclamation Act, which changed the repayment period on reclamation projects to 40 years after a 10-year development period. Later revisions and project-specific legislation extended repayment periods for most reclamation projects to 50 years after a 10-year development period. However, the Kennewick project has a 66-year repayment period.

Originally, irrigators were responsible for repaying all project construction costs without interest. However, hydropower is a by-product of many reclamation projects and not all of the power generated is needed for irrigation works. As early as the Town Sites and Power Development Act (April 16, 1906, ch. 1631, 34 Stat. 116) Congress authorized Reclamation to lease surplus power and use the proceeds to repay part of the costs of the reclamation projects.

The concept of power revenues contributing to the repayment of Reclamation's multipurpose projects evolved to the current policy, in which power revenues are used to repay that portion of the project construction costs allocated to irrigation use that are beyond the irrigators' "ability to repay." Moreover, the costs to be repaid by power revenues, known as irrigation assistance, are to be repaid without interest. Reclamation has the responsibility to make the determination of the amount that is beyond the irrigators' "ability to repay" through a farm budget analysis. The results of this analysis are used to establish the irrigators' repayment responsibility. The irrigators, as an irrigation district, and Reclamation formalize this repayment responsibility in irrigation contracts.

9.3 Irrigation Repayment

In the Pacific Northwest, the Third Powerplant, Grand Coulee Dam legislation, P.L. 89-448, authorized repayment of the irrigation assistance costs from net revenues of the entire FCRPS. There are, however, limitations on the FCRPS's repayment responsibility. These limitations were added in amendment to the Third Powerplant, Grand Coulee Dam legislation, P.L. 89-561, and apply to reclamation projects, including projects not previously receiving similar assistance, which are authorized to receive such assistance, for which construction was authorized after September 7, 1966.

The irrigation assistance for such projects is to be paid only from net revenues of the power system. Net revenues are defined as those revenues over and above the amount needed to recover all costs allocated to power, including the cost of acquiring power by purchase or exchange, and previously authorized irrigation assistance. The construction of such projects shall be scheduled so that the repayment of the irrigation assistance associated with such projects from power revenues will not require an increase in BPA's power rates.

The total of all irrigation assistance to be repaid from power revenues shall not average more than \$30 million per year in any period of 20 consecutive years.

Reclamation provides BPA with the irrigation assistance to be repaid from each reclamation project. The current generation repayment study includes information provided in July 2008. Because irrigation assistance costs are repaid without interest and BPA repays highest interest-bearing investment first, irrigation assistance is generally scheduled to be repaid in the last year of the repayment period for each reclamation project.

**Table 9A
Irrigation Assistance by Project
(\$000s)_A**

B

C

	Fiscal Year Due	Project	Amount	Total
1	2015	Columbia Basin	<u>52,204</u>	
2	2015 Total:			52,204
3	2016	Columbia Basin	<u>61,066</u>	
4	2016 Total:			61,066
5	2017	Columbia Basin	49,330	
6		Greater Wenatchee	1,073	
7		Yakima, Roza	<u>1,078</u>	
8	2017 Total:			51,482
9	2018	Columbia Basin	26,160	
10		Foster Creek	683	
11		Yakima, Roza	<u>770</u>	
12	2018 Total:			27,612
13	2019	Columbia Basin	51,478	
14		FosterCreek	1,114	
15		Michaud Flats	2,081	
16		Michaud-Fort Hall	2,081	
17		Yaklma,Roza	<u>564</u>	
18	2019 Total:			57,317
19	2020	Columbia Basin	22,259	
20		Crooked River	<u>2,380</u>	
21	2020 Total:			24,639
22	2021	Columbia Basin	10,163	
23		Yakirna, Roza	<u>2,087</u>	
24	2021 Total:			12,250
25	2022	Columbia Basin	13,794	
26		Yakima, Rosa	<u>623</u>	
27	2022 Total:			14,417
28	2023	Columbia Basin	9,898	
29		Rogue River	<u>3,091</u>	
30	2023 Total:			12,989
31	2024	Columbia Basin	7,891	
32		Greater Wenatchee	1,961	
33		Yakirna, Kennewick	<u>5,379</u>	
34	2024 Total:			15,231
35	2025	Columbia Basin	12,603	
36		Crooked River Ext	<u>1,122</u>	
37	2025 Total:			13,725
38	2026	Columbia Basin	13,072	
39		Greater Wenatchee	930	
40		Whitestone Coulee Unit	3,810	
41		Yakima, Rosa	<u>3,133</u>	
42	2026 Total:			20,944
43	2027	Columbia Basin	3,981	
44		Rogue River	<u>2,194</u>	
45	2027 Total:			6,176

**Table 9A
Irrigation Assistance by Project
(\$000s)_A**

B

C

	Fiscal Year Due	Project	Amount	Total
46	2028	Columbia Basin	7,085	
47		The Dalles	<u>4,204</u>	
48	2028 Total:			11,288
49	2029	Baker	<u>4,065</u>	
50	2029 Total:			4,065
51	2030	East Greenacres	<u>1,996</u>	
52	2030 Total:			1,996
53	2031	Columbia Basin	<u>10,678</u>	
54	2031 Total:			10,678
55	2033	Rogue River	<u>4,347</u>	
56	2033 Total:			4,347
57	2035	Columbia Basin	<u>7,875</u>	
58	2035 Total:			7,875
59	2036	Manson Unit	16,163	
60		Tualatin	9,098	
61		Whitestone Coulee Unit	<u>3,660</u>	
62	2036 Total:			28,920
63	2037	Columbia Basin	12,243	
64		East Greenacres	<u>3,834</u>	
65	2037 Total:			16,078
66	2039	Tualatin	<u>14,181</u>	
67	2039 Total:			14,181
68	2042	Oroville Tonasket	<u>73,659</u>	
69	2042 Total:			73,659
70	2045	Columbia Basin	<u>11,749</u>	
71	2045 Total:			11,749
72				
73	Grand Total:			<u>554,887</u>

Note: Assistance for Lower Teton, \$40,273, is not included in this list, as it was never completed. Therefore the Administrator has no obligation to recover the cost.

10. REPLACEMENTS PROJECTED AFTER THE COST EVALUATION PERIOD

10.1 Introduction

This chapter documents the process used to develop the capital investments necessary to maintain the existing Federal generating projects at their current operating level during the repayment period. This chapter also includes replacement costs for CGS. Replacement forecasts are included in repayment studies as required by RA 6120.2.

10.2 Methodology

The repayment study incorporates a schedule of Federal investment with the replacements that are expected to occur over the repayment period for existing generation projects. This schedule, expressed in mid-year dollars for each repayment study, FY 2014 and 2015, is based on the amount of investment in the generating projects for the Corps and Reclamation through the end of the cost evaluation period.

Replacements are based on data provided by BPA's Federal Hydro Projects group, the organization responsible for managing the capital program that funds Corps and Reclamation powerhouse replacements. They prepare a project-by-project analysis of future funding requirements extending far into the future. The data are adjusted for several factors. First, adjustments are made to remove the effect of gaining efficiencies from replacing old equipment. The BPA Federal Hydro Projects group estimates that 12.5 percent of total costs reflect upgrades for efficiencies. Second, , replacements exclude the portion of the budget for "small capital," those investments outside of the powerhouses.

We received total annual funding data in 2014 dollars. We relied on data projected through 2021. After that year, the data was held constant to reflect the budgeting intent to hold costs level for the hydro program. The replacements in any given study year reflect the price levels of that study year. Accordingly, we escalated the replacements for each study year to the dollar values of the study year. Then, we reduced the 50-year replacement streams for each repayment study to account for the upgrades and small capital investments.

A schedule of replacement investments for CGS is based on the original investment adjusted by the use of the Handy-Whitman indices for a nuclear power plant. The Handy-Whitman Index is widely used in industry for estimating replacement costs for plant. The result of this calculation was converted into a mortgage-style investment with payments sufficient to retire the replacement cost in 35 years.

Table 10A
Corps/Reclamation Replacements (FY 2016)
(\$000s)

	A	B	C	D
	In Service Date	Current Principal	Interest Rate	Due Date
1	2017	209,258	4.930%	2062
2	2018	209,258	4.930%	2063
3	2019	209,258	4.930%	2064
4	2020	209,258	4.930%	2065
5	2021	209,258	4.930%	2066
6	2022	209,258	4.930%	2067
7	2023	209,258	4.930%	2068
8	2024	209,258	4.930%	2069
9	2025	209,258	4.930%	2070
10	2026	209,258	4.930%	2071
11	2027	209,258	4.930%	2072
12	2028	209,258	4.930%	2073
13	2029	209,258	4.930%	2074
14	2030	209,258	4.930%	2075
15	2031	209,258	4.930%	2076
16	2032	209,258	4.930%	2077
17	2033	209,258	4.930%	2078
18	2034	209,258	4.930%	2079
19	2035	209,258	4.930%	2080
20	2036	209,258	4.930%	2081
21	2037	209,258	4.930%	2082
22	2038	209,258	4.930%	2083
23	2039	209,258	4.930%	2084
24	2040	209,258	4.930%	2085
25	2041	209,258	4.930%	2086
26	2042	209,258	4.930%	2087
27	2043	209,258	4.930%	2088
28	2044	209,258	4.930%	2089
29	2045	209,258	4.930%	2090
30	2046	209,258	4.930%	2091
31	2047	209,258	4.930%	2092
32	2048	209,258	4.930%	2093
33	2049	209,258	4.930%	2094
34	2050	209,258	4.930%	2095
35	2051	209,258	4.930%	2096
36	2052	209,258	4.930%	2097
37	2053	209,258	4.930%	2098
38	2054	209,258	4.930%	2099
39	2055	209,258	4.930%	2100
40	2056	209,258	4.930%	2101
41	2057	209,258	4.930%	2102
42	2058	209,258	4.930%	2103
43	2059	209,258	4.930%	2104
44	2060	209,258	4.930%	2105
45	2061	209,258	4.930%	2106
46	2062	209,258	4.930%	2107
47	2063	209,258	4.930%	2108
48	2064	209,258	4.930%	2109
49	2065	209,258	4.930%	2110
50	2066	209,258	4.930%	2111

Table 10B
Corps/Reclamation Replacements (FY 2017)
(\$000s)

	A	B	C	D
	In Service Date	Current Principal	Interest Rate	Due Date
1	2018	240,155	5.140%	2063
2	2019	240,155	5.140%	2064
3	2020	240,155	5.140%	2065
4	2021	240,155	5.140%	2066
5	2022	240,155	5.140%	2067
6	2023	240,155	5.140%	2068
7	2024	240,155	5.140%	2069
8	2025	240,155	5.140%	2070
9	2026	240,155	5.140%	2071
10	2027	240,155	5.140%	2072
11	2028	240,155	5.140%	2073
12	2029	240,155	5.140%	2074
13	2030	240,155	5.140%	2075
14	2031	240,155	5.140%	2076
15	2032	240,155	5.140%	2077
16	2033	240,155	5.140%	2078
17	2034	240,155	5.140%	2079
18	2035	240,155	5.140%	2080
19	2036	240,155	5.140%	2081
20	2037	240,155	5.140%	2082
21	2038	240,155	5.140%	2083
22	2039	240,155	5.140%	2084
23	2040	240,155	5.140%	2085
24	2041	240,155	5.140%	2086
25	2042	240,155	5.140%	2087
26	2043	240,155	5.140%	2088
27	2044	240,155	5.140%	2089
28	2045	240,155	5.140%	2090
29	2046	240,155	5.140%	2091
30	2047	240,155	5.140%	2092
31	2048	240,155	5.140%	2093
32	2049	240,155	5.140%	2094
33	2050	240,155	5.140%	2095
34	2051	240,155	5.140%	2096
35	2052	240,155	5.140%	2097
36	2053	240,155	5.140%	2098
37	2054	240,155	5.140%	2099
38	2055	240,155	5.140%	2100
39	2056	240,155	5.140%	2101
40	2057	240,155	5.140%	2102
41	2058	240,155	5.140%	2103
42	2059	240,155	5.140%	2104
43	2060	240,155	5.140%	2105
44	2061	240,155	5.140%	2106
45	2062	240,155	5.140%	2107
46	2063	240,155	5.140%	2108
47	2064	240,155	5.140%	2109
48	2065	240,155	5.140%	2110
49	2066	240,155	5.140%	2111
50	2067	240,155	5.140%	2112

Table 10C
Columbia Generating Station Replacements
(\$000s)

	A	B
	Fiscal Year	Total Debt Service
1	2045	489,037
2	2046	489,034
3	2047	489,038
4	2048	489,035
5	2049	489,036
6	2050	489,036
7	2051	489,035
8	2052	489,035
9	2053	489,035
10	2054	489,036
11	2055	489,037
12	2056	489,034
13	2057	489,034
14	2058	489,033
15	2059	489,039
16	2060	489,037
17	2061	489,038
18	2062	489,035
19	2063	489,035
20	2064	489,038
21	2065	489,035
22	2066	489,034
23	2067	489,038
24	2068	489,034
25	2069	489,035
26	2070	489,034
27	2071	489,034
28	2072	489,038
29	2073	489,036
30	2074	489,036
31	2075	489,038
32	2076	489,036
33	2077	489,034
34	2078	489,033
35	2079	489,034
36	2080	462,225
37	2081	462,225
38	2082	462,225
39	2083	462,225
40	2084	462,225
41	2085	462,225
42	2086	462,225
43	2087	462,225
44	2088	462,225
45	2089	462,225
46	2090	462,225
47	2091	462,225
48	2092	462,225
49	2093	462,225
50	2094	462,225

11. REPAYMENT STUDY DATA, FY 2016 STUDY

TABLE 11A: HISTORICAL INVESTMENTS
October 1, 2013 - September 30, 2016 Cost Evaluation period
(\$000s) (FY 2016)

A	B	C	D	E	F	G	H
Project	In Service Date	Due Date	Interest Rate	Initial Principal	Current Principal	Roll Maturity Date	Rollover Rate
1723	Construction (AS)	05/2014	04/2020	1.010%	700	700	
1724	Construction (AS)	07/2014	07/2020	1.010%	1,050	1,050	
1725	Construction (AS)	11/2014	11/2020	1.809%	2,100	2,100	
1726	Construction (AS)	12/2014	12/2020	1.922%	1,050	1,050	
1727	Construction (AS)	02/2015	02/2021	1.761%	1,750	1,750	
1728	Fish and Wildlife	05/1989	05/1999	8.950%	25,000	0	
1729	Fish and Wildlife	05/1991	05/1996	7.950%	50,000	0	
1730	Fish and Wildlife	02/1993	02/2008	6.950%	20,000	0	
1731	Fish and Wildlife	09/1994	09/1999	7.650%	20,000	0	
1732	Fish and Wildlife	08/1995	08/2010	7.200%	35,000	0	
1733	Fish and Wildlife	01/1998	01/2013	6.100%	60,000	0	
1734	Fish and Wildlife	09/1999	09/2003	6.300%	20,000	0	
1735	Fish and Wildlife	01/2001	01/2005	5.650%	25,000	0	
1736	Fish and Wildlife	09/2003	09/2007	3.100%	20,000	0	
1737	Fish and Wildlife	09/2005	09/2008	4.250%	20,000	0	
1738	Fish and Wildlife	09/2006	09/2010	4.950%	20,000	0	

TABLE 11B: PROJECTED INVESTMENTS
October 1, 2013 - September 30, 2016 Cost Evaluation period
(\$000s) (FY 2016)

	A	B	C	D	E	F	G
	Project	In Service Date	Due Date	Interest Rate	Current Principal	Roll Maturity Date	Rollover Rate
1	Bureau Direct	09/2015	09/2033	4.060%	6,000		
2	Bureau Direct	10/2015	10/2033	4.460%	5,000		
3	Bureau Direct	11/2015	11/2033	4.460%	6,000		
4	Bureau Direct	12/2015	12/2033	4.460%	4,000		
5	Bureau Direct	01/2016	01/2035	4.500%	6,000		
6	Bureau Direct	02/2016	02/2035	4.500%	1,000		
7	Bureau Direct	03/2016	03/2035	4.500%	4,000		
8	Bureau Direct	04/2016	04/2036	4.530%	6,000		
9	Bureau Direct	05/2016	05/2036	4.530%	5,000		
10	Bureau Direct	06/2016	06/2037	4.570%	5,000		
11	Bureau Direct	07/2016	07/2037	4.570%	5,000		
12	Bureau Direct	08/2016	08/2038	4.610%	7,000		
13	Bureau Direct	09/2016	09/2038	4.610%	9,000		
14	Columbia River Fish Mitigation	09/2015	09/2065	3.250%	121,391		
15	Columbia River Fish Mitigation	09/2016	09/2066	4.420%	52,353		
16	Conservation	04/2015	04/2021	2.420%	5,000		
17	Conservation	05/2015	05/2021	2.420%	6,000		
18	Conservation	06/2015	06/2021	2.420%	7,000		
19	Conservation	07/2015	07/2021	2.420%	3,000		
20	Conservation	08/2015	08/2022	2.740%	6,000		
21	Conservation	09/2015	09/2022	2.740%	13,000		
22	Construction (AS)	05/2015	05/2021	2.419%	700		
23	Construction (AS)	06/2015	06/2021	2.419%	1,050		
24	Construction (AS)	07/2015	07/2021	2.419%	700		
25	Construction (AS)	08/2015	08/2021	2.419%	700		
26	Construction (AS)	09/2015	09/2021	2.419%	1,750		
27	Construction (AS)	03/2016	03/2022	3.248%	4,900		
28	Construction (AS)	09/2016	09/2022	3.248%	4,900		
29	Corps	09/2015	09/2033	4.060%	24,000		
30	Corps	10/2015	10/2033	4.460%	7,000		
31	Corps	11/2015	11/2033	4.460%	8,000		
32	Corps	12/2015	12/2033	4.460%	8,000		
33	Corps	01/2016	01/2035	4.500%	9,000		
34	Corps	02/2016	02/2035	4.500%	9,000		
35	Corps	03/2016	03/2036	4.530%	7,000		
36	Corps	04/2016	04/2036	4.530%	9,000		
37	Corps	05/2016	05/2036	4.530%	9,000		
38	Corps	06/2016	06/2037	4.570%	11,000		
39	Corps	07/2016	07/2037	4.570%	11,000		
40	Corps	08/2016	08/2038	4.610%	9,000		
41	Corps	09/2016	09/2038	4.610%	12,000		
42	Fish and Wildlife	09/2015	09/2029	3.877%	1,000		
43	Fish and Wildlife	10/2015	10/2028	4.260%	5,000		

TABLE 11B: PROJECTED INVESTMENTS
October 1, 2013 - September 30, 2016 Cost Evaluation period
(\$000s) (FY 2016)

	A	B	C	D	E	F	G
	Project	In Service Date	Due Date	Interest Rate	Current Principal	Roll Maturity Date	Rollover Rate
44	Fish and Wildlife	11/2015	11/2028	4.260%	3,000		
45	Fish and Wildlife	12/2015	12/2028	4.260%	4,000		
46	Fish and Wildlife	01/2016	01/2029	4.260%	3,000		
47	Fish and Wildlife	02/2016	02/2029	4.260%	3,000		
48	Fish and Wildlife	03/2016	03/2029	4.260%	3,000		
49	Fish and Wildlife	04/2016	04/2030	4.300%	2,000		
50	Fish and Wildlife	05/2016	05/2030	4.300%	2,000		
51	Fish and Wildlife	06/2016	06/2030	4.300%	4,000		
52	Fish and Wildlife	07/2016	07/2030	4.300%	6,000		
53	Fish and Wildlife	08/2016	08/2030	4.300%	3,000		
54	Fish and Wildlife	09/2016	09/2031	4.340%	17,000		
55	Technology	09/2015	09/2021	2.419%	7,000		
56	Technology	03/2016	03/2022	3.248%	7,000		

**TABLE 11C: Interest Calculation Summary
October 1, 2013 - September 30, 2016 Cost Evaluation Period
(\$000s) (FY 2016)**

	A	B	D	E	F	G	H	I	J
	Fiscal Year	Project	Type	Current Principal	Rate	Interest	Premium	Net Interest Accrual	Total
725	2038	Albeni Falls	Historical	57	4.375%	2	-	-	2
726	2038	Boise	Historical	64	4.876%	3	-	-	3
727	2038	Bonneville Dam	Historical	14,609	4.875%	712	-	-	712
728	2038	Chief Joseph	Historical	3,500	4.875%	171	-	-	171
729	2038	Columbia Basin	Historical	2,173	4.567%	99	-	-	99
730	2038	Columbia River Fish Mitigation	Historical	402,949	4.534%	18,270	-	-	18,270
731	2038	Dworshak	Historical	10	4.877%	-	-	-	-
732	2038	Hungry Horse Dam	Historical	137	4.654%	6	-	-	6
733	2038	Ice Harbor	Historical	14	4.874%	1	-	-	1
734	2038	John Day	Historical	1,548	4.375%	68	-	-	68
735	2038	Libby	Historical	1,567	4.875%	76	-	-	76
736	2038	Little Goose	Historical	13	4.877%	1	-	-	1
737	2038	Lower Granite	Historical	24	4.875%	1	-	-	1
738	2038	Lower Monument	Historical	9	4.871%	-	-	-	-
739	2038	Lower Snake Fish and Wildlife	Historical	74	4.874%	4	-	-	4
740	2038	McNary	Historical	215	4.875%	10	-	-	10
741	2038	The Dalles	Historical	1,651	4.875%	80	-	-	80
742	2038	Yakima Chandler/Kennewick	Historical	15	4.377%	1	-	-	1
743	2038	Replacements	Historical	209,258	2.465%	5,158	-	-	5,158
744	2038	Replacements	New	209,258	2.465%	5,158	-	-	5,158
745	2038	Float	Historical	-	-	(6,989)	-	-	(6,989)
746	FY 2038	Subtotal:		847,145		22,834			22,834
747	2039	Albeni Falls	Historical	57	4.375%	2	-	-	2
748	2039	Boise	Historical	64	4.876%	3	-	-	3
749	2039	Bonneville Dam	Historical	14,609	4.875%	712	-	-	712
750	2039	Chief Joseph	Historical	3,500	4.875%	171	-	-	171
751	2039	Columbia Basin	Historical	2,173	4.567%	99	-	-	99
752	2039	Columbia River Fish Mitigation	Historical	402,949	4.534%	18,270	-	-	18,270
753	2039	Dworshak	Historical	10	4.877%	-	-	-	-
754	2039	Hungry Horse Dam	Historical	137	4.654%	6	-	-	6
755	2039	Ice Harbor	Historical	14	4.874%	1	-	-	1
756	2039	John Day	Historical	1,548	4.375%	68	-	-	68
757	2039	Libby	Historical	1,567	4.875%	76	-	-	76
758	2039	Little Goose	Historical	13	4.877%	1	-	-	1
759	2039	Lower Granite	Historical	24	4.875%	1	-	-	1
760	2039	Lower Monument	Historical	9	4.871%	-	-	-	-
761	2039	Lower Snake Fish and Wildlife	Historical	74	4.874%	4	-	-	4
762	2039	McNary	Historical	215	4.875%	10	-	-	10
763	2039	The Dalles	Historical	1,651	4.875%	80	-	-	80
764	2039	Yakima Chandler/Kennewick	Historical	15	4.377%	1	-	-	1
765	2039	Replacements	Historical	209,258	2.465%	5,158	-	-	5,158
766	2039	Replacements	New	209,258	2.465%	5,158	-	-	5,158
767	2039	Float	Historical	-	-	(7,228)	-	-	(7,228)
768	FY 2039	Subtotal:		847,145		22,595			22,595
769	2040	Albeni Falls	Historical	57	4.375%	2	-	-	2
770	2040	Boise	Historical	64	4.876%	3	-	-	3
771	2040	Bonneville Dam	Historical	14,609	4.875%	712	-	-	712
772	2040	Chief Joseph	Historical	3,500	4.875%	171	-	-	171
773	2040	Columbia Basin	Historical	2,173	4.567%	99	-	-	99
774	2040	Columbia River Fish Mitigation	Historical	402,949	4.534%	18,270	-	-	18,270
775	2040	Dworshak	Historical	10	4.877%	-	-	-	-
776	2040	Hungry Horse Dam	Historical	137	4.654%	6	-	-	6
777	2040	Ice Harbor	Historical	14	4.874%	1	-	-	1
778	2040	John Day	Historical	1,548	4.375%	68	-	-	68
779	2040	Libby	Historical	1,567	4.875%	76	-	-	76
780	2040	Little Goose	Historical	13	4.877%	1	-	-	1
781	2040	Lower Granite	Historical	24	4.875%	1	-	-	1
782	2040	Lower Monument	Historical	9	4.871%	-	-	-	-
783	2040	Lower Snake Fish and Wildlife	Historical	74	4.874%	4	-	-	4
784	2040	McNary	Historical	215	4.875%	10	-	-	10
785	2040	The Dalles	Historical	1,651	4.875%	80	-	-	80
786	2040	Yakima Chandler/Kennewick	Historical	15	4.377%	1	-	-	1
787	2040	Replacements	Historical	209,258	2.465%	5,158	-	-	5,158
788	2040	Replacements	New	209,258	2.465%	5,158	-	-	5,158
789	2040	Float	Historical	-	-	(7,245)	-	-	(7,245)
790	FY 2040	Subtotal:		847,145		22,578			22,578

TABLE 11C: Interest Calculation Summary
October 1, 2013 - September 30, 2016 Cost Evaluation Period
(\$000s) (FY 2016)

	A	B	D	E	F	G	H	I	J
	Fiscal Year	Project	Type	Current Principal	Rate	Interest	Premium	Net Interest Accrual	Total
791	2041	Albeni Falls	Historical	57	4.375%	2	-	-	2
792	2041	Boise	Historical	64	4.876%	3	-	-	3
793	2041	Bonneville Dam	Historical	14,609	4.875%	712	-	-	712
794	2041	Chief Joseph	Historical	3,500	4.875%	171	-	-	171
795	2041	Columbia Basin	Historical	2,173	4.567%	99	-	-	99
796	2041	Columbia River Fish Mitigation	Historical	402,949	4.534%	18,270	-	-	18,270
797	2041	Dworshak	Historical	10	4.877%	-	-	-	-
798	2041	Hungry Horse Dam	Historical	137	4.654%	6	-	-	6
799	2041	Ice Harbor	Historical	14	4.874%	1	-	-	1
800	2041	John Day	Historical	1,548	4.375%	68	-	-	68
801	2041	Libby	Historical	1,567	4.875%	76	-	-	76
802	2041	Little Goose	Historical	13	4.877%	1	-	-	1
803	2041	Lower Granite	Historical	24	4.875%	1	-	-	1
804	2041	Lower Monument	Historical	9	4.871%	-	-	-	-
805	2041	Lower Snake Fish and Wildlife	Historical	74	4.874%	4	-	-	4
806	2041	McNary	Historical	215	4.875%	10	-	-	10
807	2041	The Dalles	Historical	1,651	4.875%	80	-	-	80
808	2041	Yakima Chandler/Kenniwick	Historical	15	4.377%	1	-	-	1
809	2041	Replacements	Historical	209,258	2.465%	5,158	-	-	5,158
810	2041	Replacements	New	209,258	2.465%	5,158	-	-	5,158
811	2041	Float	Historical	-	-	(7,296)	-	-	(7,296)
812	FY 2041	Subtotal:		847,145		22,527	-	-	22,527
813	2042	Albeni Falls	Historical	57	4.375%	2	-	-	2
814	2042	Boise	Historical	64	4.876%	3	-	-	3
815	2042	Bonneville Dam	Historical	14,609	4.875%	712	-	-	712
816	2042	Chief Joseph	Historical	3,500	4.875%	171	-	-	171
817	2042	Columbia Basin	Historical	2,173	4.567%	99	-	-	99
818	2042	Columbia River Fish Mitigation	Historical	402,949	4.534%	18,270	-	-	18,270
819	2042	Dworshak	Historical	10	4.877%	-	-	-	-
820	2042	Hungry Horse Dam	Historical	137	4.654%	6	-	-	6
821	2042	Ice Harbor	Historical	14	4.874%	1	-	-	1
822	2042	John Day	Historical	1,548	4.375%	68	-	-	68
823	2042	Libby	Historical	1,567	4.875%	76	-	-	76
824	2042	Little Goose	Historical	13	4.877%	1	-	-	1
825	2042	Lower Granite	Historical	24	4.875%	1	-	-	1
826	2042	Lower Monument	Historical	9	4.871%	-	-	-	-
827	2042	Lower Snake Fish and Wildlife	Historical	74	4.874%	4	-	-	4
828	2042	McNary	Historical	215	4.875%	10	-	-	10
829	2042	The Dalles	Historical	1,651	4.875%	80	-	-	80
830	2042	Yakima Chandler/Kenniwick	Historical	15	4.377%	1	-	-	1
831	2042	Replacements	Historical	209,258	2.465%	5,158	-	-	5,158
832	2042	Replacements	New	209,258	2.465%	5,158	-	-	5,158
833	2042	Float	Historical	-	-	(7,296)	-	-	(7,296)
834	FY 2042	Subtotal:		847,145		22,527	-	-	22,527
835	2043	Albeni Falls	Historical	57	4.375%	2	-	-	2
836	2043	Boise	Historical	64	4.876%	3	-	-	3
837	2043	Bonneville Dam	Historical	14,609	4.875%	712	-	-	712
838	2043	Chief Joseph	Historical	3,500	4.875%	171	-	-	171
839	2043	Columbia Basin	Historical	2,173	4.567%	99	-	-	99
840	2043	Columbia River Fish Mitigation	Historical	402,949	4.534%	18,270	-	-	18,270
841	2043	Dworshak	Historical	10	4.877%	-	-	-	-
842	2043	Hungry Horse Dam	Historical	137	4.654%	6	-	-	6
843	2043	Ice Harbor	Historical	14	4.874%	1	-	-	1
844	2043	John Day	Historical	1,548	4.375%	68	-	-	68
845	2043	Libby	Historical	1,567	4.875%	76	-	-	76
846	2043	Little Goose	Historical	13	4.877%	1	-	-	1
847	2043	Lower Granite	Historical	24	4.875%	1	-	-	1
848	2043	Lower Monument	Historical	9	4.871%	-	-	-	-
849	2043	Lower Snake Fish and Wildlife	Historical	74	4.874%	4	-	-	4
850	2043	McNary	Historical	215	4.875%	10	-	-	10
851	2043	The Dalles	Historical	1,651	4.875%	80	-	-	80
852	2043	Yakima Chandler/Kenniwick	Historical	15	4.377%	1	-	-	1
853	2043	Replacements	Historical	209,258	2.465%	5,158	-	-	5,158
854	2043	Replacements	New	209,258	2.465%	5,158	-	-	5,158
855	2043	Float	Historical	-	-	(7,296)	-	-	(7,296)
856	FY 2043	Subtotal:		847,145		22,527	-	-	22,527

TABLE 11C: Interest Calculation Summary
October 1, 2013 - September 30, 2016 Cost Evaluation Period
(\$000s) (FY 2016)

	A	B	D	E	F	G	H	I	J
	Fiscal Year	Project	Type	Current Principal	Rate	Interest	Premium	Net Interest Accrual	Total
857	2044	Albeni Falls	Historical	57	4.375%	2	-	-	2
858	2044	Boise	Historical	64	4.876%	3	-	-	3
859	2044	Bonneville Dam	Historical	14,609	4.875%	712	-	-	712
860	2044	Chief Joseph	Historical	3,500	4.875%	171	-	-	171
861	2044	Columbia Basin	Historical	2,173	4.567%	99	-	-	99
862	2044	Columbia River Fish Mitigation	Historical	402,949	4.534%	18,270	-	-	18,270
863	2044	Dworshak	Historical	10	4.877%	-	-	-	-
864	2044	Hungry Horse Dam	Historical	137	4.654%	6	-	-	6
865	2044	Ice Harbor	Historical	14	4.874%	1	-	-	1
866	2044	John Day	Historical	1,548	4.375%	68	-	-	68
867	2044	Libby	Historical	1,567	4.875%	76	-	-	76
868	2044	Little Goose	Historical	13	4.877%	1	-	-	1
869	2044	Lower Granite	Historical	24	4.875%	1	-	-	1
870	2044	Lower Monument	Historical	9	4.871%	-	-	-	-
871	2044	Lower Snake Fish and Wildlife	Historical	74	4.874%	4	-	-	4
872	2044	McNary	Historical	215	4.875%	10	-	-	10
873	2044	The Dalles	Historical	1,651	4.875%	80	-	-	80
874	2044	Yakima Chandler/Kennewick	Historical	15	4.377%	1	-	-	1
875	2044	Replacements	Historical	209,258	2.465%	5,158	-	-	5,158
876	2044	Replacements	New	209,258	2.465%	5,158	-	-	5,158
877	2044	Float	Historical	-	-	(6,392)	-	-	(6,392)
878	FY 2044	Subtotal:		847,145		23,431			23,431
879	2045	Albeni Falls	Historical	57	4.375%	2	-	-	2
880	2045	Boise	Historical	64	4.876%	3	-	-	3
881	2045	Bonneville Dam	Historical	14,609	4.875%	712	-	-	712
882	2045	Chief Joseph	Historical	3,500	4.875%	171	-	-	171
883	2045	Columbia Basin	Historical	2,173	4.567%	99	-	-	99
884	2045	Columbia River Fish Mitigation	Historical	402,949	4.534%	18,270	-	-	18,270
885	2045	Dworshak	Historical	10	4.877%	-	-	-	-
886	2045	Hungry Horse Dam	Historical	137	4.654%	6	-	-	6
887	2045	Ice Harbor	Historical	14	4.874%	1	-	-	1
888	2045	John Day	Historical	1,548	4.375%	68	-	-	68
889	2045	Libby	Historical	1,567	4.875%	76	-	-	76
890	2045	Little Goose	Historical	13	4.877%	1	-	-	1
891	2045	Lower Granite	Historical	24	4.875%	1	-	-	1
892	2045	Lower Monument	Historical	9	4.871%	-	-	-	-
893	2045	Lower Snake Fish and Wildlife	Historical	74	4.874%	4	-	-	4
894	2045	McNary	Historical	215	4.875%	10	-	-	10
895	2045	The Dalles	Historical	1,651	4.875%	80	-	-	80
896	2045	Yakima Chandler/Kennewick	Historical	15	4.377%	1	-	-	1
897	2045	Replacements	Historical	209,258	2.465%	5,158	-	-	5,158
898	2045	Replacements	New	209,258	2.465%	5,158	-	-	5,158
899	2045	Float	Historical	-	-	(3,699)	-	-	(3,699)
900	FY 2045	Subtotal:		847,145		26,124			26,124
901	2046	Albeni Falls	Historical	57	4.375%	2	-	-	2
902	2046	Boise	Historical	64	4.876%	3	-	-	3
903	2046	Bonneville Dam	Historical	14,609	4.875%	712	-	-	712
904	2046	Chief Joseph	Historical	3,500	4.875%	171	-	-	171
905	2046	Columbia Basin	Historical	2,173	4.567%	99	-	-	99
906	2046	Columbia River Fish Mitigation	Historical	402,949	4.534%	18,270	-	-	18,270
907	2046	Dworshak	Historical	10	4.877%	-	-	-	-
908	2046	Hungry Horse Dam	Historical	137	4.654%	6	-	-	6
909	2046	Ice Harbor	Historical	14	4.874%	1	-	-	1
910	2046	John Day	Historical	1,548	4.375%	68	-	-	68
911	2046	Libby	Historical	1,567	4.875%	76	-	-	76
912	2046	Little Goose	Historical	13	4.877%	1	-	-	1
913	2046	Lower Granite	Historical	24	4.875%	1	-	-	1
914	2046	Lower Monument	Historical	9	4.871%	-	-	-	-
915	2046	Lower Snake Fish and Wildlife	Historical	74	4.874%	4	-	-	4
916	2046	McNary	Historical	215	4.875%	10	-	-	10
917	2046	The Dalles	Historical	1,651	4.875%	80	-	-	80
918	2046	Yakima Chandler/Kennewick	Historical	15	4.377%	1	-	-	1
919	2046	Replacements	Historical	209,258	2.465%	5,158	-	-	5,158
920	2046	Replacements	New	209,258	2.465%	5,158	-	-	5,158
921	2046	Float	Historical	-	-	(3,699)	-	-	(3,699)
922	FY 2046	Subtotal:		847,145		26,124			26,124

TABLE 11C: Interest Calculation Summary
October 1, 2013 - September 30, 2016 Cost Evaluation Period
(\$000s) (FY 2016)

A	B	D	E	F	G	H	I	J
Fiscal Year	Project	Type	Current Principal	Rate	Interest	Premium	Net Interest Accrual	Total
923	2047	Albeni Falls	Historical	57	4.375%	2	-	2
924	2047	Boise	Historical	64	4.876%	3	-	3
925	2047	Bonneville Dam	Historical	14,609	4.875%	712	-	712
926	2047	Chief Joseph	Historical	3,500	4.875%	171	-	171
927	2047	Columbia Basin	Historical	2,173	4.567%	99	-	99
928	2047	Columbia River Fish Mitigation	Historical	402,949	4.534%	18,270	-	18,270
929	2047	Dworshak	Historical	10	4.877%	-	-	-
930	2047	Hungry Horse Dam	Historical	137	4.654%	6	-	6
931	2047	Ice Harbor	Historical	14	4.874%	1	-	1
932	2047	John Day	Historical	1,548	4.375%	68	-	68
933	2047	Libby	Historical	1,567	4.875%	76	-	76
934	2047	Little Goose	Historical	13	4.877%	1	-	1
935	2047	Lower Granite	Historical	24	4.875%	1	-	1
936	2047	Lower Monument	Historical	9	4.871%	-	-	-
937	2047	Lower Snake Fish and Wildlife	Historical	74	4.874%	4	-	4
938	2047	McNary	Historical	215	4.875%	10	-	10
939	2047	The Dalles	Historical	1,651	4.875%	80	-	80
940	2047	Yakima Chandler/Kenniwick	Historical	15	4.377%	1	-	1
941	2047	Replacements	Historical	209,258	2.465%	5,158	-	5,158
942	2047	Replacements	New	209,258	2.465%	5,158	-	5,158
943	2047	Float	Historical	-	-	(3,699)	-	(3,699)
944	FY 2047	Subtotal:		847,145		26,124	-	26,124
945	2048	Albeni Falls	Historical	57	4.375%	2	-	2
946	2048	Boise	Historical	64	4.876%	3	-	3
947	2048	Bonneville Dam	Historical	14,609	4.875%	712	-	712
948	2048	Chief Joseph	Historical	3,500	4.875%	171	-	171
949	2048	Columbia Basin	Historical	2,173	4.567%	99	-	99
950	2048	Columbia River Fish Mitigation	Historical	402,949	4.534%	18,270	-	18,270
951	2048	Dworshak	Historical	10	4.877%	-	-	-
952	2048	Hungry Horse Dam	Historical	137	4.654%	6	-	6
953	2048	Ice Harbor	Historical	14	4.874%	1	-	1
954	2048	John Day	Historical	1,548	4.375%	68	-	68
955	2048	Libby	Historical	1,567	4.875%	76	-	76
956	2048	Little Goose	Historical	13	4.877%	1	-	1
957	2048	Lower Granite	Historical	24	4.875%	1	-	1
958	2048	Lower Monument	Historical	9	4.871%	-	-	-
959	2048	Lower Snake Fish and Wildlife	Historical	74	4.874%	4	-	4
960	2048	McNary	Historical	215	4.875%	10	-	10
961	2048	The Dalles	Historical	1,651	4.875%	80	-	80
962	2048	Yakima Chandler/Kenniwick	Historical	15	4.377%	1	-	1
963	2048	Replacements	Historical	209,258	2.465%	5,158	-	5,158
964	2048	Replacements	New	209,258	2.465%	5,158	-	5,158
965	2048	Float	Historical	-	-	(3,699)	-	(3,699)
966	FY 2048	Subtotal:		847,145		26,124	-	26,124
967	2049	Albeni Falls	Historical	57	4.375%	2	-	2
968	2049	Boise	Historical	64	4.876%	3	-	3
969	2049	Bonneville Dam	Historical	14,609	4.875%	712	-	712
970	2049	Chief Joseph	Historical	3,500	4.875%	171	-	171
971	2049	Columbia Basin	Historical	2,173	4.567%	99	-	99
972	2049	Columbia River Fish Mitigation	Historical	362,949	4.538%	16,470	-	16,470
973	2049	Dworshak	Historical	10	4.877%	-	-	-
974	2049	Hungry Horse Dam	Historical	137	4.654%	6	-	6
975	2049	Ice Harbor	Historical	14	4.874%	1	-	1
976	2049	John Day	Historical	1,548	4.375%	68	-	68
977	2049	Libby	Historical	1,567	4.875%	76	-	76
978	2049	Little Goose	Historical	13	4.877%	1	-	1
979	2049	Lower Granite	Historical	24	4.875%	1	-	1
980	2049	Lower Monument	Historical	9	4.871%	-	-	-
981	2049	Lower Snake Fish and Wildlife	Historical	74	4.874%	4	-	4
982	2049	McNary	Historical	215	4.875%	10	-	10
983	2049	The Dalles	Historical	1,651	4.875%	80	-	80
984	2049	Yakima Chandler/Kenniwick	Historical	15	4.377%	1	-	1
985	2049	Replacements	Historical	209,258	2.465%	5,158	-	5,158
986	2049	Replacements	New	209,258	2.465%	5,158	-	5,158
987	2049	Float	Historical	-	-	(3,699)	-	(3,699)
988	FY 2049	Subtotal:		807,145		24,324	-	24,324

TABLE 11C: Interest Calculation Summary
October 1, 2013 - September 30, 2016 Cost Evaluation Period
(\$000s) (FY 2016)

A	B	D	E	F	G	H	I	J
Fiscal Year	Project	Type	Current Principal	Rate	Interest	Premium	Net Interest Accrual	Total
1121	2056	Albeni Falls	Historical	57	4.375%	2	-	2
1122	2056	Boise	Historical	64	4.876%	3	-	3
1123	2056	Bonneville Dam	Historical	14,609	4.875%	712	-	712
1124	2056	Chief Joseph	Historical	3,500	4.875%	171	-	171
1125	2056	Columbia Basin	Historical	2,173	4.567%	99	-	99
1126	2056	Columbia River Fish Mitigation	Historical	82,949	4.665%	3,870	-	3,870
1127	2056	Dworshak	Historical	10	4.877%	-	-	-
1128	2056	Hungry Horse Dam	Historical	137	4.654%	6	-	6
1129	2056	Ice Harbor	Historical	14	4.874%	1	-	1
1130	2056	John Day	Historical	1,548	4.375%	68	-	68
1131	2056	Libby	Historical	1,567	4.875%	76	-	76
1132	2056	Little Goose	Historical	13	4.877%	1	-	1
1133	2056	Lower Granite	Historical	24	4.875%	1	-	1
1134	2056	Lower Monument	Historical	9	4.871%	-	-	-
1135	2056	Lower Snake Fish and Wildlife	Historical	74	4.874%	4	-	4
1136	2056	McNary	Historical	215	4.875%	10	-	10
1137	2056	The Dalles	Historical	1,651	4.875%	80	-	80
1138	2056	Yakima Chandler/Kenniwick	Historical	15	4.377%	1	-	1
1139	2056	Replacements	Historical	209,258	2.465%	5,158	-	5,158
1140	2056	Replacements	New	209,258	2.465%	5,158	-	5,158
1141	2056	Float	Historical	-	-	(3,699)	-	(3,699)
1142	FY 2056	Subtotal:		527,145		11,724	-	11,724
1143	2057	Albeni Falls	Historical	57	4.375%	2	-	2
1144	2057	Boise	Historical	64	4.876%	3	-	3
1145	2057	Bonneville Dam	Historical	14,609	4.875%	712	-	712
1146	2057	Chief Joseph	Historical	3,500	4.875%	171	-	171
1147	2057	Columbia Basin	Historical	2,173	4.567%	99	-	99
1148	2057	Columbia River Fish Mitigation	Historical	36,554	4.875%	1,782	-	1,782
1149	2057	Dworshak	Historical	10	4.877%	-	-	-
1150	2057	Hungry Horse Dam	Historical	137	4.654%	6	-	6
1151	2057	Ice Harbor	Historical	14	4.874%	1	-	1
1152	2057	John Day	Historical	1,548	4.375%	68	-	68
1153	2057	Libby	Historical	1,567	4.875%	76	-	76
1154	2057	Little Goose	Historical	13	4.877%	1	-	1
1155	2057	Lower Granite	Historical	24	4.875%	1	-	1
1156	2057	Lower Monument	Historical	9	4.871%	-	-	-
1157	2057	Lower Snake Fish and Wildlife	Historical	74	4.874%	4	-	4
1158	2057	McNary	Historical	215	4.875%	10	-	10
1159	2057	The Dalles	Historical	1,651	4.875%	80	-	80
1160	2057	Yakima Chandler/Kenniwick	Historical	15	4.377%	1	-	1
1161	2057	Replacements	Historical	209,258	2.465%	5,158	-	5,158
1162	2057	Replacements	New	209,258	2.465%	5,158	-	5,158
1163	2057	Float	Historical	-	-	(3,699)	-	(3,699)
1164	FY 2057	Subtotal:		480,751		9,637	-	9,637
1165	2058	Albeni Falls	Historical	57	4.375%	2	-	2
1166	2058	Boise	Historical	64	4.876%	3	-	3
1167	2058	Bonneville Dam	Historical	14,609	4.875%	712	-	712
1168	2058	Chief Joseph	Historical	3,500	4.875%	171	-	171
1169	2058	Columbia Basin	Historical	2,173	4.567%	99	-	99
1170	2058	Columbia River Fish Mitigation	Historical	36,554	4.875%	1,782	-	1,782
1171	2058	Dworshak	Historical	10	4.877%	-	-	-
1172	2058	Hungry Horse Dam	Historical	137	4.654%	6	-	6
1173	2058	Ice Harbor	Historical	14	4.874%	1	-	1
1174	2058	John Day	Historical	1,548	4.375%	68	-	68
1175	2058	Libby	Historical	1,567	4.875%	76	-	76
1176	2058	Little Goose	Historical	13	4.877%	1	-	1
1177	2058	Lower Granite	Historical	24	4.875%	1	-	1
1178	2058	Lower Monument	Historical	9	4.871%	-	-	-
1179	2058	Lower Snake Fish and Wildlife	Historical	74	4.874%	4	-	4
1180	2058	McNary	Historical	215	4.875%	10	-	10
1181	2058	The Dalles	Historical	1,651	4.875%	80	-	80
1182	2058	Yakima Chandler/Kenniwick	Historical	15	4.377%	1	-	1
1183	2058	Replacements	Historical	209,258	2.465%	5,158	-	5,158
1184	2058	Replacements	New	209,258	2.465%	5,158	-	5,158
1185	2058	Float	Historical	-	-	(3,699)	-	(3,699)
1186	FY 2058	Subtotal:		480,751		9,637	-	9,637

TABLE 11C: Interest Calculation Summary
October 1, 2013 - September 30, 2016 Cost Evaluation Period
(\$000s) (FY 2016)

	A	B	D	E	F	G	H	I	J
	Fiscal Year	Project	Type	Current Principal	Rate	Interest	Premium	Net Interest Accrual	Total
1187	2059	Albeni Falls	Historical	57	4.375%	2	-	-	2
1188	2059	Columbia Basin	Historical	1,338	4.375%	59	-	-	59
1189	2059	Hungry Horse Dam	Historical	60	4.376%	3	-	-	3
1190	2059	John Day	Historical	1,548	4.375%	68	-	-	68
1191	2059	Yakima Chandler/Kenniwick	Historical	15	4.377%	1	-	-	1
1192	2059	Replacements	Historical	209,258	2.465%	5,158	-	-	5,158
1193	2059	Replacements	New	209,258	2.465%	5,158	-	-	5,158
1194	2059	Float	Historical	-	-	(3,699)	-	-	(3,699)
1195	FY 2059	Subtotal:		421,535		6,750	-	-	6,750
1196	2060	Replacements	Historical	209,258	2.465%	5,158	-	-	5,158
1197	2060	Replacements	New	209,258	2.465%	5,158	-	-	5,158
1198	2060	Float	Historical	-	-	(3,699)	-	-	(3,699)
1199	FY 2060	Subtotal:		418,516		6,618	-	-	6,618
1200	2061	Replacements	Historical	209,258	2.465%	5,158	-	-	5,158
1201	2061	Replacements	New	209,258	2.465%	5,158	-	-	5,158
1202	2061	Float	Historical	-	-	(3,699)	-	-	(3,699)
1203	FY 2061	Subtotal:		418,516		6,618	-	-	6,618
1204	2062	Replacements	Historical	209,258	2.465%	5,158	-	-	5,158
1205	2062	Replacements	New	209,258	2.465%	5,158	-	-	5,158
1206	2062	Float	Historical	-	-	(3,699)	-	-	(3,699)
1207	FY 2062	Subtotal:		418,516		6,618	-	-	6,618
1208	2063	Replacements	Historical	209,258	2.465%	5,158	-	-	5,158
1209	2063	Replacements	New	209,258	2.465%	5,158	-	-	5,158
1210	2063	Float	Historical	-	-	(3,699)	-	-	(3,699)
1211	FY 2063	Subtotal:		418,516		6,618	-	-	6,618
1212	2064	Replacements	Historical	209,258	2.465%	5,158	-	-	5,158
1213	2064	Replacements	New	209,258	2.465%	5,158	-	-	5,158
1214	2064	Float	Historical	-	-	(3,699)	-	-	(3,699)
1215	FY 2064	Subtotal:		418,516		6,618	-	-	6,618
1216	2065	Replacements	Historical	209,258	2.465%	5,158	-	-	5,158
1217	2065	Replacements	New	209,258	2.465%	5,158	-	-	5,158
1218	2065	Float	Historical	-	-	(3,699)	-	-	(3,699)
1219	FY 2065	Subtotal:		418,516		6,618	-	-	6,618
1220	2066	Replacements	Historical	209,258	2.465%	5,158	-	-	5,158
1221	2066	Replacements	New	209,258	2.465%	5,158	-	-	5,158
1222	2066	Float	Historical	-	-	(3,699)	-	-	(3,699)
1223	FY 2066	Subtotal:		418,516		6,618	-	-	6,618
1224	Grand Total:			\$104,699,508		\$4,118,099	-	(\$9,556)	\$4,108,544

TABLE 11D: Application of Amortization
October 1, 2013 - September 30, 2016 Cost Evaluation Period
(\$000s) (FY 2016)

A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R
Fiscal Year	Project	Debt Type	In Service	Bond Due Date	Initial Principal	Current Principal	Original Rate	Effective Rate	Refinance Type	Refinanced Date	Roll Maturity Date	Roll Rate	Principal Paid	Premium	Discount	Accrual	Reversal
671	2059	Albeni Falls	Corps of Engineers	9/30/2009	9/30/2059	57		4.375%	4.375%				57				
672	2059	Columbia Basin	Bureau of Reclamation	9/30/2009	9/30/2059	1,338		4.375%	4.375%				1,338				
673	2059	Hungry Horse Dam	Bureau of Reclamation	9/30/2009	9/30/2059	60		4.375%	4.375%				60				
674	2059	John Day	Corps of Engineers	9/30/2009	9/30/2059	1,548		4.375%	4.375%				1,548				
675	2059	Yakima Chandler/Kenniwick	Bureau of Reclamation	9/30/2009	9/30/2059	15		4.375%	4.375%				15				
676	2059	Replacements	-	3/31/2058	3/31/2103	209,258		4.930%	4.930%				209,258				
677		FY 2059 Subtotal:	-	-	-	212,277		-	-				212,277				
678	2060	Replacements	-	3/31/2059	3/31/2104	209,258		4.930%	4.930%				209,258				
679		FY 2060 Subtotal:	-	-	-	209,258		-	-				209,258				
680	2061	Replacements	-	3/31/2060	3/31/2105	209,258		4.930%	4.930%				209,258				
681		FY 2061 Subtotal:	-	-	-	209,258		-	-				209,258				
682	2062	Replacements	-	3/31/2061	3/31/2106	209,258		4.930%	4.930%				209,258				
683		FY 2062 Subtotal:	-	-	-	209,258		-	-				209,258				
684	2063	Replacements	-	3/31/2062	3/31/2107	209,258		4.930%	4.930%				209,258				
685		FY 2063 Subtotal:	-	-	-	209,258		-	-				209,258				
686	2064	Replacements	-	3/31/2063	3/31/2108	209,258		4.930%	4.930%				209,258				
687		FY 2064 Subtotal:	-	-	-	209,258		-	-				209,258				
688	2065	Replacements	-	3/31/2064	3/31/2109	209,258		4.930%	4.930%				209,258				
689		FY 2065 Subtotal:	-	-	-	209,258		-	-				209,258				
690	2066	Replacements	-	3/31/2065	3/31/2110	209,258		4.930%	4.930%				209,258				
691		FY 2066 Subtotal:	-	-	-	209,258		-	-				209,258				
692		Grand Total				\$20,357,125		\$18,199,979					\$16,013,317	\$2,055	\$26,762		

12. REPAYMENT STUDY DATA, FY 2017 STUDY

TABLE 12A
HISTORICAL INVESTMENTS
October 1, 2014 - September 30, 2017 Cost Evaluation period
(\$000s) (FY 2017)

A	B	C	D	E	F	G	H
Project	In Service Date	Due Date	Interest Rate	Initial Principal	Current Principal	Roll Maturity Date	Hollover Rate
811	Hungry Horse Dam	09/1963	09/2003	6.840%	18	0	
812	Hungry Horse Dam	09/1963	09/2003	6.840%	1	0	
813	Hungry Horse Dam	09/1964	09/2003	6.840%	17	0	
814	Hungry Horse Dam	09/1964	09/2003	6.840%	1	0	
815	Hungry Horse Dam	09/1965	09/2003	6.840%	17	0	
816	Hungry Horse Dam	09/1965	09/2003	6.840%	1	0	
817	Hungry Horse Dam	09/1966	09/2003	6.840%	17	0	
818	Hungry Horse Dam	09/1966	09/2003	6.840%	1	0	
819	Hungry Horse Dam	09/1967	09/2003	6.840%	18	0	
820	Hungry Horse Dam	09/1967	09/2003	6.840%	1	0	
821	Hungry Horse Dam	09/1968	09/2003	6.840%	18	0	
822	Hungry Horse Dam	09/1968	09/2003	6.840%	1	0	
823	Hungry Horse Dam	09/1969	09/2003	6.840%	18	0	
824	Hungry Horse Dam	09/1969	09/2003	6.840%	1	0	
825	Hungry Horse Dam	09/1970	09/2003	6.840%	18	0	
826	Hungry Horse Dam	09/1970	09/2003	6.840%	1	0	
827	Hungry Horse Dam	09/1971	09/2003	6.840%	18	0	
828	Hungry Horse Dam	09/1971	09/2003	6.840%	1	0	
829	Hungry Horse Dam	09/1972	09/2003	6.840%	18	0	
830	Hungry Horse Dam	09/1972	09/2003	6.840%	1	0	
831	Hungry Horse Dam	09/1973	09/2003	6.840%	18	0	
832	Hungry Horse Dam	09/1973	09/2003	6.840%	1	0	
833	Hungry Horse Dam	09/1974	09/2003	6.840%	17	0	
834	Hungry Horse Dam	09/1974	09/2003	6.840%	1	0	
835	Hungry Horse Dam	09/1975	09/2003	6.840%	17	0	
836	Hungry Horse Dam	09/1975	09/2003	6.840%	1	0	
837	Hungry Horse Dam	09/1976	09/2003	6.840%	10	0	
838	Hungry Horse Dam	09/1976	09/2003	6.840%	1	0	
839	Hungry Horse Dam	09/1977	09/2003	6.840%	18	0	
840	Hungry Horse Dam	09/1977	09/2003	6.840%	1	0	
841	Hungry Horse Dam	09/1978	09/2003	6.840%	18	0	
842	Hungry Horse Dam	09/1978	09/2003	6.840%	1	0	
843	Hungry Horse Dam	09/1979	09/2003	6.840%	18	0	
844	Hungry Horse Dam	09/1979	09/2003	6.840%	1	0	
845	Hungry Horse Dam	09/1980	09/2003	6.840%	18	0	
846	Hungry Horse Dam	09/1980	09/2003	6.840%	1	0	
847	Hungry Horse Dam	09/1981	09/2003	6.840%	22	0	
848	Hungry Horse Dam	09/1981	09/2003	6.840%	1	0	
849	Hungry Horse Dam	09/1982	09/2003	6.840%	1	0	
850	Hungry Horse Dam	09/1983	09/2003	6.840%	12	0	
851	Hungry Horse Dam	09/1983	09/2003	6.840%	1	0	
852	Hungry Horse Dam	09/1984	09/2003	10.750%	32	0	
853	Hungry Horse Dam	09/1984	09/2003	10.750%	1	0	
854	Hungry Horse Dam	09/1985	09/2003	12.375%	36	0	
855	Hungry Horse Dam	09/1985	09/2003	12.375%	37	0	
856	Hungry Horse Dam	09/1989	09/2003	9.250%	101	0	
857	Hungry Horse Dam	09/1990	09/2003	8.875%	58	0	
858	Hungry Horse Dam	09/1991	09/2003	8.750%	19	0	
859	Hungry Horse Dam	09/1992	09/2003	8.500%	9	0	
860	Hungry Horse Dam	09/1993	09/2003	7.875%	4,136	0	
861	Hungry Horse Dam	09/1993	09/2003	7.875%	2	0	
862	Hungry Horse Dam	09/1994	09/2019	7.125%	56	0	
863	Hungry Horse Dam	09/1995	09/2000	6.620%	156	0	
864	Hungry Horse Dam	09/1995	09/2000	6.620%	84	0	
865	Hungry Horse Dam	09/1995	09/2020	7.930%	450	0	
866	Hungry Horse Dam	09/1995	09/2030	7.150%	536	536	
867	Hungry Horse Dam	09/1995	09/2030	7.150%	1,198	1,195	
868	Hungry Horse Dam	09/1995	09/2045	7.150%	6,190	6,190	
869	Hungry Horse Dam	09/1995	09/2045	7.860%	14,354	0	
870	Hungry Horse Dam	09/1996	09/2046	7.150%	15	15	
871	Hungry Horse Dam	09/1996	09/2046	7.150%	2	2	
872	Hungry Horse Dam	09/1997	09/2007	6.950%	154	0	
873	Hungry Horse Dam	09/1997	09/2047	7.150%	111	111	
874	Hungry Horse Dam	09/2001	09/2051	5.875%	552	552	
875	Hungry Horse Dam	09/2005	09/2055	5.125%	2,951	2,951	
876	Hungry Horse Dam	09/2007	09/2057	5.000%	294	294	
877	Hungry Horse Dam	09/2008	09/2058	4.875%	76	76	
878	Hungry Horse Dam	09/2009	09/2059	4.375%	60	60	
879	Hungry Horse Dam	09/2010	09/2060	4.250%	779	779	
880	Hungry Horse Dam	09/2011	09/2061	3.750%	503	503	
881	Hungry Horse Dam	09/2012	09/2062	3.375%	3	3	
882	Hungry Horse Dam	09/2014	09/2064	3.875%	12	12	
883	Ice Harbor	09/1962	09/2012	7.160%	59,699	0	
884	Ice Harbor	09/1962	09/2012	7.160%	664	0	
885	Ice Harbor	09/1963	09/2012	7.160%	46	0	
886	Ice Harbor	09/1963	09/2012	7.160%	1	0	
887	Ice Harbor	09/1964	09/2012	7.160%	46	0	
888	Ice Harbor	09/1964	09/2012	7.160%	1	0	
889	Ice Harbor	09/1965	09/2012	7.160%	46	0	
890	Ice Harbor	09/1965	09/2012	7.160%	1	0	
891	Ice Harbor	09/1966	09/2012	7.160%	46	0	

**TABLE 12A
HISTORICAL INVESTMENTS
October 1, 2014 - September 30, 2017 Cost Evaluation period
(\$000s) (FY 2017)**

A	B	C	D	E	F	G	H
Project	In Service Date	Due Date	Interest Rate	Initial Principal	Current Principal	Roll Maturity Date	Rollover Rate
892	Ice Harbor	09/1966	09/2012	7.160%	1	0	
893	Ice Harbor	09/1967	09/2012	7.160%	46	0	
894	Ice Harbor	09/1967	09/2012	7.160%	1	0	
895	Ice Harbor	09/1968	09/2012	7.160%	46	0	
896	Ice Harbor	09/1968	09/2012	7.160%	1	0	
897	Ice Harbor	09/1969	09/2012	7.160%	46	0	
898	Ice Harbor	09/1969	09/2012	7.160%	1	0	
899	Ice Harbor	09/1970	09/2012	7.160%	46	0	
900	Ice Harbor	09/1970	09/2012	7.160%	1	0	
901	Ice Harbor	09/1971	09/2012	7.160%	46	0	
902	Ice Harbor	09/1971	09/2012	7.160%	1	0	
903	Ice Harbor	09/1972	09/2012	7.160%	46	0	
904	Ice Harbor	09/1972	09/2012	7.160%	1	0	
905	Ice Harbor	09/1973	09/2012	7.160%	46	0	
906	Ice Harbor	09/1973	09/2012	7.160%	1	0	
907	Ice Harbor	09/1974	09/2012	7.160%	46	0	
908	Ice Harbor	09/1974	09/2012	7.160%	1	0	
909	Ice Harbor	09/1975	09/2012	7.160%	46	0	
910	Ice Harbor	09/1975	09/2012	7.160%	1	0	
911	Ice Harbor	09/1976	09/2012	7.160%	46	0	
912	Ice Harbor	09/1976	09/2012	7.160%	1	0	
913	Ice Harbor	09/1976	09/2026	7.150%	20,472	20,472	
914	Ice Harbor	09/1976	09/2026	7.150%	228	228	
915	Ice Harbor	09/1977	09/2012	7.160%	46	0	
916	Ice Harbor	09/1977	09/2012	7.160%	1	0	
917	Ice Harbor	09/1978	09/2012	7.160%	46	0	
918	Ice Harbor	09/1978	09/2012	7.160%	1	0	
919	Ice Harbor	09/1979	09/2012	7.160%	46	0	
920	Ice Harbor	09/1979	09/2012	7.160%	1	0	
921	Ice Harbor	09/1980	09/2012	7.160%	46	0	
922	Ice Harbor	09/1980	09/2012	7.160%	1	0	
923	Ice Harbor	09/1981	09/2012	7.160%	46	0	
924	Ice Harbor	09/1981	09/2012	7.160%	1	0	
925	Ice Harbor	09/1982	09/2012	7.160%	46	0	
926	Ice Harbor	09/1982	09/2012	7.160%	1	0	
927	Ice Harbor	09/1983	09/2012	7.160%	46	0	
928	Ice Harbor	09/1983	09/2012	7.160%	1	0	
929	Ice Harbor	09/1985	09/2012	7.160%	41	0	
930	Ice Harbor	09/1985	09/2026	7.150%	21	21	
931	Ice Harbor	09/1986	09/2012	7.160%	137	0	
932	Ice Harbor	09/1987	09/2012	7.160%	3	0	
933	Ice Harbor	09/1987	09/2012	8.875%	71	0	
934	Ice Harbor	09/1987	09/2012	8.875%	1	0	
935	Ice Harbor	09/1988	09/2012	8.500%	8	0	
936	Ice Harbor	09/1988	09/2012	8.500%	57	0	
937	Ice Harbor	09/1989	09/2012	9.250%	51	0	
938	Ice Harbor	09/1990	09/2012	8.875%	427	0	
939	Ice Harbor	09/1991	09/2012	8.750%	348	0	
940	Ice Harbor	09/1992	09/2012	8.500%	177	0	
941	Ice Harbor	09/1993	09/2012	7.875%	3,192	0	
942	Ice Harbor	09/1993	09/2012	7.875%	1,645	0	
943	Ice Harbor	09/1994	09/2029	7.125%	328	0	
944	Ice Harbor	09/1994	09/2029	7.125%	520	0	
945	Ice Harbor	09/1995	09/2000	7.330%	2	0	
946	Ice Harbor	09/1995	09/2019	7.270%	84	0	
947	Ice Harbor	09/1995	09/2019	7.270%	171	0	
948	Ice Harbor	09/1995	09/2019	7.270%	849	0	
949	Ice Harbor	09/1996	09/2031	7.150%	78	78	
950	Ice Harbor	09/1996	09/2041	7.150%	371	371	
951	Ice Harbor	09/1997	09/2022	7.230%	66	0	
952	Ice Harbor	09/1997	09/2047	7.150%	67	67	
953	Ice Harbor	09/1999	09/2049	5.375%	5,516	5,516	
954	Ice Harbor	09/2000	09/2050	6.125%	548	548	
955	Ice Harbor	09/2001	09/2051	5.875%	764	764	
956	Ice Harbor	09/2002	09/2052	5.500%	1,014	1,014	
957	Ice Harbor	09/2003	09/2053	5.125%	50	50	
958	Ice Harbor	09/2004	09/2054	5.375%	3,321	3,321	
959	Ice Harbor	09/2008	09/2058	4.875%	14	14	
960	Ice Harbor	09/2009	09/2059	4.375%	2,615	2,615	
961	Ice Harbor	09/2010	09/2060	4.250%	207	207	
962	Ice Harbor	09/2011	09/2061	3.750%	819	819	
963	Ice Harbor	09/2012	09/2062	3.375%	115	115	
964	John Day	09/1968	09/2018	7.280%	27,254	0	
965	John Day	09/1969	09/2019	7.270%	96,104	0	
966	John Day	09/1970	09/2020	7.250%	23,656	0	
967	John Day	09/1971	09/2021	7.230%	34,974	0	
968	John Day	09/1972	09/2022	7.210%	11,502	0	
969	John Day	09/1984	09/2022	10.750%	3,677	0	
970	John Day	09/1985	09/2022	7.210%	6,490	0	
971	John Day	09/1985	09/2022	12.375%	1,209	0	
972	John Day	09/1986	09/2022	7.210%	3,227	0	

**TABLE 12A
HISTORICAL INVESTMENTS
October 1, 2014 - September 30, 2017 Cost Evaluation period
(\$000s) (FY 2017)**

	A	B	C	D	E	F	G	H
Project	In Service Date	Due Date	Interest Rate	Initial Principal	Current Principal	Roll Maturity Date	Hollover Rate	
973	John Day	09/1986	09/2022	11.375%	713	0		
974	John Day	09/1987	09/2022	7.210%	706	0		
975	John Day	09/1987	09/2022	8.875%	4,353	0		
976	John Day	09/1988	09/2022	8.500%	332	0		
977	John Day	09/1988	09/2022	8.500%	199	0		
978	John Day	09/1989	09/2022	7.210%	30	0		
979	John Day	09/1989	09/2022	9.250%	377	0		
980	John Day	09/1990	09/2022	7.210%	37	0		
981	John Day	09/1990	09/2022	8.875%	543	0		
982	John Day	09/1991	09/2022	8.750%	13,218	0		
983	John Day	09/1991	09/2022	8.750%	144	0		
984	John Day	09/1992	09/2022	7.210%	19	0		
985	John Day	09/1992	09/2022	8.500%	95	0		
986	John Day	09/1993	09/2022	7.875%	7,810	0		
987	John Day	09/1993	09/2022	7.875%	9,585	0		
988	John Day	09/1994	09/2019	7.125%	14	0		
989	John Day	09/1994	09/2029	7.125%	1,252	0		
990	John Day	09/1995	09/2000	7.330%	2	0		
991	John Day	09/1995	09/2000	7.330%	9	0		
992	John Day	09/1995	09/2020	7.250%	79	0		
993	John Day	09/1995	09/2035	7.150%	22	22		
994	John Day	09/1995	09/2035	7.150%	52	52		
995	John Day	09/1995	09/2035	7.150%	121	121		
996	John Day	09/1995	09/2045	7.150%	37	37		
997	John Day	09/1995	09/2045	7.150%	608	608		
998	John Day	09/1995	09/2045	7.150%	7,653	7,653		
999	John Day	09/1996	09/2011	7.130%	237	0		
1000	John Day	09/1996	09/2016	7.290%	1,072	0		
1001	John Day	09/1997	09/2022	7.230%	133	0		
1002	John Day	09/1997	09/2047	7.150%	179	179		
1003	John Day	09/1999	09/2049	5.375%	3,510	3,510		
1004	John Day	09/2000	09/2050	6.125%	2,761	2,761		
1005	John Day	09/2001	09/2051	5.875%	619	619		
1006	John Day	09/2004	09/2054	5.375%	2,830	2,830		
1007	John Day	09/2005	09/2055	5.125%	2,827	2,827		
1008	John Day	09/2006	09/2056	4.500%	601	601		
1009	John Day	09/2007	09/2057	5.000%	233	233		
1010	John Day	09/2009	09/2059	4.375%	1,548	1,548		
1011	John Day	09/2010	09/2060	4.250%	356	356		
1012	John Day	09/2011	09/2061	3.750%	175	175		
1013	John Day	09/2012	09/2062	3.375%	6,161	6,161		
1014	John Day	09/2013	09/2063	2.875%	17	17		
1015	Libby	09/1975	09/2025	7.160%	54,644	0		
1016	Libby	09/1976	09/2026	7.150%	153,432	146,624		
1017	Libby	09/1977	09/2026	7.150%	1,465	1,465		
1018	Libby	09/1978	09/2026	7.150%	1,465	1,465		
1019	Libby	09/1979	09/2026	7.150%	1,465	1,465		
1020	Libby	09/1980	09/2026	7.150%	1,465	1,465		
1021	Libby	09/1981	09/2026	7.150%	1,465	1,465		
1022	Libby	09/1982	09/2026	7.150%	1,465	1,465		
1023	Libby	09/1983	09/2026	7.150%	1,465	1,465		
1024	Libby	09/1984	09/2026	10.750%	104	0		
1025	Libby	09/1985	09/2026	7.150%	518	518		
1026	Libby	09/1986	09/2026	7.150%	283	283		
1027	Libby	09/1987	09/2026	7.150%	2	2		
1028	Libby	09/1988	09/2026	8.505%	35	0		
1029	Libby	09/1988	09/2038	7.150%	18,043	14,781		
1030	Libby	09/1989	09/2026	7.150%	1	1		
1031	Libby	09/1989	09/2026	9.250%	131	0		
1032	Libby	09/1990	09/2026	8.875%	11	0		
1033	Libby	09/1991	09/2026	8.750%	134	0		
1034	Libby	09/1992	09/2026	8.500%	100	0		
1035	Libby	09/1992	09/2026	8.500%	70	0		
1036	Libby	09/1993	09/2026	7.875%	600	0		
1037	Libby	09/1994	09/2029	7.125%	215	0		
1038	Libby	09/1994	09/2029	7.150%	286	152		
1039	Libby	09/1995	09/2030	7.150%	15	15		
1040	Libby	09/1995	09/2030	7.150%	41	41		
1041	Libby	09/1995	09/2030	7.150%	94	94		
1042	Libby	09/1997	09/2022	7.230%	432	0		
1043	Libby	09/1997	09/2047	7.150%	660	660		
1044	Libby	09/2001	09/2051	5.875%	5,562	5,562		
1045	Libby	09/2008	09/2058	4.875%	1,567	1,567		
1046	Libby	09/2010	09/2060	4.250%	40	40		
1047	Libby	09/2011	09/2061	3.750%	152	152		
1048	Libby	09/2012	09/2062	3.375%	16	16		
1049	Little Goose	09/1970	09/2020	7.250%	22,326	0		
1050	Little Goose	09/1971	09/2021	7.230%	42,962	0		
1051	Little Goose	09/1972	09/2021	7.230%	28	0		
1052	Little Goose	09/1973	09/2021	7.230%	29	0		
1053	Little Goose	09/1974	09/2021	7.230%	28	0		

TABLE 12A
HISTORICAL INVESTMENTS
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A	B	C	D	E	F	G	H
Project	In Service Date	Due Date	Interest Rate	Initial Principal	Current Principal	Roll Maturity Date	Hollover Rate
1054	Little Goose	09/1975	09/2021	7.230%	29	0	
1055	Little Goose	09/1976	09/2021	7.230%	28	0	
1056	Little Goose	09/1977	09/2021	7.230%	29	0	
1057	Little Goose	09/1978	09/2021	7.230%	28	0	
1058	Little Goose	09/1978	09/2028	7.150%	49,578	49,578	
1059	Little Goose	09/1979	09/2021	7.230%	29	0	
1060	Little Goose	09/1980	09/2021	7.230%	28	0	
1061	Little Goose	09/1981	09/2021	7.230%	29	0	
1062	Little Goose	09/1982	09/2021	7.230%	28	0	
1063	Little Goose	09/1983	09/2021	7.230%	29	0	
1064	Little Goose	09/1984	09/2021	10.750%	201	0	
1065	Little Goose	09/1985	09/2021	7.230%	174	0	
1066	Little Goose	09/1985	09/2028	7.150%	47	47	
1067	Little Goose	09/1986	09/2021	7.230%	239	0	
1068	Little Goose	09/1987	09/2021	7.230%	6	0	
1069	Little Goose	09/1987	09/2021	8.875%	72	0	
1070	Little Goose	09/1988	09/2021	8.500%	12	0	
1071	Little Goose	09/1988	09/2021	8.500%	68	0	
1072	Little Goose	09/1989	09/2021	9.250%	77	0	
1073	Little Goose	09/1990	09/2021	8.875%	408	0	
1074	Little Goose	09/1990	09/2021	8.875%	21	0	
1075	Little Goose	09/1991	09/2021	8.750%	266	0	
1076	Little Goose	09/1992	09/2021	8.500%	66	0	
1077	Little Goose	09/1992	09/2021	8.500%	27	0	
1078	Little Goose	09/1993	09/2021	7.875%	276	0	
1079	Little Goose	09/1993	09/2021	7.875%	3,359	0	
1080	Little Goose	09/1994	09/2019	7.125%	37	0	
1081	Little Goose	09/1994	09/2029	7.125%	2,044	0	
1082	Little Goose	09/1995	09/2040	7.150%	17	17	
1083	Little Goose	09/1995	09/2040	7.150%	450	450	
1084	Little Goose	09/1995	09/2040	7.150%	733	733	
1085	Little Goose	09/1996	09/2046	7.150%	10	10	
1086	Little Goose	09/1996	09/2046	7.150%	10	10	
1087	Little Goose	09/1996	09/2046	7.150%	211	211	
1088	Little Goose	09/1996	09/2046	7.150%	241	241	
1089	Little Goose	09/1996	09/2046	7.150%	520	520	
1090	Little Goose	09/1996	09/2046	7.150%	3,909	3,909	
1091	Little Goose	09/1997	09/2047	7.150%	1	1	
1092	Little Goose	09/2001	09/2051	5.875%	4,608	4,608	
1093	Little Goose	09/2002	09/2052	5.500%	27	27	
1094	Little Goose	09/2003	09/2053	5.125%	146	146	
1095	Little Goose	09/2004	09/2054	5.375%	67	67	
1096	Little Goose	09/2008	09/2058	4.875%	13	13	
1097	Little Goose	09/2009	09/2059	4.375%	3,171	3,171	
1098	Little Goose	09/2010	09/2060	4.250%	30	30	
1099	Little Goose	09/2013	09/2063	2.875%	66	66	
1100	Lookout Dam	09/1955	09/2005	6.910%	34,290	0	
1101	Lookout Dam	09/1956	09/2005	6.910%	52	0	
1102	Lookout Dam	09/1957	09/2005	6.910%	51	0	
1103	Lookout Dam	09/1958	09/2005	6.910%	51	0	
1104	Lookout Dam	09/1959	09/2005	6.910%	51	0	
1105	Lookout Dam	09/1960	09/2005	6.910%	51	0	
1106	Lookout Dam	09/1961	09/2005	6.910%	52	0	
1107	Lookout Dam	09/1962	09/2005	6.910%	51	0	
1108	Lookout Dam	09/1963	09/2005	6.910%	51	0	
1109	Lookout Dam	09/1964	09/2005	6.910%	51	0	
1110	Lookout Dam	09/1965	09/2005	6.910%	51	0	
1111	Lookout Dam	09/1966	09/2005	6.910%	51	0	
1112	Lookout Dam	09/1967	09/2005	6.910%	52	0	
1113	Lookout Dam	09/1968	09/2005	6.910%	51	0	
1114	Lookout Dam	09/1969	09/2005	6.910%	51	0	
1115	Lookout Dam	09/1970	09/2005	6.910%	51	0	
1116	Lookout Dam	09/1971	09/2005	6.910%	51	0	
1117	Lookout Dam	09/1972	09/2005	6.910%	51	0	
1118	Lookout Dam	09/1973	09/2005	6.910%	52	0	
1119	Lookout Dam	09/1974	09/2005	6.910%	51	0	
1120	Lookout Dam	09/1975	09/2005	6.910%	51	0	
1121	Lookout Dam	09/1976	09/2005	6.910%	51	0	
1122	Lookout Dam	09/1977	09/2005	6.910%	51	0	
1123	Lookout Dam	09/1978	09/2005	6.910%	51	0	
1124	Lookout Dam	09/1979	09/2005	6.910%	52	0	
1125	Lookout Dam	09/1980	09/2005	6.910%	51	0	
1126	Lookout Dam	09/1981	09/2005	6.910%	51	0	
1127	Lookout Dam	09/1982	09/2005	6.910%	51	0	
1128	Lookout Dam	09/1983	09/2005	6.910%	51	0	
1129	Lookout Dam	09/1984	09/2005	10.750%	185	0	
1130	Lookout Dam	09/1985	09/2005	6.910%	52	0	
1131	Lookout Dam	09/1986	09/2005	6.910%	42	0	
1132	Lookout Dam	09/1987	09/2005	6.910%	9	0	
1133	Lookout Dam	09/1987	09/2005	8.875%	12	0	
1134	Lookout Dam	09/1988	09/2005	8.500%	46	0	

TABLE 12A
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A	B	C	D	E	F	G	H
Project	In Service Date	Due Date	Interest Rate	Initial Principal	Current Principal	Roll Maturity Date	Rollover Rate
1135	Lookout Dam	09/1988	09/2005	8.500%	17	0	
1136	Lookout Dam	09/1989	09/2005	9.250%	23	0	
1137	Lookout Dam	09/1990	09/2005	8.875%	147	0	
1138	Lookout Dam	09/1990	09/2005	8.875%	4	0	
1139	Lookout Dam	09/1991	09/2005	8.750%	6	0	
1140	Lookout Dam	09/1991	09/2005	8.750%	50	0	
1141	Lookout Dam	09/1992	09/2005	8.500%	181	0	
1142	Lookout Dam	09/1992	09/2005	8.500%	4	0	
1143	Lookout Dam	09/1993	09/2005	7.875%	18	0	
1144	Lookout Dam	09/1993	09/2005	7.875%	189	0	
1145	Lookout Dam	09/1994	09/2019	7.125%	73	0	
1146	Lookout Dam	09/1995	09/2045	7.150%	80	39	
1147	Lookout Dam	09/1995	09/2045	7.150%	33	33	
1148	Lookout Dam	09/1995	09/2045	7.860%	9	0	
1149	Lookout Dam	09/1995	09/2045	7.860%	15	0	
1150	Lookout Dam	09/1995	09/2045	7.860%	31	0	
1151	Lookout Dam	09/1995	09/2045	7.860%	157	0	
1152	Lookout Dam	09/2000	09/2050	6.125%	5,098	5,098	
1153	Lookout Dam	09/2003	09/2053	5.125%	135	135	
1154	Lookout Dam	09/2005	09/2055	5.125%	7,355	7,355	
1155	Lookout Dam	09/2007	09/2057	5.000%	572	572	
1156	Lookout Dam	09/2011	09/2061	3.750%	17	17	
1157	Lookout Dam	09/2012	09/2062	3.375%	294	294	
1158	Lost Creek	09/1977	09/2027	7.150%	14,293	14,201	
1159	Lost Creek	09/1978	09/2027	7.150%	58	58	
1160	Lost Creek	09/1979	09/2027	7.150%	60	60	
1161	Lost Creek	09/1980	09/2027	7.150%	60	60	
1162	Lost Creek	09/1981	09/2027	7.150%	60	60	
1163	Lost Creek	09/1982	09/2027	7.150%	60	60	
1164	Lost Creek	09/1983	09/2027	7.150%	60	60	
1165	Lost Creek	09/1984	09/2027	10.750%	243	0	
1166	Lost Creek	09/1985	09/2027	7.150%	12	12	
1167	Lost Creek	09/1986	09/2027	7.150%	6	6	
1168	Lost Creek	09/1986	09/2027	11.375%	5	0	
1169	Lost Creek	09/1987	09/2027	7.150%	4	4	
1170	Lost Creek	09/1987	09/2027	8.875%	3	0	
1171	Lost Creek	09/1988	09/2027	8.500%	7	0	
1172	Lost Creek	09/1989	09/2027	9.250%	9	0	
1173	Lost Creek	09/1990	09/2027	8.875%	1	0	
1174	Lost Creek	09/1991	09/2027	8.750%	31	0	
1175	Lost Creek	09/1992	09/2027	8.500%	1	0	
1176	Lost Creek	09/1992	09/2027	8.500%	1	0	
1177	Lost Creek	09/1993	09/2027	7.875%	14	0	
1178	Lost Creek	09/1993	09/2027	7.875%	1	0	
1179	Lost Creek	09/1995	09/2000	7.330%	4	0	
1180	Lost Creek	09/1995	09/2045	7.150%	94	94	
1181	Lost Creek	09/1996	09/2031	7.150%	31	31	
1182	Lost Creek	09/1996	09/2046	7.150%	24	24	
1183	Lost Creek	09/2001	09/2051	5.875%	147	147	
1184	Lost Creek	09/2011	09/2061	3.750%	7	7	
1185	Lower Granite	09/1975	09/2025	7.160%	119,237	0	
1186	Lower Granite	09/1976	09/2025	7.160%	510	0	
1187	Lower Granite	09/1977	09/2025	7.160%	510	0	
1188	Lower Granite	09/1978	09/2025	7.160%	510	0	
1189	Lower Granite	09/1978	09/2028	7.150%	40,611	40,611	
1190	Lower Granite	09/1979	09/2025	7.160%	510	0	
1191	Lower Granite	09/1980	09/2025	7.160%	510	0	
1192	Lower Granite	09/1981	09/2025	7.160%	510	0	
1193	Lower Granite	09/1982	09/2025	7.160%	510	0	
1194	Lower Granite	09/1983	09/2025	7.160%	510	0	
1195	Lower Granite	09/1984	09/2025	10.750%	311	0	
1196	Lower Granite	09/1985	09/2025	7.160%	328	0	
1197	Lower Granite	09/1986	09/2025	7.160%	215	0	
1198	Lower Granite	09/1986	09/2025	11.375%	4	0	
1199	Lower Granite	09/1987	09/2025	7.160%	8	0	
1200	Lower Granite	09/1987	09/2025	8.875%	60	0	
1201	Lower Granite	09/1988	09/2025	8.500%	22	0	
1202	Lower Granite	09/1988	09/2025	8.500%	95	0	
1203	Lower Granite	09/1989	09/2025	9.250%	112	0	
1204	Lower Granite	09/1990	09/2025	8.875%	392	0	
1205	Lower Granite	09/1991	09/2025	8.750%	281	0	
1206	Lower Granite	09/1991	09/2025	8.750%	6	0	
1207	Lower Granite	09/1992	09/2025	8.500%	83	0	
1208	Lower Granite	09/1992	09/2025	8.500%	121	0	
1209	Lower Granite	09/1993	09/2025	7.875%	26	0	
1210	Lower Granite	09/1993	09/2025	7.875%	3,272	0	
1211	Lower Granite	09/1994	09/2019	7.125%	38	0	
1212	Lower Granite	09/1994	09/2029	7.150%	3,543	1,551	
1213	Lower Granite	09/1995	09/2017	7.290%	77	0	
1214	Lower Granite	09/1995	09/2017	7.290%	388	0	
1215	Lower Granite	09/1995	09/2017	7.290%	458	0	

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A	B	C	D	E	F	G	H
Project	In Service Date	Due Date	Interest Rate	Initial Principal	Current Principal	Roll Maturity Date	Hollover Rate
1216	Lower Granite	09/1995	09/2025	7.160%	96	0	
1217	Lower Granite	09/1996	09/2011	7.130%	255	0	
1218	Lower Granite	09/1996	09/2031	7.150%	206	206	
1219	Lower Granite	09/1996	09/2046	7.150%	9	9	
1220	Lower Granite	09/1996	09/2046	7.150%	625	625	
1221	Lower Granite	09/1997	09/2047	7.150%	677	677	
1222	Lower Granite	09/1999	09/2049	5.375%	856	856	
1223	Lower Granite	09/2001	09/2051	5.875%	2,025	2,025	
1224	Lower Granite	09/2002	09/2052	5.500%	1,275	1,275	
1225	Lower Granite	09/2003	09/2053	5.125%	42	42	
1226	Lower Granite	09/2005	09/2055	5.125%	393	393	
1227	Lower Granite	09/2008	09/2058	4.875%	24	24	
1228	Lower Granite	09/2009	09/2059	4.375%	5,669	5,669	
1229	Lower Granite	09/2010	09/2060	4.250%	1,156	1,156	
1230	Lower Granite	09/2011	09/2061	3.750%	8	8	
1231	Lower Granite	09/2014	09/2064	3.875%	2,644	2,644	
1232	Lower Monument	09/1969	09/2019	7.270%	26,974	0	
1233	Lower Monument	09/1970	09/2020	7.250%	51,218	0	
1234	Lower Monument	09/1971	09/2020	7.250%	214	0	
1235	Lower Monument	09/1972	09/2020	7.250%	214	0	
1236	Lower Monument	09/1973	09/2020	7.250%	214	0	
1237	Lower Monument	09/1974	09/2020	7.250%	214	0	
1238	Lower Monument	09/1975	09/2020	7.250%	214	0	
1239	Lower Monument	09/1976	09/2020	7.250%	214	0	
1240	Lower Monument	09/1977	09/2020	7.250%	214	0	
1241	Lower Monument	09/1978	09/2020	7.250%	214	0	
1242	Lower Monument	09/1979	09/2020	7.250%	214	0	
1243	Lower Monument	09/1979	09/2029	7.150%	40,669	40,669	
1244	Lower Monument	09/1980	09/2020	7.250%	214	0	
1245	Lower Monument	09/1981	09/2020	7.250%	214	0	
1246	Lower Monument	09/1982	09/2020	7.250%	214	0	
1247	Lower Monument	09/1983	09/2020	7.250%	214	0	
1248	Lower Monument	09/1985	09/2020	7.250%	8	0	
1249	Lower Monument	09/1985	09/2029	7.150%	256	256	
1250	Lower Monument	09/1986	09/2020	7.250%	132	0	
1251	Lower Monument	09/1987	09/2020	7.250%	3	0	
1252	Lower Monument	09/1987	09/2020	8.875%	50	0	
1253	Lower Monument	09/1988	09/2020	8.500%	1	0	
1254	Lower Monument	09/1988	09/2020	8.500%	58	0	
1255	Lower Monument	09/1989	09/2020	9.250%	93	0	
1256	Lower Monument	09/1990	09/2020	8.875%	358	0	
1257	Lower Monument	09/1991	09/2020	8.750%	594	0	
1258	Lower Monument	09/1992	09/2020	8.500%	4,484	0	
1259	Lower Monument	09/1993	09/2020	7.875%	24	0	
1260	Lower Monument	09/1993	09/2020	7.875%	2,175	0	
1261	Lower Monument	09/1994	09/2019	7.125%	107	0	
1262	Lower Monument	09/1994	09/2029	7.125%	2,167	0	
1263	Lower Monument	09/1995	09/2000	7.330%	6	0	
1264	Lower Monument	09/1995	09/2045	7.150%	41	41	
1265	Lower Monument	09/1995	09/2045	7.150%	99	99	
1266	Lower Monument	09/1995	09/2045	7.150%	624	624	
1267	Lower Monument	09/1995	09/2045	7.150%	1,122	1,122	
1268	Lower Monument	09/1996	09/2016	7.290%	668	0	
1269	Lower Monument	09/1996	09/2021	7.230%	37	0	
1270	Lower Monument	09/1996	09/2021	7.230%	51	0	
1271	Lower Monument	09/1996	09/2036	7.150%	264	264	
1272	Lower Monument	09/1996	09/2046	7.150%	10	10	
1273	Lower Monument	09/2001	09/2051	5.875%	3,301	3,301	
1274	Lower Monument	09/2002	09/2052	5.500%	29	29	
1275	Lower Monument	09/2003	09/2053	5.125%	22	22	
1276	Lower Monument	09/2004	09/2054	5.375%	3,423	3,423	
1277	Lower Monument	09/2005	09/2055	5.125%	527	527	
1278	Lower Monument	09/2006	09/2056	4.500%	285	285	
1279	Lower Monument	09/2008	09/2058	4.875%	9	9	
1280	Lower Monument	09/2009	09/2059	4.375%	2,332	2,332	
1281	Lower Monument	09/2012	09/2062	3.375%	89	89	
1282	Lower Monument	09/2014	09/2064	3.875%	1,431	1,431	
1283	Lower Snake Fish and Wildlife	09/1983	09/2033	7.150%	30,488	9,472	
1284	Lower Snake Fish and Wildlife	09/1985	09/2035	7.150%	47,921	47,921	
1285	Lower Snake Fish and Wildlife	09/1987	09/2037	7.150%	72,536	72,536	
1286	Lower Snake Fish and Wildlife	09/1988	09/2038	7.150%	805	805	
1287	Lower Snake Fish and Wildlife	09/1990	09/2040	7.150%	1,557	1,557	
1288	Lower Snake Fish and Wildlife	09/1991	09/2041	7.150%	4,411	4,411	
1289	Lower Snake Fish and Wildlife	09/1993	09/2043	7.150%	71,632	71,632	
1290	Lower Snake Fish and Wildlife	09/1994	09/2044	7.150%	4,722	4,722	
1291	Lower Snake Fish and Wildlife	09/1996	09/2046	7.150%	12,085	12,085	
1292	Lower Snake Fish and Wildlife	09/1997	09/2047	7.150%	2,173	2,173	
1293	Lower Snake Fish and Wildlife	09/1999	09/2049	5.375%	7	7	
1294	Lower Snake Fish and Wildlife	09/2000	09/2050	6.125%	1,529	1,529	
1295	Lower Snake Fish and Wildlife	09/2001	09/2051	5.875%	325	325	
1296	Lower Snake Fish and Wildlife	09/2002	09/2052	5.500%	890	890	

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Project	In Service Date	Due Date	Interest Rate	Initial Principal	Current Principal	Roll Maturity Date	Hollover Rate
1297	Lower Snake Fish and Wildlife	09/2003	09/2053	5.125%	98	98	
1298	Lower Snake Fish and Wildlife	09/2004	09/2054	5.375%	230	230	
1299	Lower Snake Fish and Wildlife	09/2005	09/2055	5.125%	4	4	
1300	Lower Snake Fish and Wildlife	09/2006	09/2056	4.500%	379	379	
1301	Lower Snake Fish and Wildlife	09/2008	09/2058	4.875%	74	74	
1302	Lower Snake Fish and Wildlife	09/2009	09/2059	4.375%	1,540	1,540	
1303	Lower Snake Fish and Wildlife	09/2010	09/2060	4.250%	6	6	
1304	Lower Snake Fish and Wildlife	09/2011	09/2061	3.750%	122	122	
1305	Lower Snake Fish and Wildlife	09/2014	09/2064	3.875%	222	222	
1306	McNary	09/1954	09/2004	6.880%	80,256	0	
1307	McNary	09/1955	09/2005	6.910%	53,493	0	
1308	McNary	09/1956	09/2006	6.950%	38,748	0	
1309	McNary	09/1957	09/2007	6.980%	24,985	0	
1310	McNary	09/1958	09/2007	6.980%	468	0	
1311	McNary	09/1959	09/2007	6.980%	468	0	
1312	McNary	09/1960	09/2007	6.980%	468	0	
1313	McNary	09/1961	09/2007	6.980%	468	0	
1314	McNary	09/1962	09/2007	6.980%	467	0	
1315	McNary	09/1963	09/2007	6.980%	468	0	
1316	McNary	09/1964	09/2007	6.980%	468	0	
1317	McNary	09/1965	09/2007	6.980%	468	0	
1318	McNary	09/1966	09/2007	6.980%	468	0	
1319	McNary	09/1967	09/2007	6.980%	467	0	
1320	McNary	09/1968	09/2007	6.980%	468	0	
1321	McNary	09/1969	09/2007	6.980%	468	0	
1322	McNary	09/1970	09/2007	6.980%	468	0	
1323	McNary	09/1971	09/2007	6.980%	468	0	
1324	McNary	09/1972	09/2007	6.980%	468	0	
1325	McNary	09/1973	09/2007	6.980%	467	0	
1326	McNary	09/1974	09/2007	6.980%	468	0	
1327	McNary	09/1975	09/2007	6.980%	468	0	
1328	McNary	09/1976	09/2007	6.980%	468	0	
1329	McNary	09/1977	09/2007	6.980%	467	0	
1330	McNary	09/1978	09/2007	6.980%	468	0	
1331	McNary	09/1979	09/2007	6.980%	468	0	
1332	McNary	09/1980	09/2007	6.980%	468	0	
1333	McNary	09/1981	09/2007	6.980%	468	0	
1334	McNary	09/1982	09/2007	6.980%	467	0	
1335	McNary	09/1983	09/2007	6.980%	468	0	
1336	McNary	09/1985	09/2007	6.980%	557	0	
1337	McNary	09/1986	09/2007	6.980%	454	0	
1338	McNary	09/1987	09/2007	6.980%	24	0	
1339	McNary	09/1995	09/2010	7.090%	509	0	
1340	McNary	09/1995	09/2045	7.150%	16	16	
1341	McNary	09/1996	09/2006	6.950%	778	0	
1342	McNary	09/1996	09/2011	7.130%	3	0	
1343	McNary	09/1996	09/2026	7.150%	74	74	
1344	McNary	09/1996	09/2026	7.150%	277	277	
1345	McNary	09/1996	09/2046	7.150%	619	619	
1346	McNary	09/1997	09/2032	7.150%	30	30	
1347	McNary	09/2001	09/2051	5.875%	1,046	1,046	
1348	McNary	09/2003	09/2053	5.125%	97	97	
1349	McNary	09/2004	09/2054	5.375%	6,138	6,138	
1350	McNary	09/2005	09/2055	5.125%	550	550	
1351	McNary	09/2006	09/2056	4.500%	4,080	4,080	
1352	McNary	09/2008	09/2058	4.875%	215	215	
1353	McNary	09/2011	09/2061	3.750%	565	565	
1354	McNary	09/2012	09/2062	3.375%	11	11	
1355	McNary	09/2013	09/2063	2.875%	1,000	1,000	
1356	McNary	09/2014	09/2064	3.875%	759	759	
1357	Minidoka/Palisades	09/1909	09/1959	3.000%	854	0	
1358	Minidoka/Palisades	09/1909	09/1959	3.000%	226	0	
1359	Minidoka/Palisades	09/1910	09/1960	3.000%	1,709	0	
1360	Minidoka/Palisades	09/1910	09/1960	3.000%	451	0	
1361	Minidoka/Palisades	09/1911	09/1961	3.000%	1,709	0	
1362	Minidoka/Palisades	09/1911	09/1961	3.000%	451	0	
1363	Minidoka/Palisades	09/1927	09/1977	3.000%	854	0	
1364	Minidoka/Palisades	09/1927	09/1977	3.000%	226	0	
1365	Minidoka/Palisades	09/1942	09/1992	3.000%	854	0	
1366	Minidoka/Palisades	09/1942	09/1992	3.000%	226	0	
1367	Minidoka/Palisades	09/1957	09/2007	3.000%	2,561	0	
1368	Minidoka/Palisades	09/1957	09/2007	3.000%	677	0	
1369	Minidoka/Palisades	09/1958	09/2008	3.000%	854	0	
1370	Minidoka/Palisades	09/1958	09/2008	3.000%	226	0	
1371	Minidoka/Palisades	09/1959	09/2008	3.000%	108	0	
1372	Minidoka/Palisades	09/1959	09/2008	3.000%	28	0	
1373	Minidoka/Palisades	09/1960	09/2008	3.000%	108	0	
1374	Minidoka/Palisades	09/1960	09/2008	3.000%	29	0	
1375	Minidoka/Palisades	09/1961	09/2008	3.000%	108	0	
1376	Minidoka/Palisades	09/1961	09/2008	3.000%	29	0	
1377	Minidoka/Palisades	09/1962	09/2008	3.000%	108	0	

TABLE 12A
HISTORICAL INVESTMENTS
October 1, 2014 - September 30, 2017 Cost Evaluation period
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A	B	C	D	E	F	G	H
Project	In Service Date	Due Date	Interest Rate	Initial Principal	Current Principal	Roll Maturity Date	Hollover Rate
1378	Minidoka/Palisades	09/1962	09/2008	3.000%	28	0	
1379	Minidoka/Palisades	09/1963	09/2008	3.000%	108	0	
1380	Minidoka/Palisades	09/1963	09/2008	3.000%	29	0	
1381	Minidoka/Palisades	09/1964	09/2008	3.000%	108	0	
1382	Minidoka/Palisades	09/1964	09/2008	3.000%	28	0	
1383	Minidoka/Palisades	09/1965	09/2008	3.000%	108	0	
1384	Minidoka/Palisades	09/1965	09/2008	3.000%	29	0	
1385	Minidoka/Palisades	09/1966	09/2008	3.000%	108	0	
1386	Minidoka/Palisades	09/1966	09/2008	3.000%	29	0	
1387	Minidoka/Palisades	09/1967	09/2008	3.000%	108	0	
1388	Minidoka/Palisades	09/1967	09/2008	3.000%	28	0	
1389	Minidoka/Palisades	09/1968	09/2008	3.000%	108	0	
1390	Minidoka/Palisades	09/1968	09/2008	3.000%	29	0	
1391	Minidoka/Palisades	09/1969	09/2008	3.000%	3	0	
1392	Minidoka/Palisades	09/1969	09/2008	3.000%	28	0	
1393	Minidoka/Palisades	09/1970	09/2008	3.000%	108	0	
1394	Minidoka/Palisades	09/1970	09/2008	3.000%	29	0	
1395	Minidoka/Palisades	09/1971	09/2008	3.000%	108	0	
1396	Minidoka/Palisades	09/1971	09/2008	3.000%	29	0	
1397	Minidoka/Palisades	09/1972	09/2008	3.000%	108	0	
1398	Minidoka/Palisades	09/1972	09/2008	3.000%	28	0	
1399	Minidoka/Palisades	09/1973	09/2008	3.000%	108	0	
1400	Minidoka/Palisades	09/1973	09/2008	3.000%	29	0	
1401	Minidoka/Palisades	09/1974	09/2008	3.000%	108	0	
1402	Minidoka/Palisades	09/1974	09/2008	3.000%	28	0	
1403	Minidoka/Palisades	09/1975	09/2008	3.000%	108	0	
1404	Minidoka/Palisades	09/1975	09/2008	3.000%	29	0	
1405	Minidoka/Palisades	09/1976	09/2008	3.000%	108	0	
1406	Minidoka/Palisades	09/1976	09/2008	3.000%	29	0	
1407	Minidoka/Palisades	09/1977	09/2008	7.020%	83	0	
1408	Minidoka/Palisades	09/1977	09/2008	7.020%	28	0	
1409	Minidoka/Palisades	09/1978	09/2008	7.020%	75	0	
1410	Minidoka/Palisades	09/1978	09/2008	7.020%	20	0	
1411	Minidoka/Palisades	09/1979	09/2008	7.020%	75	0	
1412	Minidoka/Palisades	09/1979	09/2008	7.020%	19	0	
1413	Minidoka/Palisades	09/1980	09/2008	7.020%	75	0	
1414	Minidoka/Palisades	09/1980	09/2008	7.020%	20	0	
1415	Minidoka/Palisades	09/1981	09/2008	7.020%	75	0	
1416	Minidoka/Palisades	09/1981	09/2008	7.020%	20	0	
1417	Minidoka/Palisades	09/1982	09/2008	7.020%	75	0	
1418	Minidoka/Palisades	09/1982	09/2008	7.020%	19	0	
1419	Minidoka/Palisades	09/1983	09/2008	7.020%	65	0	
1420	Minidoka/Palisades	09/1983	09/2008	7.020%	20	0	
1421	Minidoka/Palisades	09/1984	09/2008	10.075%	44	0	
1422	Minidoka/Palisades	09/1984	09/2008	10.075%	11	0	
1423	Minidoka/Palisades	09/1985	09/2008	7.020%	21	0	
1424	Minidoka/Palisades	09/1986	09/2008	7.020%	21	0	
1425	Minidoka/Palisades	09/1986	09/2008	11.375%	48	0	
1426	Minidoka/Palisades	09/1987	09/2008	7.020%	16	0	
1427	Minidoka/Palisades	09/1988	09/2008	8.500%	31	0	
1428	Minidoka/Palisades	09/1989	09/2008	9.250%	20	0	
1429	Minidoka/Palisades	09/1990	09/2008	8.875%	33	0	
1430	Minidoka/Palisades	09/1991	09/2008	8.750%	62	0	
1431	Minidoka/Palisades	09/1991	09/2008	8.750%	11	0	
1432	Minidoka/Palisades	09/1991	09/2008	8.750%	32	0	
1433	Minidoka/Palisades	09/1992	09/2008	8.500%	6	0	
1434	Minidoka/Palisades	09/1994	09/2029	7.125%	351	0	
1435	Minidoka/Palisades	09/1995	09/2000	7.330%	6	0	
1436	Minidoka/Palisades	09/1995	09/2010	7.890%	40	0	
1437	Minidoka/Palisades	09/1996	09/2011	7.130%	54	0	
1438	Minidoka/Palisades	09/1997	09/2007	6.950%	66	0	
1439	Minidoka/Palisades	09/1997	09/2047	7.150%	50,911	50,911	
1440	Minidoka/Palisades	09/2001	09/2051	5.875%	42	42	
1441	Minidoka/Palisades	09/2012	09/2062	3.375%	7	7	
1442	RRP - Green Springs	09/2001	09/2051	5.875%	11,145	11,145	
1443	RRP - Green Springs	09/2012	09/2062	3.375%	2	2	
1444	RRP - Green Springs	09/2013	09/2063	2.875%	1	1	
1445	The Dalles	09/1957	09/2007	2.500%	15,908	0	
1446	The Dalles	09/1958	09/2008	7.020%	45,837	0	
1447	The Dalles	09/1959	09/2009	7.060%	40,415	0	
1448	The Dalles	09/1960	09/2010	7.090%	39,179	0	
1449	The Dalles	09/1961	09/2011	7.130%	9,492	0	
1450	The Dalles	09/1962	09/2011	7.130%	56	0	
1451	The Dalles	09/1963	09/2011	7.130%	57	0	
1452	The Dalles	09/1964	09/2011	7.130%	57	0	
1453	The Dalles	09/1965	09/2011	7.130%	56	0	
1454	The Dalles	09/1966	09/2011	7.130%	57	0	
1455	The Dalles	09/1967	09/2011	7.130%	57	0	
1456	The Dalles	09/1968	09/2011	7.130%	56	0	
1457	The Dalles	09/1969	09/2011	7.130%	57	0	
1458	The Dalles	09/1970	09/2011	7.130%	57	0	

TABLE 12A
HISTORICAL INVESTMENTS
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(\$000s) (FY 2017)

	A	B	C	D	E	F	G	H
Project	In Service Date	Due Date	Interest Rate	Initial Principal	Current Principal	Roll Maturity Date	Hollover Rate	
1459	The Dalles	09/1971	09/2011	7.130%	56	0		
1460	The Dalles	09/1972	09/2011	7.130%	57	0		
1461	The Dalles	09/1973	09/2011	7.130%	57	0		
1462	The Dalles	09/1973	09/2023	7.190%	21,983	0		
1463	The Dalles	09/1974	09/2011	7.130%	56	0		
1464	The Dalles	09/1974	09/2024	7.170%	7,268	0		
1465	The Dalles	09/1975	09/2011	7.130%	57	0		
1466	The Dalles	09/1976	09/2011	7.130%	57	0		
1467	The Dalles	09/1977	09/2011	7.130%	56	0		
1468	The Dalles	09/1978	09/2011	7.130%	57	0		
1469	The Dalles	09/1979	09/2011	7.130%	57	0		
1470	The Dalles	09/1980	09/2011	7.130%	56	0		
1471	The Dalles	09/1981	09/2011	7.130%	57	0		
1472	The Dalles	09/1982	09/2011	7.130%	57	0		
1473	The Dalles	09/1983	09/2011	7.130%	56	0		
1474	The Dalles	09/1984	09/2011	10.750%	961	0		
1475	The Dalles	09/1985	09/2011	7.130%	95	0		
1476	The Dalles	09/1985	09/2011	12.375%	280	0		
1477	The Dalles	09/1986	09/2011	7.130%	95	0		
1478	The Dalles	09/1986	09/2011	11.375%	4	0		
1479	The Dalles	09/1987	09/2011	7.130%	1,417	0		
1480	The Dalles	09/1987	09/2011	8.875%	81	0		
1481	The Dalles	09/1988	09/2011	8.500%	685	0		
1482	The Dalles	09/1988	09/2011	8.500%	1	0		
1483	The Dalles	09/1989	09/2011	9.250%	898	0		
1484	The Dalles	09/1990	09/2011	8.875%	319	0		
1485	The Dalles	09/1990	09/2011	8.875%	745	0		
1486	The Dalles	09/1991	09/2011	8.750%	89	0		
1487	The Dalles	09/1991	09/2011	8.750%	2,452	0		
1488	The Dalles	09/1992	09/2011	8.500%	57	0		
1489	The Dalles	09/1992	09/2011	8.500%	130	0		
1490	The Dalles	09/1993	09/2011	7.875%	2,028	0		
1491	The Dalles	09/1993	09/2011	7.875%	2,929	0		
1492	The Dalles	09/1994	09/2029	7.125%	1,425	0		
1493	The Dalles	09/1996	09/2008	7.020%	196	0		
1494	The Dalles	09/1996	09/2011	7.130%	457	0		
1495	The Dalles	09/1996	09/2046	7.150%	1,991	1,991		
1496	The Dalles	09/2000	09/2050	6.125%	2,588	2,588		
1497	The Dalles	09/2002	09/2052	5.500%	1,226	1,226		
1498	The Dalles	09/2004	09/2054	5.375%	182	182		
1499	The Dalles	09/2005	09/2055	5.125%	36,019	36,019		
1500	The Dalles	09/2006	09/2056	4.500%	2,030	2,030		
1501	The Dalles	09/2007	09/2057	5.000%	140	140		
1502	The Dalles	09/2008	09/2058	4.875%	1,651	1,651		
1503	Yakima Chandler/Kenniwick	09/1956	09/2022	7.210%	1,068	0		
1504	Yakima Chandler/Kenniwick	09/1956	09/2022	7.210%	481	0		
1505	Yakima Chandler/Kenniwick	09/1959	09/2022	7.210%	1	0		
1506	Yakima Chandler/Kenniwick	09/1960	09/2022	7.210%	1	0		
1507	Yakima Chandler/Kenniwick	09/1961	09/2022	7.210%	1	0		
1508	Yakima Chandler/Kenniwick	09/1984	09/2022	10.750%	35	0		
1509	Yakima Chandler/Kenniwick	09/1984	09/2022	10.750%	10	0		
1510	Yakima Chandler/Kenniwick	09/1985	09/2022	12.375%	357	0		
1511	Yakima Chandler/Kenniwick	09/1986	09/2022	7.210%	439	0		
1512	Yakima Chandler/Kenniwick	09/1986	09/2022	11.375%	7	0		
1513	Yakima Chandler/Kenniwick	09/1987	09/2022	8.875%	126	0		
1514	Yakima Chandler/Kenniwick	09/1989	09/2022	9.250%	18	0		
1515	Yakima Chandler/Kenniwick	09/1990	09/2022	8.875%	40	0		
1516	Yakima Chandler/Kenniwick	09/1991	09/2022	8.750%	109	0		
1517	Yakima Chandler/Kenniwick	09/2005	09/2055	5.125%	833	833		
1518	Yakima Chandler/Kenniwick	09/2009	09/2059	4.375%	15	15		
1519	Yakima Roza	09/1958	09/2008	7.020%	1,194	0		
1520	Yakima Roza	09/1958	09/2008	7.020%	383	0		
1521	Yakima Roza	09/1984	09/2008	10.750%	5	0		
1522	Yakima Roza	09/1984	09/2008	10.750%	17	0		
1523	Yakima Roza	09/1985	09/2008	7.020%	69	0		
1524	Yakima Roza	09/1985	09/2008	12.375%	5	0		
1525	Yakima Roza	09/1986	09/2008	7.020%	6	0		
1526	Yakima Roza	09/1987	09/2008	7.020%	2	0		
1527	Yakima Roza	09/1987	09/2008	8.875%	9	0		
1528	Yakima Roza	09/2001	09/2051	5.875%	15	14		
1529	Bureau Direct	05/1995	05/2015	7.500%	35,000	0		
1530	Bureau Direct	05/1997	05/2000	6.500%	50,000	0		
1531	Bureau Direct	04/1998	05/2008	6.000%	25,000	0		
1532	Bureau Direct	09/1999	09/2004	6.400%	20,000	0		
1533	Bureau Direct	04/2000	04/2003	6.850%	40,000	0		
1534	Bureau Direct	09/2000	09/2005	6.700%	20,000	0		
1535	Bureau Direct	06/2001	06/2004	4.750%	50,000	0		
1536	Bureau Direct	03/2002	03/2005	4.600%	30,000	0		
1537	Bureau Direct	09/2002	09/2006	3.050%	20,000	0		
1538	Bureau Direct	12/2002	12/2006	3.050%	40,000	0		
1539	Bureau Direct	04/2003	04/2006	2.400%	40,000	0		

**TABLE 12A
HISTORICAL INVESTMENTS
October 1, 2014 - September 30, 2017 Cost Evaluation period
(\$000s) (FY 2017)**

	A	B	C	D	E	F	G	H
Project	In Service Date	Due Date	Interest Rate	Initial Principal	Current Principal	Roll Maturity Date	Hollover Rate	
1540	Bureau Direct	04/2003	04/2006	2.400%	25,000	0		
1541	Bureau Direct	07/2003	07/2006	2.300%	30,000	0		
1542	Bureau Direct	09/2003	09/2006	2.500%	25,000	0		
1543	Bureau Direct	01/2004	01/2007	2.500%	25,000	0		
1544	Bureau Direct	04/2004	04/2007	2.950%	35,000	0		
1545	Bureau Direct	07/2004	07/2007	3.450%	25,000	0		
1546	Bureau Direct	09/2004	09/2007	3.100%	30,000	0		
1547	Bureau Direct	11/2004	11/2007	3.500%	20,000	0		
1548	Bureau Direct	01/2005	01/2008	3.600%	20,000	0		
1549	Bureau Direct	06/2005	06/2008	3.950%	30,000	0		
1550	Bureau Direct	09/2005	09/2008	4.250%	25,000	0		
1551	Bureau Direct	03/2006	03/2009	5.050%	25,000	0		
1552	Bureau Direct	07/2006	07/2009	5.350%	45,000	0		
1553	Bureau Direct	09/2006	09/2009	4.950%	15,000	0		
1554	Bureau Direct	01/2007	01/2010	5.100%	35,000	0		
1555	Bureau Direct	03/2007	03/2010	4.800%	30,000	0		
1556	Bureau Direct	06/2007	06/2010	5.350%	30,000	0		
1557	Bureau Direct	01/2008	01/2011	2.850%	35,000	0		
1558	Bureau Direct	01/2008	01/2011	2.850%	20,000	0		
1559	Bureau Direct	05/2008	05/2011	3.358%	35,000	0		
1560	Bureau Direct	05/2008	05/2011	3.358%	25,000	0		
1561	Bureau Direct	06/2008	06/2012	3.974%	30,000	0		
1562	Bureau Direct	07/2008	07/2012	3.913%	35,000	0		
1563	Bureau Direct	09/2008	09/2012	3.444%	35,000	0		
1564	Bureau Direct	01/2009	01/2021	3.999%	25,000	25,000		
1565	Bureau Direct	04/2009	04/2023	4.391%	25,000	25,000		
1566	Bureau Direct	06/2009	06/2039	5.192%	25,000	25,000		
1567	Bureau Direct	09/2009	09/2019	3.699%	25,000	25,000		
1568	Bureau Direct	10/2009	10/2018	3.719%	24,000	24,000		
1569	Bureau Direct	10/2009	10/2019	3.842%	20,000	20,000		
1570	Bureau Direct	11/2009	11/2019	3.637%	7,000	7,000		
1571	Bureau Direct	12/2009	12/2019	4.194%	13,000	13,000		
1572	Bureau Direct	01/2010	01/2019	3.714%	10,000	10,000		
1573	Bureau Direct	02/2010	02/2019	0.165%	10,000	0		
1574	Bureau Direct	03/2010	03/2020	4.083%	30,000	30,000		
1575	Bureau Direct	04/2010	04/2020	3.973%	18,000	18,000		
1576	Bureau Direct	05/2010	05/2020	3.574%	15,000	15,000		
1577	Bureau Direct	06/2010	06/2020	3.243%	10,000	10,000		
1578	Bureau Direct	06/2010	06/2020	3.243%	30,000	30,000		
1579	Bureau Direct	07/2010	07/2020	3.118%	17,000	17,000		
1580	Bureau Direct	08/2010	08/2020	0.165%	5,000	0		
1581	Bureau Direct	09/2010	09/2021	2.883%	22,000	22,000		
1582	Bureau Direct	10/2010	10/2034	4.211%	20,000	20,000		
1583	Bureau Direct	01/2011	09/2011	0.244%	20,000	0		
1584	Bureau Direct	01/2011	09/2011	0.244%	35,000	0		
1585	Bureau Direct	01/2011	01/2039	5.040%	35,000	35,000		
1586	Bureau Direct	02/2011	02/2040	4.995%	50,000	50,000		
1587	Bureau Direct	05/2011	09/2011	0.076%	35,000	0		
1588	Bureau Direct	05/2011	09/2011	0.076%	25,000	0		
1589	Bureau Direct	06/2011	06/2036	4.629%	30,000	30,000		
1590	Bureau Direct	06/2011	06/2038	4.700%	30,000	30,000		
1591	Bureau Direct	08/2011	08/2037	4.208%	30,000	30,000		
1592	Bureau Direct	09/2011	07/2041	3.825%	30,000	0		
1593	Bureau Direct	12/2011	12/2038	3.880%	35,000	0		
1594	Bureau Direct	01/2012	01/2038	3.893%	15,000	0		
1595	Bureau Direct	02/2012	02/2034	1.010%	55,000	55,000		
1596	Bureau Direct	06/2012	06/2041	3.666%	50,000	0		
1597	Bureau Direct	06/2012	09/2012	0.119%	30,000	0		
1598	Bureau Direct	08/2012	07/2042	3.834%	44,000	0		
1599	Bureau Direct	09/2012	09/2013	0.174%	35,000	0		
1600	Bureau Direct	09/2012	09/2042	3.668%	25,000	0		
1601	Bureau Direct	01/2013	01/2043	6.194%	70,000	0		
1602	Bureau Direct	02/2013	02/2043	5.993%	18,000	0		
1603	Bureau Direct	03/2013	03/2043	5.958%	15,000	0		
1604	Bureau Direct	04/2013	04/2043	5.633%	15,000	0		
1605	Bureau Direct	05/2013	05/2043	6.192%	18,000	0		
1606	Bureau Direct	06/2013	01/2039	1.010%	35,000	35,000		
1607	Bureau Direct	06/2013	06/2043	6.938%	21,000	0		
1608	Bureau Direct	07/2013	07/2034	7.164%	25,000	0		
1609	Bureau Direct	08/2013	08/2034	7.413%	15,000	0		
1610	Bureau Direct	11/2013	09/2014	0.140%	77,000	0		
1611	Bureau Direct	11/2013	09/2020	2.473%	51,000	51,000		
1612	Bureau Direct	11/2013	09/2021	2.812%	50,000	50,000		
1613	Bureau Direct	11/2013	09/2022	3.125%	19,000	19,000		
1614	Bureau Direct	01/2014	12/2018	1.943%	43,000	43,000		
1615	Bureau Direct	01/2014	12/2018	1.943%	38,000	38,000		
1616	Bureau Direct	01/2014	12/2018	1.943%	21,000	21,000		
1617	Bureau Direct	01/2014	12/2018	1.943%	26,000	26,000		
1618	Bureau Direct	01/2014	12/2018	1.943%	14,000	14,000		
1619	Bureau Direct	09/2014	05/2032	1.010%	16,000	16,000		
1620	Bureau Direct	09/2014	05/2032	1.010%	10,000	10,000		

TABLE 12A
HISTORICAL INVESTMENTS
October 1, 2014 - September 30, 2017 Cost Evaluation period
(\$000s) (FY 2017)

	A	B	C	D	E	F	G	H
Project	In Service Date	Due Date	Interest Rate	Initial Principal	Current Principal	Roll Maturity Date	Hollover Rate	
1621	Bureau Direct	09/2014	06/2033	1.010%	11,000			11,000
1622	Bureau Direct	09/2014	06/2033	1.010%	12,000			12,000
1623	Bureau Direct	09/2014	07/2033	1.010%	15,000			15,000
1624	Conservation	09/1983	09/2003	12.200%	140,000			0
1625	Conservation	09/1984	09/2004	13.050%	150,000			0
1626	Conservation	09/1985	09/1990	10.150%	50,000			0
1627	Conservation	03/1986	03/1991	7.800%	50,000			0
1628	Conservation	03/1986	03/1996	8.150%	50,000			0
1629	Conservation	04/1987	04/2007	9.300%	75,000			0
1630	Conservation	06/1987	06/1992	8.350%	50,000			0
1631	Conservation	04/1988	04/2008	9.900%	90,000			0
1632	Conservation	07/1989	07/2009	8.550%	40,000			0
1633	Conservation	09/1989	09/1995	8.600%	66,000			0
1634	Conservation	09/1989	09/2002	8.650%	66,000			0
1635	Conservation	07/1992	07/1997	5.800%	80,200			0
1636	Conservation	07/1992	07/2007	7.140%	100,000			0
1637	Conservation	10/1992	10/2012	8.050%	50,000			0
1638	Conservation	02/1993	02/2013	7.400%	50,000			0
1639	Conservation	08/1993	08/2013	6.750%	40,000			0
1640	Conservation	01/1994	01/2014	6.750%	50,000			0
1641	Conservation	05/1994	05/1998	7.100%	50,000			0
1642	Conservation	05/1995	05/2015	7.500%	85,000			0
1643	Conservation	01/1996	01/2011	6.700%	30,000			0
1644	Conservation	11/1996	11/2016	7.200%	40,000			0
1645	Conservation	05/1998	05/2009	6.000%	37,700			0
1646	Conservation	09/1998	09/2008	5.300%	104,300			0
1647	Conservation	09/1998	09/2013	5.600%	52,800			0
1648	Conservation	07/2000	07/2003	6.950%	32,000			0
1649	Conservation	06/2002	06/2005	3.750%	40,000			0
1650	Conservation	01/2004	01/2008	2.950%	30,000			0
1651	Conservation	03/2006	03/2009	5.050%	20,000			0
1652	Conservation	06/2007	06/2010	5.350%	20,000			0
1653	Conservation	09/2008	09/2013	3.701%	10,000			0
1654	Conservation	09/2009	09/2014	2.746%	15,000			0
1655	Conservation	01/2010	01/2015	2.609%	15,000			0
1656	Conservation	04/2010	04/2015	2.677%	20,000			20,000
1657	Conservation	08/2010	08/2015	1.619%	15,000			15,000
1658	Conservation	09/2010	09/2015	1.534%	10,000			10,000
1659	Conservation	01/2011	01/2023	4.046%	40,000			40,000
1660	Conservation	04/2011	04/2023	3.932%	35,000			35,000
1661	Conservation	08/2011	08/2023	3.206%	40,000			40,000
1662	Conservation	10/2011	08/2012	0.204%	55,000			0
1663	Conservation	12/2011	12/2037	0.189%	55,000			0
1664	Conservation	05/2012	09/2015	0.676%	30,000			30,000
1665	Conservation	06/2012	09/2015	0.671%	15,000			15,000
1666	Conservation	08/2012	08/2024	2.788%	15,000			0
1667	Conservation	11/2012	11/2016	0.630%	20,000			20,000
1668	Conservation	01/2013	01/2018	1.107%	9,000			9,000
1669	Conservation	03/2013	03/2025	4.992%	10,000			0
1670	Conservation	04/2013	04/2025	4.553%	12,000			0
1671	Conservation	08/2013	08/2025	6.973%	5,000			0
1672	Conservation	10/2013	10/2025	3.568%	34,000			34,000
1673	Conservation	11/2013	09/2023	3.375%	27,000			27,000
1674	Conservation	12/2013	12/2021	3.142%	6,000			6,000
1675	Conservation	12/2013	12/2023	1.010%	55,000			55,000
1676	Conservation	01/2014	01/2026	3.621%	5,000			5,000
1677	Conservation	04/2014	06/2025	1.010%	30,000			30,000
1678	Conservation	05/2014	04/2024	1.010%	15,000			15,000
1679	Conservation	05/2014	04/2025	1.010%	3,000			3,000
1680	Conservation	06/2014	10/2024	1.010%	5,000			5,000
1681	Conservation	07/2014	07/2025	1.010%	12,000			12,000
1682	Conservation	08/2014	09/2025	1.010%	4,000			4,000
1683	Conservation	10/2014	12/2024	1.010%	10,000			10,000
1684	Conservation	11/2014	03/2027	1.010%	6,000			6,000
1685	Conservation	12/2014	12/2023	2.403%	7,000			7,000
1686	Conservation	01/2015	09/2015	0.204%	15,000			15,000
1687	Conservation	01/2015	01/2024	1.908%	7,000			7,000
1688	Conservation	02/2015	02/2024	2.251%	8,000			8,000
1689	Conservation	03/2015	03/2025	2.295%	5,000			5,000
1690	Construction (AS)	10/1992	10/2032	8.350%	38			0
1691	Construction (AS)	07/1995	07/2025	7.700%	67			0
1692	Construction (AS)	01/1996	01/2003	5.900%	5,622			0
1693	Construction (AS)	01/1997	01/2004	6.800%	7,400			0
1694	Construction (AS)	08/1998	08/2008	5.750%	3,181			0
1695	Construction (AS)	02/1999	02/2014	5.900%	950			0
1696	Construction (AS)	07/2000	07/2004	7.000%	10,948			0
1697	Construction (AS)	01/2001	01/2010	6.050%	68			0
1698	Construction (AS)	03/2002	03/2005	4.600%	1,990			0
1699	Construction (AS)	10/2002	10/2005	3.000%	45,062			0
1700	Construction (AS)	01/2004	01/2007	2.500%	13,357			0
1701	Construction (AS)	11/2004	11/2008	3.750%	7,990			0

TABLE 12A
HISTORICAL INVESTMENTS
October 1, 2014 - September 30, 2017 Cost Evaluation period
(\$000s) (FY 2017)

A	B	C	D	E	F	G	H
Project	In Service Date	Due Date	Interest Rate	Initial Principal	Current Principal	Roll Maturity Date	Rollover Rate
1702	Construction (AS)	09/2006	09/2010	4.950%	9,681	0	
1703	Construction (AS)	01/2008	01/2012	3.200%	10,000	0	
1704	Construction (AS)	09/2008	09/2012	3.444%	10,000	0	
1705	Construction (AS)	09/2009	09/2014	2.746%	14,000	0	
1706	Construction (AS)	02/2010	02/2015	0.165%	7,500	0	
1707	Construction (AS)	08/2010	08/2015	1.619%	5,000	5,000	
1708	Construction (AS)	06/2011	06/2016	1.957%	7,000	7,000	
1709	Construction (AS)	08/2011	08/2016	1.423%	3,500	3,500	
1710	Construction (AS)	01/2012	09/2012	0.146%	10,000	0	
1711	Construction (AS)	06/2012	09/2017	0.671%	7,700	7,700	
1712	Construction (AS)	11/2012	11/2018	1.109%	5,250	5,250	
1713	Construction (AS)	04/2013	04/2017	0.622%	2,450	2,450	
1714	Construction (AS)	06/2013	06/2017	1.271%	3,000	3,000	
1715	Construction (AS)	08/2013	08/2017	1.494%	2,000	2,000	
1716	Construction (AS)	10/2013	10/2019	2.039%	4,200	4,200	
1717	Construction (AS)	10/2013	10/2019	2.039%	5,000	5,000	
1718	Construction (AS)	01/2014	01/2020	2.183%	1,750	1,750	
1719	Construction (AS)	01/2014	01/2020	2.183%	2,000	2,000	
1720	Construction (AS)	02/2014	09/2014	0.117%	950	0	
1721	Construction (AS)	04/2014	03/2020	1.010%	1,400	1,400	
1722	Construction (AS)	04/2014	03/2020	1.010%	2,000	2,000	
1723	Construction (AS)	05/2014	04/2020	1.010%	700	700	
1724	Construction (AS)	07/2014	07/2020	1.010%	1,050	1,050	
1725	Construction (AS)	11/2014	11/2020	1.809%	2,100	2,100	
1726	Construction (AS)	12/2014	12/2020	1.922%	1,050	1,050	
1727	Construction (AS)	02/2015	02/2021	1.761%	1,750	1,750	
1728	Fish and Wildlife	05/1989	05/1999	8.950%	25,000	0	
1729	Fish and Wildlife	05/1991	05/1996	7.950%	50,000	0	
1730	Fish and Wildlife	02/1993	02/2008	6.950%	20,000	0	
1731	Fish and Wildlife	09/1994	09/1999	7.650%	20,000	0	
1732	Fish and Wildlife	08/1995	08/2010	7.200%	35,000	0	
1733	Fish and Wildlife	01/1998	01/2013	6.100%	60,000	0	
1734	Fish and Wildlife	09/1999	09/2003	6.300%	20,000	0	
1735	Fish and Wildlife	01/2001	01/2005	5.650%	25,000	0	
1736	Fish and Wildlife	09/2003	09/2007	3.100%	20,000	0	
1737	Fish and Wildlife	09/2005	09/2008	4.250%	20,000	0	
1738	Fish and Wildlife	09/2006	09/2010	4.950%	20,000	0	
1739	Fish and Wildlife	06/2007	06/2010	5.350%	30,000	0	
1740	Fish and Wildlife	09/2007	09/2011	4.700%	20,000	0	
1741	Fish and Wildlife	09/2008	09/2012	3.444%	20,000	0	
1742	Fish and Wildlife	06/2009	06/2024	4.556%	20,000	20,000	
1743	Fish and Wildlife	12/2009	12/2018	4.069%	26,000	26,000	
1744	Fish and Wildlife	08/2010	08/2019	2.646%	20,000	20,000	
1745	Fish and Wildlife	01/2011	01/2026	4.440%	50,000	50,000	
1746	Fish and Wildlife	02/2011	02/2026	4.398%	15,000	15,000	
1747	Fish and Wildlife	06/2011	06/2026	4.205%	15,000	15,000	
1748	Fish and Wildlife	01/2012	01/2038	3.893%	30,000	0	
1749	Fish and Wildlife	05/2012	05/2029	0.140%	5,000	0	
1750	Fish and Wildlife	06/2012	06/2041	3.666%	11,000	0	
1751	Fish and Wildlife	08/2012	08/2027	3.090%	11,000	0	
1752	Fish and Wildlife	11/2012	11/2027	5.046%	25,000	0	
1753	Fish and Wildlife	01/2013	09/2013	0.149%	60,000	0	
1754	Fish and Wildlife	03/2013	03/2028	5.445%	10,000	0	
1755	Fish and Wildlife	04/2013	04/2028	5.042%	6,000	0	
1756	Fish and Wildlife	06/2013	06/2028	6.607%	8,000	0	
1757	Fish and Wildlife	08/2013	08/2028	7.249%	5,000	0	
1758	Fish and Wildlife	10/2013	12/2026	3.717%	28,000	28,000	
1759	Fish and Wildlife	10/2013	05/2027	3.762%	11,000	11,000	
1760	Fish and Wildlife	10/2013	10/2028	3.880%	22,000	22,000	
1761	Fish and Wildlife	11/2013	09/2022	3.125%	31,000	31,000	
1762	Fish and Wildlife	11/2013	09/2023	3.375%	23,000	23,000	
1763	Fish and Wildlife	11/2013	05/2027	1.010%	5,000	5,000	
1764	Fish and Wildlife	01/2014	01/2029	3.896%	7,000	7,000	
1765	Fish and Wildlife	04/2014	02/2029	1.010%	7,000	7,000	
1766	Fish and Wildlife	05/2014	04/2027	1.010%	11,000	11,000	
1767	Fish and Wildlife	08/2014	07/2029	1.010%	5,000	5,000	
1768	Fish and Wildlife	10/2014	01/2029	1.010%	15,000	15,000	
1769	Fish and Wildlife	11/2014	03/2030	1.010%	8,000	8,000	
1770	Fish and Wildlife	01/2015	01/2024	1.908%	5,000	5,000	
1771	Fish and Wildlife	03/2015	03/2028	2.511%	3,000	3,000	
1772	Technology	01/2015	01/2021	1.469%	35,000	35,000	
1773	Totals:				11,832,232	5,285,981	

TABLE 12B
PROJECTED INVESTMENTS
October 1, 2014 - September 30, 2017 Cost Evaluation period
(\$000s) (FY 2017)

A	B	C	D	E	F	G
Project	In Service Date	Due Date	Interest Rate	Current Principal	Roll Maturity Date	Rollover Rate
1	Bureau Direct	09/2015	09/2033	4.060%	6,000	
2	Bureau Direct	10/2015	10/2033	4.460%	5,000	
3	Bureau Direct	11/2015	11/2033	4.460%	6,000	
4	Bureau Direct	12/2015	12/2033	4.460%	4,000	
5	Bureau Direct	01/2016	01/2035	4.500%	6,000	
6	Bureau Direct	02/2016	02/2035	4.500%	1,000	
7	Bureau Direct	03/2016	03/2035	4.500%	4,000	
8	Bureau Direct	04/2016	04/2036	4.530%	6,000	
9	Bureau Direct	05/2016	05/2036	4.530%	5,000	
10	Bureau Direct	06/2016	06/2037	4.570%	5,000	
11	Bureau Direct	07/2016	07/2037	4.570%	5,000	
12	Bureau Direct	08/2016	08/2038	4.610%	7,000	
13	Bureau Direct	09/2016	09/2038	4.610%	9,000	
14	Bureau Direct	10/2016	10/2038	4.930%	7,000	
15	Bureau Direct	11/2016	11/2038	4.930%	9,000	
16	Bureau Direct	12/2016	12/2039	4.960%	7,000	
17	Bureau Direct	01/2017	01/2041	4.980%	10,000	
18	Bureau Direct	02/2017	02/2041	4.980%	1,000	
19	Bureau Direct	03/2017	03/2042	5.010%	7,000	
20	Bureau Direct	04/2017	04/2043	5.040%	10,000	
21	Bureau Direct	05/2017	05/2043	5.040%	8,000	
22	Bureau Direct	06/2017	06/2044	5.060%	8,000	
23	Bureau Direct	07/2017	07/2044	5.060%	9,000	
24	Bureau Direct	08/2017	08/2047	5.140%	11,000	
25	Bureau Direct	09/2017	09/2046	5.110%	15,000	
26	Columbia River Fish Mitigation	09/2015	09/2065	3.250%	121,391	
27	Columbia River Fish Mitigation	09/2016	09/2066	4.420%	52,353	
28	Columbia River Fish Mitigation	09/2017	09/2067	4.580%	129,451	
29	Conservation	04/2015	04/2021	2.420%	5,000	
30	Conservation	05/2015	05/2021	2.420%	6,000	
31	Conservation	06/2015	06/2021	2.420%	7,000	
32	Conservation	07/2015	07/2021	2.420%	3,000	
33	Conservation	08/2015	08/2022	2.740%	6,000	
34	Conservation	09/2015	09/2022	2.740%	13,000	
35	Construction (AS)	05/2015	05/2021	2.419%	700	
36	Construction (AS)	06/2015	06/2021	2.419%	1,050	
37	Construction (AS)	07/2015	07/2021	2.419%	700	
38	Construction (AS)	08/2015	08/2021	2.419%	700	
39	Construction (AS)	09/2015	09/2021	2.419%	1,750	
40	Construction (AS)	03/2016	03/2022	3.248%	4,900	
41	Construction (AS)	09/2016	09/2022	3.248%	4,900	
42	Construction (AS)	03/2017	03/2022	4.090%	3,850	
43	Construction (AS)	09/2017	09/2022	4.090%	3,850	
44	Corps	09/2015	09/2033	4.060%	24,000	
45	Corps	10/2015	10/2033	4.460%	7,000	
46	Corps	11/2015	11/2033	4.460%	8,000	
47	Corps	12/2015	12/2033	4.460%	8,000	
48	Corps	01/2016	01/2035	4.500%	9,000	
49	Corps	02/2016	02/2035	4.500%	9,000	

TABLE 12B
PROJECTED INVESTMENTS
October 1, 2014 - September 30, 2017 Cost Evaluation period
(\$000s) (FY 2017)

A	B	C	D	E	F	G
Project	In Service Date	Due Date	Interest Rate	Current Principal	Roll Maturity Date	Rollover Rate
50	Corps	03/2016	03/2036	4.530%	7,000	
51	Corps	04/2016	04/2036	4.530%	9,000	
52	Corps	05/2016	05/2036	4.530%	9,000	
53	Corps	06/2016	06/2037	4.570%	11,000	
54	Corps	07/2016	07/2037	4.570%	11,000	
55	Corps	08/2016	08/2038	4.610%	9,000	
56	Corps	09/2016	09/2038	4.610%	12,000	
57	Corps	10/2016	10/2038	4.930%	10,000	
58	Corps	11/2016	11/2039	4.960%	12,000	
59	Corps	12/2016	12/2039	4.960%	12,000	
60	Corps	01/2017	01/2041	4.980%	13,000	
61	Corps	02/2017	02/2042	5.010%	14,000	
62	Corps	03/2017	03/2042	5.010%	11,000	
63	Corps	04/2017	04/2043	5.040%	14,000	
64	Corps	05/2017	05/2044	5.060%	13,000	
65	Corps	06/2017	06/2045	5.090%	16,000	
66	Corps	07/2017	07/2045	5.090%	16,000	
67	Corps	08/2017	08/2046	5.110%	14,000	
68	Corps	09/2017	09/2047	5.140%	19,000	
69	Fish and Wildlife	09/2015	09/2029	3.877%	1,000	
70	Fish and Wildlife	10/2015	10/2028	4.260%	5,000	
71	Fish and Wildlife	11/2015	11/2028	4.260%	3,000	
72	Fish and Wildlife	12/2015	12/2028	4.260%	4,000	
73	Fish and Wildlife	01/2016	01/2029	4.260%	3,000	
74	Fish and Wildlife	02/2016	02/2029	4.260%	3,000	
75	Fish and Wildlife	03/2016	03/2029	4.260%	3,000	
76	Fish and Wildlife	04/2016	04/2030	4.300%	2,000	
77	Fish and Wildlife	05/2016	05/2030	4.300%	2,000	
78	Fish and Wildlife	06/2016	06/2030	4.300%	4,000	
79	Fish and Wildlife	07/2016	07/2030	4.300%	6,000	
80	Fish and Wildlife	08/2016	08/2030	4.300%	3,000	
81	Fish and Wildlife	09/2016	09/2031	4.340%	17,000	
82	Fish and Wildlife	10/2016	10/2029	4.700%	3,000	
83	Fish and Wildlife	11/2016	11/2029	4.700%	2,000	
84	Fish and Wildlife	12/2016	12/2030	4.720%	3,000	
85	Fish and Wildlife	01/2017	01/2031	4.720%	2,000	
86	Fish and Wildlife	02/2017	02/2032	4.750%	1,000	
87	Fish and Wildlife	03/2017	03/2032	4.750%	1,000	
88	Fish and Wildlife	04/2017	04/2032	4.750%	1,000	
89	Fish and Wildlife	05/2017	05/2032	4.750%	1,000	
90	Fish and Wildlife	06/2017	06/2032	4.750%	2,000	
91	Fish and Wildlife	07/2017	07/2032	4.750%	3,000	
92	Fish and Wildlife	08/2017	08/2032	4.750%	2,000	
93	Fish and Wildlife	09/2017	09/2032	4.750%	10,000	
94	Technology	09/2015	09/2021	2.419%	7,000	
95	Technology	03/2016	03/2022	3.248%	7,000	
96	Technology	03/2017	03/2022	4.090%	5,000	
97	Totals:				939,595	

TABLE 12C: Interest Calculation Summary
October 1, 2014 - September 30, 2017 Cost Evaluation Period
(\$000s) (FY 2017)

A	B	D	E	F	G	H	I	J
Fiscal Year	Project	Type	Current Principal	Rate	Interest	Premium	Net Interest Accrual	Total
1	2015 Albeni Falls	Historical	3,090	6.744%	208	-	-	208
2	2015 Boise	Historical	4,425	6.657%	295	-	-	295
3	2015 Bonneville 2nd Powerhouse	Historical	366,796	7.150%	26,226	-	-	26,226
4	2015 Bonneville Dam	Historical	151,727	5.483%	8,320	-	-	8,320
5	2015 Chief Joseph	Historical	238,256	6.818%	16,243	-	-	16,243
6	2015 Columbia Basin	Historical	98,328	5.676%	5,581	-	-	5,581
7	2015 Columbia Basin 3rd Powerhouse	Historical	411,264	7.150%	29,405	-	-	29,405
8	2015 Columbia River Fish Mitigation	Historical	1,317,440	4.460%	58,761	-	-	58,761
9	2015 Cougar	Historical	16,708	4.580%	765	-	-	765
10	2015 Detroit Lake/Big Cliff	Historical	2,138	4.698%	100	-	-	100
11	2015 Dworshak	Historical	14,145	6.323%	894	-	-	894
12	2015 Green Peter/Foster	Historical	725	4.508%	33	-	-	33
13	2015 Hills Creek	Historical	2,867	5.972%	171	-	-	171
14	2015 Hungry Horse Dam	Historical	13,280	6.271%	833	-	-	833
15	2015 Ice Harbor	Historical	36,219	6.319%	2,289	-	-	2,289
16	2015 John Day	Historical	30,309	5.436%	1,648	-	-	1,648
17	2015 Libby	Historical	180,762	7.087%	12,811	-	-	12,811
18	2015 Little Goose	Historical	63,856	6.907%	4,410	-	-	4,410
19	2015 Lookout Dam	Historical	13,543	5.467%	740	-	-	740
20	2015 Lost Creek	Historical	14,884	7.136%	1,062	-	-	1,062
21	2015 Lower Granite	Historical	57,771	6.546%	3,781	-	-	3,781
22	2015 Lower Monument	Historical	54,535	6.715%	3,662	-	-	3,662
23	2015 Lower Snake Fish and Wildlife	Historical	232,739	7.104%	16,534	-	-	16,534
24	2015 McNary	Historical	15,477	4.981%	771	-	-	771
25	2015 Minidoka/Palisades	Historical	50,960	7.148%	3,643	-	-	3,643
26	2015 RRP - Green Springs	Historical	11,148	5.874%	655	-	-	655
27	2015 The Dalles	Historical	45,827	5.243%	2,403	-	-	2,403
28	2015 Yakima Chandler/Kenniwick	Historical	848	5.111%	43	-	-	43
29	2015 Yakima Roza	Historical	14	5.878%	1	-	-	1
30	2015 Bureau Direct	Historical	927,000	3.090%	28,647	-	171	28,819
31	2015 Conservation	Historical	430,000	2.200%	9,460	-	(223)	9,237
32	2015 Conservation	New	85,000	0.514%	437	-	272	708
33	2015 Construction (AS)	Historical	54,000	1.447%	781	-	(6)	775
34	2015 Construction (AS)	New	8,050	0.553%	44	-	37	81
35	2015 Fish and Wildlife	Historical	296,000	3.581%	10,600	-	13	10,614
36	2015 Fish and Wildlife	New	31,000	0.859%	266	-	41	307
37	2015 Technology	New	35,000	0.735%	257	-	85	342
38	2015 Float	Historical	-	-	(3,585)	-	-	(3,585)
39	FY 2015 Subtotal:		5,316,131		249,198		389	249,587
40	2016 Albeni Falls	Historical	3,090	6.744%	208	-	-	208
41	2016 Boise	Historical	4,425	6.657%	295	-	-	295
42	2016 Bonneville 2nd Powerhouse	Historical	366,796	7.150%	26,226	-	-	26,226
43	2016 Bonneville Dam	Historical	151,727	5.483%	8,320	-	-	8,320
44	2016 Chief Joseph	Historical	238,256	6.818%	16,243	-	-	16,243
45	2016 Columbia Basin	Historical	98,256	5.675%	5,576	-	-	5,576
46	2016 Columbia Basin 3rd Powerhouse	Historical	361,897	7.150%	25,876	-	-	25,876
47	2016 Columbia River Fish Mitigation	Historical	1,438,831	4.358%	62,706	-	-	62,706
48	2016 Cougar	Historical	16,708	4.580%	765	-	-	765
49	2016 Detroit Lake/Big Cliff	Historical	2,138	4.698%	100	-	-	100
50	2016 Dworshak	Historical	14,145	6.323%	894	-	-	894
51	2016 Green Peter/Foster	Historical	725	4.508%	33	-	-	33
52	2016 Hills Creek	Historical	2,867	5.972%	171	-	-	171
53	2016 Hungry Horse Dam	Historical	13,280	6.271%	833	-	-	833
54	2016 Ice Harbor	Historical	15,498	5.208%	807	-	-	807
55	2016 John Day	Historical	30,309	5.436%	1,648	-	-	1,648
56	2016 Libby	Historical	23,079	6.658%	1,537	-	-	1,537
57	2016 Little Goose	Historical	63,856	6.907%	4,410	-	-	4,410
58	2016 Lookout Dam	Historical	13,543	5.467%	740	-	-	740
59	2016 Lost Creek	Historical	12,618	7.133%	900	-	-	900
60	2016 Lower Granite	Historical	57,771	6.546%	3,781	-	-	3,781
61	2016 Lower Monument	Historical	54,535	6.715%	3,662	-	-	3,662
62	2016 Lower Snake Fish and Wildlife	Historical	232,739	7.104%	16,534	-	-	16,534
63	2016 McNary	Historical	15,126	4.931%	746	-	-	746
64	2016 Minidoka/Palisades	Historical	50,960	7.148%	3,643	-	-	3,643
65	2016 RRP - Green Springs	Historical	11,148	5.874%	655	-	-	655
66	2016 The Dalles	Historical	45,827	5.243%	2,403	-	-	2,403
67	2016 Yakima Chandler/Kenniwick	Historical	848	5.111%	43	-	-	43
68	2016 Yakima Roza	Historical	14	5.878%	1	-	-	1
69	2016 Bureau Direct	Historical	933,000	3.115%	29,062	-	-	29,062
70	2016 Bureau Direct	New	54,000	1.078%	582	-	586	1,168
71	2016 Conservation	Historical	423,000	2.372%	10,031	-	-	10,031
72	2016 Construction (AS)	Historical	58,800	1.575%	926	-	(38)	888
73	2016 Construction (AS)	New	4,900	1.624%	80	-	80	80
74	2016 Corps	Historical	24,000	4.060%	974	-	-	974
75	2016 Corps	New	97,000	1.110%	1,076	-	989	2,065
76	2016 Fish and Wildlife	Historical	328,000	3.371%	11,056	-	-	11,056
77	2016 Fish and Wildlife	New	38,000	1.177%	447	-	367	814
78	2016 Technology	Historical	42,000	1.627%	683	-	-	683
79	2016 Technology	New	7,000	1.624%	114	-	-	114
80	2016 Float	Historical	-	-	(2,756)	-	-	(2,756)
81	FY 2016 Subtotal:		5,350,711		242,033		1,903	243,936

TABLE 12C: Interest Calculation Summary
October 1, 2014 - September 30, 2017 Cost Evaluation Period
(\$000s) (FY 2017)

A	B	D	E	F	G	H	I	J
Fiscal Year	Project	Type	Current Principal	Rate	Interest	Premium	Net Interest Accrual	Total
82	2017 Albeni Falls	Historical	3,090	6.744%	208	-	-	208
83	2017 Boise	Historical	4,425	6.657%	295	-	-	295
84	2017 Bonneville 2nd Powerhouse	Historical	366,796	7.150%	26,226	-	-	26,226
85	2017 Bonneville Dam	Historical	151,727	5.483%	8,320	-	-	8,320
86	2017 Chief Joseph	Historical	216,721	6.785%	14,704	-	-	14,704
87	2017 Columbia Basin	Historical	98,256	5.675%	5,576	-	-	5,576
88	2017 Columbia Basin 3rd Powerhouse	Historical	311,169	7.150%	22,249	-	-	22,249
89	2017 Columbia River Fish Mitigation	Historical	1,491,185	4.360%	65,020	-	-	65,020
90	2017 Cougar	Historical	16,708	4.580%	765	-	-	765
91	2017 Detroit Lake/Big Cliff	Historical	2,138	4.698%	100	-	-	100
92	2017 Dworshak	Historical	14,145	6.323%	894	-	-	894
93	2017 Green Peter/Foster	Historical	725	4.508%	33	-	-	33
94	2017 Hills Creek	Historical	2,867	5.972%	171	-	-	171
95	2017 Hungry Horse Dam	Historical	13,280	6.271%	833	-	-	833
96	2017 Ice Harbor	Historical	15,498	5.208%	807	-	-	807
97	2017 John Day	Historical	30,309	5.436%	1,648	-	-	1,648
98	2017 Libby	Historical	23,079	6.658%	1,537	-	-	1,537
99	2017 Little Goose	Historical	63,856	6.907%	4,410	-	-	4,410
100	2017 Lookout Dam	Historical	13,543	5.467%	740	-	-	740
101	2017 Lost Creek	Historical	683	6.839%	47	-	-	47
102	2017 Lower Granite	Historical	57,771	6.546%	3,781	-	-	3,781
103	2017 Lower Monument	Historical	54,535	6.715%	3,662	-	-	3,662
104	2017 Lower Snake Fish and Wildlife	Historical	232,739	7.104%	16,534	-	-	16,534
105	2017 McNary	Historical	15,126	4.931%	746	-	-	746
106	2017 Minidoka/Palisades	Historical	50,960	7.148%	3,643	-	-	3,643
107	2017 RRP - Green Springs	Historical	11,148	5.874%	655	-	-	655
108	2017 The Dalles	Historical	45,827	5.243%	2,403	-	-	2,403
109	2017 Yakima Chandler/Kenniwick	Historical	848	5.111%	43	-	-	43
110	2017 Yakima Roza	Historical	14	5.878%	1	-	-	1
111	2017 Bureau Direct	Historical	996,000	3.205%	31,918	-	-	31,918
112	2017 Bureau Direct	New	87,000	1.169%	1,017	-	1,033	2,051
113	2017 Conservation	Historical	423,000	2.357%	9,968	-	(42)	9,926
114	2017 Construction (AS)	Historical	58,100	1.820%	1,058	-	(18)	1,039
115	2017 Construction (AS)	New	3,850	2.045%	79	-	-	79
116	2017 Corps	Historical	133,000	4.447%	5,914	-	-	5,914
117	2017 Corps	New	145,000	1.236%	1,792	-	1,631	3,422
118	2017 Fish and Wildlife	Historical	383,000	3.504%	13,418	-	-	13,418
119	2017 Fish and Wildlife	New	21,000	1.348%	283	-	236	519
120	2017 Technology	Historical	49,000	1.859%	911	-	-	911
121	2017 Technology	New	5,000	2.045%	102	-	-	102
122	2017 Float	Historical	-	-	(5,050)	-	-	(5,050)
123	FY 2017 Subtotal:		5,613,118		247,461	-	2,839	250,300
124	2018 Albeni Falls	Historical	3,090	6.744%	208	-	-	208
125	2018 Boise	Historical	4,425	6.657%	295	-	-	295
126	2018 Bonneville 2nd Powerhouse	Historical	366,796	7.150%	26,226	-	-	26,226
127	2018 Bonneville Dam	Historical	136,057	5.291%	7,199	-	-	7,199
128	2018 Chief Joseph	Historical	207,744	6.769%	14,062	-	-	14,062
129	2018 Columbia Basin	Historical	98,256	5.675%	5,576	-	-	5,576
130	2018 Columbia Basin 3rd Powerhouse	Historical	311,169	7.150%	22,249	-	-	22,249
131	2018 Columbia River Fish Mitigation	Historical	1,620,636	4.378%	70,949	-	-	70,949
132	2018 Cougar	Historical	16,708	4.580%	765	-	-	765
133	2018 Detroit Lake/Big Cliff	Historical	2,138	4.698%	100	-	-	100
134	2018 Dworshak	Historical	14,145	6.323%	894	-	-	894
135	2018 Green Peter/Foster	Historical	725	4.508%	33	-	-	33
136	2018 Hills Creek	Historical	2,867	5.972%	171	-	-	171
137	2018 Hungry Horse Dam	Historical	13,280	6.271%	833	-	-	833
138	2018 Ice Harbor	Historical	15,498	5.208%	807	-	-	807
139	2018 John Day	Historical	30,309	5.436%	1,648	-	-	1,648
140	2018 Libby	Historical	23,079	6.658%	1,537	-	-	1,537
141	2018 Little Goose	Historical	55,215	6.869%	3,793	-	-	3,793
142	2018 Lookout Dam	Historical	13,543	5.467%	740	-	-	740
143	2018 Lost Creek	Historical	303	6.450%	20	-	-	20
144	2018 Lower Granite	Historical	17,160	5.116%	878	-	-	878
145	2018 Lower Monument	Historical	54,535	6.715%	3,662	-	-	3,662
146	2018 Lower Snake Fish and Wildlife	Historical	232,739	7.104%	16,534	-	-	16,534
147	2018 McNary	Historical	15,126	4.931%	746	-	-	746
148	2018 Minidoka/Palisades	Historical	50,960	7.148%	3,643	-	-	3,643
149	2018 RRP - Green Springs	Historical	11,148	5.874%	655	-	-	655
150	2018 The Dalles	Historical	45,827	5.243%	2,403	-	-	2,403
151	2018 Yakima Chandler/Kenniwick	Historical	848	5.111%	43	-	-	43
152	2018 Yakima Roza	Historical	14	5.878%	1	-	-	1
153	2018 Bureau Direct	Historical	1,098,000	3.374%	37,050	-	-	37,050
154	2018 Conservation	Historical	403,000	2.446%	9,856	-	(16)	9,839
155	2018 Construction (AS)	Historical	50,650	2.409%	1,220	-	-	1,220
156	2018 Corps	Historical	297,000	4.774%	14,177	-	-	14,177
157	2018 Fish and Wildlife	Historical	414,000	3.596%	14,887	-	-	14,887
158	2018 Replacements	New	240,144	2.570%	6,172	-	-	6,172
159	2018 Technology	Historical	54,000	2.065%	1,115	-	-	1,115
160	2018 Float	Historical	-	-	(4,867)	-	-	(4,867)
161	FY 2018 Subtotal:		5,921,134		266,278	-	(16)	266,262

TABLE 12C: Interest Calculation Summary
October 1, 2014 - September 30, 2017 Cost Evaluation Period
(\$000s) (FY 2017)

A	B	D	E	F	G	H	I	J
Fiscal Year	Project	Type	Current Principal	Rate	Interest	Premium	Net Interest Accrual	Total
162	2019 Albeni Falls	Historical	3,090	6.744%	208	-	-	208
163	2019 Boise	Historical	4,425	6.657%	295	-	-	295
164	2019 Bonneville 2nd Powerhouse	Historical	366,796	7.150%	26,226	-	-	26,226
165	2019 Bonneville Dam	Historical	136,057	5.291%	7,199	-	-	7,199
166	2019 Chief Joseph	Historical	198,072	6.750%	13,370	-	-	13,370
167	2019 Columbia Basin	Historical	98,256	5.675%	5,576	-	-	5,576
168	2019 Columbia Basin 3rd Powerhouse	Historical	260,874	7.150%	18,652	-	-	18,652
169	2019 Columbia River Fish Mitigation	Historical	1,620,636	4.378%	70,949	-	-	70,949
170	2019 Cougar	Historical	16,708	4.580%	765	-	-	765
171	2019 Detroit Lake/Big Cliff	Historical	2,138	4.698%	100	-	-	100
172	2019 Dworshak	Historical	14,145	6.323%	894	-	-	894
173	2019 Green Peter/Foster	Historical	725	4.508%	33	-	-	33
174	2019 Hills Creek	Historical	2,867	5.972%	171	-	-	171
175	2019 Hungry Horse Dam	Historical	13,280	6.271%	833	-	-	833
176	2019 Ice Harbor	Historical	15,498	5.208%	807	-	-	807
177	2019 John Day	Historical	30,309	5.436%	1,648	-	-	1,648
178	2019 Libby	Historical	23,079	6.658%	1,537	-	-	1,537
179	2019 Little Goose	Historical	14,278	6.062%	866	-	-	866
180	2019 Lookout Dam	Historical	13,543	5.467%	740	-	-	740
181	2019 Lost Creek	Historical	303	6.450%	20	-	-	20
182	2019 Lower Granite	Historical	17,160	5.116%	878	-	-	878
183	2019 Lower Monument	Historical	54,535	6.715%	3,662	-	-	3,662
184	2019 Lower Snake Fish and Wildlife	Historical	232,739	7.104%	16,534	-	-	16,534
185	2019 McNary	Historical	15,126	4.931%	746	-	-	746
186	2019 Minidoka/Palisades	Historical	50,960	7.148%	3,643	-	-	3,643
187	2019 RRP - Green Springs	Historical	11,148	5.874%	655	-	-	655
188	2019 The Dalles	Historical	45,827	5.243%	2,403	-	-	2,403
189	2019 Yakima Chandler/Kennewick	Historical	848	5.111%	43	-	-	43
190	2019 Yakima Roza	Historical	14	5.878%	1	-	-	1
191	2019 Bureau Direct	Historical	1,098,000	3.191%	35,038	-	(1,121)	33,917
192	2019 Conservation	Historical	394,000	2.489%	9,806	-	-	9,806
193	2019 Construction (AS)	Historical	50,650	2.352%	1,191	-	(20)	1,172
194	2019 Corps	Historical	297,000	4.774%	14,177	-	-	14,177
195	2019 Fish and Wildlife	Historical	414,000	3.468%	14,358	-	(309)	14,048
196	2019 Replacements	Historical	240,144	5.140%	12,343	-	-	12,343
197	2019 Replacements	New	240,144	2.570%	6,172	-	-	6,172
198	2019 Technology	Historical	54,000	2.065%	1,115	-	-	1,115
199	2019 Float	Historical	-	-	(8,050)	-	-	(8,050)
200	FY 2019 Subtotal:		6,051,374		265,605		(1,450)	264,154
201	2020 Albeni Falls	Historical	3,090	6.744%	208	-	-	208
202	2020 Boise	Historical	4,425	6.657%	295	-	-	295
203	2020 Bonneville 2nd Powerhouse	Historical	366,796	7.150%	26,226	-	-	26,226
204	2020 Bonneville Dam	Historical	136,057	5.291%	7,199	-	-	7,199
205	2020 Chief Joseph	Historical	132,075	6.550%	8,651	-	-	8,651
206	2020 Columbia Basin	Historical	98,256	5.675%	5,576	-	-	5,576
207	2020 Columbia Basin 3rd Powerhouse	Historical	260,874	7.150%	18,652	-	-	18,652
208	2020 Columbia River Fish Mitigation	Historical	1,620,636	4.378%	70,949	-	-	70,949
209	2020 Cougar	Historical	16,708	4.580%	765	-	-	765
210	2020 Detroit Lake/Big Cliff	Historical	2,138	4.698%	100	-	-	100
211	2020 Dworshak	Historical	14,145	6.323%	894	-	-	894
212	2020 Green Peter/Foster	Historical	725	4.508%	33	-	-	33
213	2020 Hills Creek	Historical	2,867	5.972%	171	-	-	171
214	2020 Hungry Horse Dam	Historical	13,280	6.271%	833	-	-	833
215	2020 Ice Harbor	Historical	15,498	5.208%	807	-	-	807
216	2020 John Day	Historical	30,309	5.436%	1,648	-	-	1,648
217	2020 Libby	Historical	23,079	6.658%	1,537	-	-	1,537
218	2020 Little Goose	Historical	14,231	6.058%	862	-	-	862
219	2020 Lookout Dam	Historical	13,543	5.467%	740	-	-	740
220	2020 Lost Creek	Historical	303	6.450%	20	-	-	20
221	2020 Lower Granite	Historical	17,160	5.116%	878	-	-	878
222	2020 Lower Monument	Historical	47,388	6.649%	3,151	-	-	3,151
223	2020 Lower Snake Fish and Wildlife	Historical	232,739	7.104%	16,534	-	-	16,534
224	2020 McNary	Historical	15,126	4.931%	746	-	-	746
225	2020 Minidoka/Palisades	Historical	50,960	7.148%	3,643	-	-	3,643
226	2020 RRP - Green Springs	Historical	11,148	5.874%	655	-	-	655
227	2020 The Dalles	Historical	45,827	5.243%	2,403	-	-	2,403
228	2020 Yakima Chandler/Kennewick	Historical	848	5.111%	43	-	-	43
229	2020 Yakima Roza	Historical	14	5.878%	1	-	-	1
230	2020 Bureau Direct	Historical	897,000	3.423%	30,706	-	(1,429)	29,277
231	2020 Conservation	Historical	394,000	2.489%	9,806	-	-	9,806
232	2020 Construction (AS)	Historical	45,400	2.225%	1,010	-	(96)	914
233	2020 Corps	Historical	297,000	4.774%	14,177	-	-	14,177
234	2020 Fish and Wildlife	Historical	368,000	3.614%	13,301	-	-	13,301
235	2020 Replacements	Historical	480,288	5.140%	24,687	-	-	24,687
236	2020 Replacements	New	240,144	2.570%	6,172	-	-	6,172
237	2020 Technology	Historical	54,000	2.065%	1,115	-	-	1,115
238	2020 Float	Historical	-	-	(7,391)	-	-	(7,391)
239	FY 2020 Subtotal:		5,966,077		267,803		(1,525)	266,278

TABLE 12C: Interest Calculation Summary
October 1, 2014 - September 30, 2017 Cost Evaluation Period
(\$000s) (FY 2017)

A	B	D	E	F	G	H	I	J
Fiscal Year	Project	Type	Current Principal	Rate	Interest	Premium	Net Interest Accrual	Total
240	2021 Albeni Falls	Historical	3,090	6.744%	208	-	-	208
241	2021 Boise	Historical	4,425	6.657%	295	-	-	295
242	2021 Bonneville 2nd Powerhouse	Historical	366,796	7.150%	26,226	-	-	26,226
243	2021 Bonneville Dam	Historical	136,057	5.291%	7,199	-	-	7,199
244	2021 Chief Joseph	Historical	132,075	6.550%	8,651	-	-	8,651
245	2021 Columbia Basin	Historical	98,256	5.675%	5,576	-	-	5,576
246	2021 Columbia Basin 3rd Powerhouse	Historical	213,938	7.150%	15,297	-	-	15,297
247	2021 Columbia River Fish Mitigation	Historical	1,620,636	4.378%	70,949	-	-	70,949
248	2021 Cougar	Historical	16,708	4.580%	765	-	-	765
249	2021 Detroit Lake/Big Cliff	Historical	2,138	4.698%	100	-	-	100
250	2021 Dworshak	Historical	14,145	6.323%	894	-	-	894
251	2021 Green Peter/Foster	Historical	725	4.508%	33	-	-	33
252	2021 Hills Creek	Historical	2,867	5.972%	171	-	-	171
253	2021 Hungry Horse Dam	Historical	13,280	6.271%	833	-	-	833
254	2021 Ice Harbor	Historical	15,498	5.208%	807	-	-	807
255	2021 John Day	Historical	30,309	5.436%	1,648	-	-	1,648
256	2021 Libby	Historical	23,079	6.658%	1,537	-	-	1,537
257	2021 Little Goose	Historical	14,231	6.058%	862	-	-	862
258	2021 Lookout Dam	Historical	13,543	5.467%	740	-	-	740
259	2021 Lost Creek	Historical	303	6.450%	20	-	-	20
260	2021 Lower Granite	Historical	17,160	5.116%	878	-	-	878
261	2021 Lower Monument	Historical	13,866	5.439%	754	-	-	754
262	2021 Lower Snake Fish and Wildlife	Historical	232,739	7.104%	16,534	-	-	16,534
263	2021 McNary	Historical	15,126	4.931%	746	-	-	746
264	2021 Minidoka/Palisades	Historical	50,960	7.148%	3,643	-	-	3,643
265	2021 RRP - Green Springs	Historical	11,148	5.874%	655	-	-	655
266	2021 The Dalles	Historical	45,827	5.243%	2,403	-	-	2,403
267	2021 Yakima Chandler/Kenniwick	Historical	848	5.111%	43	-	-	43
268	2021 Yakima Roza	Historical	14	5.878%	1	-	-	1
269	2021 Bureau Direct	Historical	686,000	3.567%	24,469	-	(165)	24,304
270	2021 Conservation	Historical	394,000	2.489%	9,806	-	(153)	9,653
271	2021 Construction (AS)	Historical	27,300	2.916%	796	-	(37)	760
272	2021 Corps	Historical	297,000	4.774%	14,177	-	-	14,177
273	2021 Fish and Wildlife	Historical	368,000	3.614%	13,301	-	-	13,301
274	2021 Replacements	Historical	720,432	5.140%	37,030	-	-	37,030
275	2021 Replacements	New	240,144	2.570%	6,172	-	-	6,172
276	2021 Technology	Historical	54,000	1.589%	858	-	(85)	773
277	2021 Float	Historical	-	-	(7,610)	-	-	(7,610)
278	FY 2021 Subtotal:		5,896,664		267,468		(440)	267,028
279	2022 Albeni Falls	Historical	3,090	6.744%	208	-	-	208
280	2022 Boise	Historical	4,425	6.657%	295	-	-	295
281	2022 Bonneville 2nd Powerhouse	Historical	346,756	7.150%	24,793	-	-	24,793
282	2022 Bonneville Dam	Historical	136,057	5.291%	7,199	-	-	7,199
283	2022 Chief Joseph	Historical	37,771	5.053%	1,909	-	-	1,909
284	2022 Columbia Basin	Historical	98,256	5.675%	5,576	-	-	5,576
285	2022 Columbia Basin 3rd Powerhouse	Historical	161,090	7.150%	11,518	-	-	11,518
286	2022 Columbia River Fish Mitigation	Historical	1,620,636	4.378%	70,949	-	-	70,949
287	2022 Cougar	Historical	16,708	4.580%	765	-	-	765
288	2022 Detroit Lake/Big Cliff	Historical	2,138	4.698%	100	-	-	100
289	2022 Dworshak	Historical	13,927	6.311%	879	-	-	879
290	2022 Green Peter/Foster	Historical	725	4.508%	33	-	-	33
291	2022 Hills Creek	Historical	2,867	5.972%	171	-	-	171
292	2022 Hungry Horse Dam	Historical	11,549	6.139%	709	-	-	709
293	2022 Ice Harbor	Historical	15,498	5.208%	807	-	-	807
294	2022 John Day	Historical	30,309	5.436%	1,648	-	-	1,648
295	2022 Libby	Historical	22,777	6.652%	1,515	-	-	1,515
296	2022 Little Goose	Historical	14,231	6.058%	862	-	-	862
297	2022 Lookout Dam	Historical	13,543	5.467%	740	-	-	740
298	2022 Lost Creek	Historical	303	6.450%	20	-	-	20
299	2022 Lower Granite	Historical	15,609	4.913%	767	-	-	767
300	2022 Lower Monument	Historical	13,610	5.407%	736	-	-	736
301	2022 Lower Snake Fish and Wildlife	Historical	232,739	7.104%	16,534	-	-	16,534
302	2022 McNary	Historical	15,126	4.931%	746	-	-	746
303	2022 Minidoka/Palisades	Historical	50,960	7.148%	3,643	-	-	3,643
304	2022 RRP - Green Springs	Historical	11,148	5.874%	655	-	-	655
305	2022 The Dalles	Historical	45,827	5.243%	2,403	-	-	2,403
306	2022 Yakima Chandler/Kenniwick	Historical	848	5.111%	43	-	-	43
307	2022 Yakima Roza	Historical	14	5.878%	1	-	-	1
308	2022 Bureau Direct	Historical	589,000	3.723%	21,929	-	-	21,929
309	2022 Conservation	Historical	373,000	2.467%	9,203	-	(61)	9,142
310	2022 Construction (AS)	Historical	17,500	2.714%	475	-	-	475
311	2022 Corps	Historical	297,000	4.774%	14,177	-	-	14,177
312	2022 Fish and Wildlife	Historical	368,000	3.614%	13,301	-	-	13,301
313	2022 Replacements	Historical	960,577	5.140%	49,374	-	-	49,374
314	2022 Replacements	New	240,144	2.570%	6,172	-	-	6,172
315	2022 Technology	Historical	12,000	1.799%	216	-	-	216
316	2022 Float	Historical	-	-	(7,476)	-	-	(7,476)
317	FY 2022 Subtotal:		5,795,757		263,595		(61)	263,534

TABLE 12C: Interest Calculation Summary
October 1, 2014 - September 30, 2017 Cost Evaluation Period
(\$000s) (FY 2017)

A	B	D	E	F	G	H	I	J
Fiscal Year	Project	Type	Current Principal	Rate	Interest	Premium	Net Interest Accrual	Total
318	2023 Albeni Falls	Historical	3,090	6.744%	208	-	-	208
319	2023 Boise	Historical	4,425	6.657%	295	-	-	295
320	2023 Bonneville 2nd Powerhouse	Historical	119,578	7.150%	8,550	-	-	8,550
321	2023 Bonneville Dam	Historical	135,517	5.284%	7,161	-	-	7,161
322	2023 Chief Joseph	Historical	37,578	5.043%	1,895	-	-	1,895
323	2023 Columbia Basin	Historical	97,896	5.669%	5,550	-	-	5,550
324	2023 Columbia Basin 3rd Powerhouse	Historical	161,090	7.150%	11,518	-	-	11,518
325	2023 Columbia River Fish Mitigation	Historical	1,620,636	4.378%	70,949	-	-	70,949
326	2023 Cougar	Historical	16,708	4.580%	765	-	-	765
327	2023 Detroit Lake/Big Cliff	Historical	2,138	4.698%	100	-	-	100
328	2023 Dworshak	Historical	13,718	6.298%	864	-	-	864
329	2023 Green Peter/Foster	Historical	725	4.508%	33	-	-	33
330	2023 Hills Creek	Historical	2,867	5.972%	171	-	-	171
331	2023 Hungry Horse Dam	Historical	11,549	6.139%	709	-	-	709
332	2023 Ice Harbor	Historical	15,420	5.198%	802	-	-	802
333	2023 John Day	Historical	30,309	5.436%	1,648	-	-	1,648
334	2023 Libby	Historical	22,777	6.652%	1,515	-	-	1,515
335	2023 Little Goose	Historical	14,231	6.058%	862	-	-	862
336	2023 Lookout Dam	Historical	13,543	5.467%	740	-	-	740
337	2023 Lost Creek	Historical	272	6.370%	17	-	-	17
338	2023 Lower Granite	Historical	15,403	4.883%	752	-	-	752
339	2023 Lower Monument	Historical	13,610	5.407%	736	-	-	736
340	2023 Lower Snake Fish and Wildlife	Historical	229,671	7.104%	16,315	-	-	16,315
341	2023 McNary	Historical	15,096	4.927%	744	-	-	744
342	2023 Minidoka/Palisades	Historical	50,960	7.148%	3,643	-	-	3,643
343	2023 RRP - Green Springs	Historical	11,148	5.874%	655	-	-	655
344	2023 The Dalles	Historical	45,827	5.243%	2,403	-	-	2,403
345	2023 Yakima Chandler/Kennwick	Historical	848	5.111%	43	-	-	43
346	2023 Yakima Roza	Historical	14	5.878%	1	-	-	1
347	2023 Bureau Direct	Historical	570,000	3.743%	21,336	-	(456)	20,880
348	2023 Conservation	Historical	348,000	2.236%	7,780	-	(947)	6,833
349	2023 Corps	Historical	297,000	4.774%	14,177	-	-	14,177
350	2023 Fish and Wildlife	Historical	337,000	3.659%	12,332	-	-	12,332
351	2023 Replacements	Historical	1,200,721	5.140%	61,717	-	-	61,717
352	2023 Replacements	New	240,144	2.570%	6,172	-	-	6,172
353	2023 Float	Historical	-	-	(7,455)	-	-	(7,455)
354	FY 2023 Subtotal:		5,699,509		255,702		(1,402)	254,299
355	2024 Albeni Falls	Historical	3,090	6.744%	208	-	-	208
356	2024 Boise	Historical	4,425	6.657%	295	-	-	295
357	2024 Bonneville 2nd Powerhouse	Historical	56,475	7.150%	4,038	-	-	4,038
358	2024 Bonneville Dam	Historical	135,517	5.284%	7,161	-	-	7,161
359	2024 Chief Joseph	Historical	37,578	5.043%	1,895	-	-	1,895
360	2024 Columbia Basin	Historical	97,896	5.669%	5,550	-	-	5,550
361	2024 Columbia Basin 3rd Powerhouse	Historical	71,160	7.150%	5,088	-	-	5,088
362	2024 Columbia River Fish Mitigation	Historical	1,620,636	4.378%	70,949	-	-	70,949
363	2024 Cougar	Historical	16,708	4.580%	765	-	-	765
364	2024 Detroit Lake/Big Cliff	Historical	2,138	4.698%	100	-	-	100
365	2024 Dworshak	Historical	13,718	6.298%	864	-	-	864
366	2024 Green Peter/Foster	Historical	725	4.508%	33	-	-	33
367	2024 Hills Creek	Historical	2,867	5.972%	171	-	-	171
368	2024 Hungry Horse Dam	Historical	11,549	6.139%	709	-	-	709
369	2024 Ice Harbor	Historical	15,420	5.198%	802	-	-	802
370	2024 John Day	Historical	30,309	5.436%	1,648	-	-	1,648
371	2024 Libby	Historical	22,777	6.652%	1,515	-	-	1,515
372	2024 Little Goose	Historical	14,231	6.058%	862	-	-	862
373	2024 Lookout Dam	Historical	13,543	5.467%	740	-	-	740
374	2024 Lost Creek	Historical	272	6.370%	17	-	-	17
375	2024 Lower Granite	Historical	15,403	4.883%	752	-	-	752
376	2024 Lower Monument	Historical	13,610	5.407%	736	-	-	736
377	2024 Lower Snake Fish and Wildlife	Historical	223,267	7.102%	15,857	-	-	15,857
378	2024 McNary	Historical	15,096	4.927%	744	-	-	744
379	2024 Minidoka/Palisades	Historical	50,960	7.148%	3,643	-	-	3,643
380	2024 RRP - Green Springs	Historical	11,148	5.874%	655	-	-	655
381	2024 The Dalles	Historical	45,827	5.243%	2,403	-	-	2,403
382	2024 Yakima Chandler/Kennwick	Historical	848	5.111%	43	-	-	43
383	2024 Yakima Roza	Historical	14	5.878%	1	-	-	1
384	2024 Bureau Direct	Historical	545,000	3.713%	20,238	-	-	20,238
385	2024 Conservation	Historical	206,000	1.401%	2,886	-	(281)	2,605
386	2024 Corps	Historical	297,000	4.774%	14,177	-	-	14,177
387	2024 Fish and Wildlife	Historical	314,000	3.665%	11,508	-	(244)	11,265
388	2024 Replacements	Historical	1,440,865	5.140%	74,060	-	-	74,060
389	2024 Replacements	New	240,144	2.570%	6,172	-	-	6,172
390	2024 Float	Historical	-	-	(8,047)	-	-	(8,047)
391	FY 2024 Subtotal:		5,590,216		249,237		(525)	248,713

TABLE 12C: Interest Calculation Summary
October 1, 2014 - September 30, 2017 Cost Evaluation Period
(\$000s) (FY 2017)

A	B	D	E	F	G	H	I	J
Fiscal Year	Project	Type	Current Principal	Rate	Interest	Premium	Net Interest Accrual	Total
392	2025 Albeni Falls	Historical	3,090	6.744%	208	-	-	208
393	2025 Boise	Historical	4,425	6.657%	295	-	-	295
394	2025 Bonneville 2nd Powerhouse	Historical	9,867	7.150%	705	-	-	705
395	2025 Bonneville Dam	Historical	135,517	5.284%	7,161	-	-	7,161
396	2025 Chief Joseph	Historical	37,578	5.043%	1,895	-	-	1,895
397	2025 Columbia Basin	Historical	97,896	5.669%	5,550	-	-	5,550
398	2025 Columbia Basin 3rd Powerhouse	Historical	12,631	7.150%	903	-	-	903
399	2025 Columbia River Fish Mitigation	Historical	1,620,636	4.378%	70,949	-	-	70,949
400	2025 Cougar	Historical	16,708	4.580%	765	-	-	765
401	2025 Detroit Lake/Big Cliff	Historical	2,138	4.698%	100	-	-	100
402	2025 Dworshak	Historical	13,718	6.298%	864	-	-	864
403	2025 Green Peter/Foster	Historical	725	4.508%	33	-	-	33
404	2025 Hills Creek	Historical	2,867	5.972%	171	-	-	171
405	2025 Hungry Horse Dam	Historical	11,549	6.139%	709	-	-	709
406	2025 Ice Harbor	Historical	15,049	5.150%	775	-	-	775
407	2025 John Day	Historical	30,114	5.425%	1,634	-	-	1,634
408	2025 Libby	Historical	7,996	5.731%	458	-	-	458
409	2025 Little Goose	Historical	13,031	5.958%	776	-	-	776
410	2025 Lookout Dam	Historical	13,543	5.467%	740	-	-	740
411	2025 Lost Creek	Historical	272	6.370%	17	-	-	17
412	2025 Lower Granite	Historical	15,403	4.883%	752	-	-	752
413	2025 Lower Monument	Historical	13,346	5.373%	717	-	-	717
414	2025 Lower Snake Fish and Wildlife	Historical	61,980	6.978%	4,325	-	-	4,325
415	2025 McNary	Historical	15,096	4.927%	744	-	-	744
416	2025 Minidoka/Palisades	Historical	50,960	7.148%	3,643	-	-	3,643
417	2025 RRP - Green Springs	Historical	11,148	5.874%	655	-	-	655
418	2025 The Dalles	Historical	45,827	5.243%	2,403	-	-	2,403
419	2025 Yakima Chandler/Kenniwick	Historical	848	5.111%	43	-	-	43
420	2025 Yakima Roza	Historical	14	5.878%	1	-	-	1
421	2025 Bureau Direct	Historical	545,000	3.713%	20,238	-	-	20,238
422	2025 Conservation	Historical	114,000	1.827%	2,083	-	(155)	1,928
423	2025 Corps	Historical	297,000	4.774%	14,177	-	-	14,177
424	2025 Fish and Wildlife	Historical	289,000	3.650%	10,549	-	-	10,549
425	2025 Replacements	Historical	1,681,009	5.140%	86,404	-	-	86,404
426	2025 Replacements	New	240,144	2.570%	6,172	-	-	6,172
427	2025 Float	Historical	-	-	(10,023)	-	-	(10,023)
428	FY 2025 Subtotal:		5,430,124		237,592		(155)	237,438
429	2026 Albeni Falls	Historical	580	4.988%	29	-	-	29
430	2026 Boise	Historical	1,060	5.091%	54	-	-	54
431	2026 Bonneville Dam	Historical	84,808	4.916%	4,169	-	-	4,169
432	2026 Chief Joseph	Historical	29,261	4.459%	1,305	-	-	1,305
433	2026 Columbia Basin	Historical	21,744	4.543%	988	-	-	988
434	2026 Columbia River Fish Mitigation	Historical	1,502,837	4.224%	63,482	-	-	63,482
435	2026 Cougar	Historical	16,682	4.576%	763	-	-	763
436	2026 Detroit Lake/Big Cliff	Historical	1,799	4.453%	80	-	-	80
437	2026 Dworshak	Historical	4,087	4.643%	190	-	-	190
438	2026 Green Peter/Foster	Historical	500	3.825%	19	-	-	19
439	2026 Hills Creek	Historical	200	3.800%	8	-	-	8
440	2026 Hungry Horse Dam	Historical	4,678	4.806%	225	-	-	225
441	2026 Ice Harbor	Historical	7,140	4.755%	340	-	-	340
442	2026 John Day	Historical	12,651	4.117%	521	-	-	521
443	2026 Libby	Historical	1,774	4.751%	84	-	-	84
444	2026 Little Goose	Historical	3,426	4.379%	150	-	-	150
445	2026 Lookout Dam	Historical	8,373	5.052%	423	-	-	423
446	2026 Lost Creek	Historical	7	3.748%	-	-	-	-
447	2026 Lower Granite	Historical	9,936	4.261%	423	-	-	423
448	2026 Lower Monument	Historical	4,696	4.300%	202	-	-	202
449	2026 Lower Snake Fish and Wildlife	Historical	2,444	4.364%	107	-	-	107
450	2026 McNary	Historical	7,276	4.218%	307	-	-	307
451	2026 Minidoka/Palisades	Historical	7	3.381%	-	-	-	-
452	2026 RRP - Green Springs	Historical	3	3.244%	-	-	-	-
453	2026 The Dalles	Historical	39,840	5.082%	2,025	-	-	2,025
454	2026 Yakima Chandler/Kenniwick	Historical	848	5.111%	43	-	-	43
455	2026 Bureau Direct	Historical	545,000	3.392%	18,486	-	(551)	17,935
456	2026 Conservation	Historical	45,000	1.684%	758	-	(533)	224
457	2026 Corps	Historical	297,000	4.215%	12,517	-	(619)	11,898
458	2026 Fish and Wildlife	Historical	289,000	3.152%	9,109	-	(580)	8,530
459	2026 Replacements	Historical	1,921,153	5.140%	98,747	-	-	98,747
460	2026 Replacements	New	240,144	2.570%	6,172	-	-	6,172
461	2026 Float	Historical	-	-	(9,894)	-	-	(9,894)
462	FY 2026 Subtotal:		5,103,957		211,832		(2,283)	209,550

TABLE 12C: Interest Calculation Summary
October 1, 2014 - September 30, 2017 Cost Evaluation Period
(\$000s) (FY 2017)

A	B	D	E	F	G	H	I	J
Fiscal Year	Project	Type	Current Principal	Rate	Interest	Premium	Net Interest Accrual	Total
463	2027 Albeni Falls	Historical	99	4.322%	4	-	-	4
464	2027 Boise	Historical	157	4.893%	8	-	-	8
465	2027 Bonneville Dam	Historical	33,761	4.402%	1,486	-	-	1,486
466	2027 Chief Joseph	Historical	28,269	4.435%	1,254	-	-	1,254
467	2027 Columbia Basin	Historical	10,781	3.951%	426	-	-	426
468	2027 Columbia River Fish Mitigation	Historical	1,321,778	4.089%	54,052	-	-	54,052
469	2027 Cougar	Historical	4,929	3.082%	152	-	-	152
470	2027 Detroit Lake/Big Cliff	Historical	545	2.908%	16	-	-	16
471	2027 Dworshak	Historical	2,613	4.371%	114	-	-	114
472	2027 Green Peter/Foster	Historical	500	3.825%	19	-	-	19
473	2027 Hills Creek	Historical	154	3.404%	5	-	-	5
474	2027 Hungry Horse Dam	Historical	1,728	4.260%	74	-	-	74
475	2027 Ice Harbor	Historical	3,770	4.204%	158	-	-	158
476	2027 John Day	Historical	9,090	3.702%	336	-	-	336
477	2027 Libby	Historical	1,774	4.751%	84	-	-	84
478	2027 Little Goose	Historical	3,280	4.346%	143	-	-	143
479	2027 Lookout Dam	Historical	883	4.435%	39	-	-	39
480	2027 Lost Creek	Historical	7	3.748%	-	-	-	-
481	2027 Lower Granite	Historical	9,502	4.221%	401	-	-	401
482	2027 Lower Monument	Historical	4,147	4.191%	174	-	-	174
483	2027 Lower Snake Fish and Wildlife	Historical	2,342	4.331%	101	-	-	101
484	2027 McNary	Historical	6,630	4.130%	274	-	-	274
485	2027 Minidoka/Palisades	Historical	7	3.381%	-	-	-	-
486	2027 RRP - Green Springs	Historical	3	3.244%	-	-	-	-
487	2027 The Dalles	Historical	3,821	4.680%	179	-	-	179
488	2027 Yakima Chandler/Kenniwick	Historical	15	4.377%	1	-	-	1
489	2027 Bureau Direct	Historical	476,285	2.566%	12,221	-	(2,036)	10,185
490	2027 Conservation	Historical	6,000	0.505%	30	-	-	30
491	2027 Corps	Historical	219,000	3.867%	8,469	-	(1,047)	7,422
492	2027 Fish and Wildlife	Historical	209,000	2.847%	5,951	-	(698)	5,253
493	2027 Replacements	Historical	2,161,297	5.140%	111,091	-	-	111,091
494	2027 Replacements	New	240,144	2.570%	6,172	-	-	6,172
495	2027 Float	Historical	-	-	(9,561)	-	-	(9,561)
496	FY 2027 Subtotal:		4,762,311		193,873		(3,781)	190,093
497	2028 Albeni Falls	Historical	99	4.322%	4	-	-	4
498	2028 Boise	Historical	81	4.792%	4	-	-	4
499	2028 Bonneville Dam	Historical	32,637	4.381%	1,430	-	-	1,430
500	2028 Chief Joseph	Historical	28,269	4.435%	1,254	-	-	1,254
501	2028 Columbia Basin	Historical	9,852	3.852%	379	-	-	379
502	2028 Columbia River Fish Mitigation	Historical	1,152,411	3.998%	46,070	-	-	46,070
503	2028 Cougar	Historical	4,810	3.035%	146	-	-	146
504	2028 Detroit Lake/Big Cliff	Historical	545	2.908%	16	-	-	16
505	2028 Dworshak	Historical	2,613	4.371%	114	-	-	114
506	2028 Green Peter/Foster	Historical	500	3.825%	19	-	-	19
507	2028 Hills Creek	Historical	154	3.404%	5	-	-	5
508	2028 Hungry Horse Dam	Historical	1,434	4.108%	59	-	-	59
509	2028 Ice Harbor	Historical	3,770	4.204%	158	-	-	158
510	2028 John Day	Historical	8,857	3.668%	325	-	-	325
511	2028 Libby	Historical	1,774	4.751%	84	-	-	84
512	2028 Little Goose	Historical	3,280	4.346%	143	-	-	143
513	2028 Lookout Dam	Historical	311	3.396%	11	-	-	11
514	2028 Lost Creek	Historical	7	3.748%	-	-	-	-
515	2028 Lower Granite	Historical	9,502	4.221%	401	-	-	401
516	2028 Lower Monument	Historical	4,147	4.191%	174	-	-	174
517	2028 Lower Snake Fish and Wildlife	Historical	2,342	4.331%	101	-	-	101
518	2028 McNary	Historical	6,630	4.130%	274	-	-	274
519	2028 Minidoka/Palisades	Historical	7	3.381%	-	-	-	-
520	2028 RRP - Green Springs	Historical	3	3.244%	-	-	-	-
521	2028 The Dalles	Historical	3,681	4.668%	172	-	-	172
522	2028 Yakima Chandler/Kenniwick	Historical	15	4.377%	1	-	-	1
523	2028 Bureau Direct	Historical	255,430	1.840%	4,700	-	(1,015)	3,685
524	2028 Corps	Historical	112,000	2.871%	3,215	-	(954)	2,261
525	2028 Fish and Wildlife	Historical	123,000	2.376%	2,923	-	(238)	2,685
526	2028 Replacements	Historical	2,401,442	5.140%	123,434	-	-	123,434
527	2028 Replacements	New	240,144	2.570%	6,172	-	-	6,172
528	2028 Float	Historical	-	-	(9,066)	-	-	(9,066)
529	FY 2028 Subtotal:		4,409,748		182,722		(2,206)	180,515

TABLE 12C: Interest Calculation Summary
October 1, 2014 - September 30, 2017 Cost Evaluation Period
(\$000s) (FY 2017)

A	B	D	E	F	G	H	I	J
Fiscal Year	Project	Type	Current Principal	Rate	Interest	Premium	Net Interest Accrual	Total
530	2029 Albeni Falls	Historical	57	4.375%	2	-	-	2
531	2029 Boise	Historical	64	4.876%	3	-	-	3
532	2029 Bonneville Dam	Historical	25,840	4.377%	1,131	-	-	1,131
533	2029 Chief Joseph	Historical	3,542	4.856%	172	-	-	172
534	2029 Columbia Basin	Historical	6,989	3.618%	253	-	-	253
535	2029 Columbia River Fish Mitigation	Historical	926,414	3.908%	36,202	-	-	36,202
536	2029 Cougar	Historical	4,521	2.947%	133	-	-	133
537	2029 Detroit Lake/Big Cliff	Historical	545	2.908%	16	-	-	16
538	2029 Dworshak	Historical	60	4.040%	2	-	-	2
539	2029 Green Peter/Foster	Historical	500	3.825%	19	-	-	19
540	2029 Hills Creek	Historical	154	3.404%	5	-	-	5
541	2029 Hungry Horse Dam	Historical	642	3.941%	25	-	-	25
542	2029 Ice Harbor	Historical	948	3.721%	35	-	-	35
543	2029 John Day	Historical	7,901	3.578%	283	-	-	283
544	2029 Libby	Historical	1,734	4.763%	83	-	-	83
545	2029 Little Goose	Historical	79	3.203%	3	-	-	3
546	2029 Lookout Dam	Historical	311	3.396%	11	-	-	11
547	2029 Lost Creek	Historical	7	3.748%	-	-	-	-
548	2029 Lower Granite	Historical	2,486	3.884%	97	-	-	97
549	2029 Lower Monument	Historical	99	3.514%	3	-	-	3
550	2029 Lower Snake Fish and Wildlife	Historical	418	4.016%	17	-	-	17
551	2029 McNary	Historical	1,791	3.394%	61	-	-	61
552	2029 Minidoka/Palisades	Historical	7	3.381%	-	-	-	-
553	2029 RRP - Green Springs	Historical	3	3.244%	-	-	-	-
554	2029 The Dalles	Historical	1,651	4.875%	80	-	-	80
555	2029 Yakima Chandler/Kenniwick	Historical	15	4.377%	1	-	-	1
556	2029 Bureau Direct	Historical	154,000	1.009%	1,554	-	-	1,554
557	2029 Fish and Wildlife	Historical	69,000	1.340%	925	-	(567)	357
558	2029 Replacements	Historical	2,641,586	5.140%	135,778	-	-	135,778
559	2029 Replacements	New	240,144	2.570%	6,172	-	-	6,172
560	2029 Float	Historical	-	-	(9,523)	-	-	(9,523)
561	FY 2029 Subtotal:		4,091,507		173,542		(567)	172,975
562	2030 Albeni Falls	Historical	57	4.375%	2	-	-	2
563	2030 Boise	Historical	64	4.876%	3	-	-	3
564	2030 Bonneville Dam	Historical	14,877	4.839%	720	-	-	720
565	2030 Chief Joseph	Historical	3,510	4.869%	171	-	-	171
566	2030 Columbia Basin	Historical	2,173	4.567%	99	-	-	99
567	2030 Columbia River Fish Mitigation	Historical	410,715	4.503%	18,493	-	-	18,493
568	2030 Cougar	Historical	4,088	2.875%	118	-	-	118
569	2030 Dworshak	Historical	10	4.877%	-	-	-	-
570	2030 Hungry Horse Dam	Historical	137	4.654%	6	-	-	6
571	2030 Ice Harbor	Historical	14	4.874%	1	-	-	1
572	2030 John Day	Historical	1,548	4.375%	68	-	-	68
573	2030 Libby	Historical	1,567	4.875%	76	-	-	76
574	2030 Little Goose	Historical	13	4.877%	1	-	-	1
575	2030 Lower Granite	Historical	24	4.875%	1	-	-	1
576	2030 Lower Monument	Historical	9	4.871%	-	-	-	-
577	2030 Lower Snake Fish and Wildlife	Historical	74	4.874%	4	-	-	4
578	2030 McNary	Historical	215	4.875%	10	-	-	10
579	2030 The Dalles	Historical	1,651	4.875%	80	-	-	80
580	2030 Yakima Chandler/Kenniwick	Historical	15	4.377%	1	-	-	1
581	2030 Bureau Direct	Historical	135,604	0.669%	907	-	(276)	631
582	2030 Fish and Wildlife	Historical	8,000	0.505%	40	-	-	40
583	2030 Replacements	Historical	2,881,730	4.653%	134,100	-	-	134,100
584	2030 Replacements	New	240,144	2.570%	6,172	-	-	6,172
585	2030 Float	Historical	-	-	(10,397)	-	-	(10,397)
586	FY 2030 Subtotal:		3,706,240		150,678		(276)	150,402
587	2031 Albeni Falls	Historical	57	4.375%	2	-	-	2
588	2031 Boise	Historical	64	4.876%	3	-	-	3
589	2031 Bonneville Dam	Historical	14,609	4.875%	712	-	-	712
590	2031 Chief Joseph	Historical	3,500	4.875%	171	-	-	171
591	2031 Columbia Basin	Historical	2,173	4.567%	99	-	-	99
592	2031 Columbia River Fish Mitigation	Historical	402,949	4.534%	18,270	-	-	18,270
593	2031 Dworshak	Historical	10	4.877%	-	-	-	-
594	2031 Hungry Horse Dam	Historical	137	4.654%	6	-	-	6
595	2031 Ice Harbor	Historical	14	4.874%	1	-	-	1
596	2031 John Day	Historical	1,548	4.375%	68	-	-	68
597	2031 Libby	Historical	1,567	4.875%	76	-	-	76
598	2031 Little Goose	Historical	13	4.877%	1	-	-	1
599	2031 Lower Granite	Historical	24	4.875%	1	-	-	1
600	2031 Lower Monument	Historical	9	4.871%	-	-	-	-
601	2031 Lower Snake Fish and Wildlife	Historical	74	4.874%	4	-	-	4
602	2031 McNary	Historical	215	4.875%	10	-	-	10
603	2031 The Dalles	Historical	1,651	4.875%	80	-	-	80
604	2031 Yakima Chandler/Kenniwick	Historical	15	4.377%	1	-	-	1
605	2031 Bureau Direct	Historical	-	-	-	-	-	-
606	2031 Replacements	Historical	2,576,325	4.407%	113,550	-	-	113,550
607	2031 Replacements	New	240,144	2.570%	6,172	-	-	6,172
608	2031 Float	Historical	-	-	(10,775)	-	-	(10,775)
609	FY 2031 Subtotal:		3,245,098		128,453			128,453

TABLE 12C: Interest Calculation Summary
October 1, 2014 - September 30, 2017 Cost Evaluation Period
(\$000s) (FY 2017)

A	B	D	E	F	G	H	I	J
Fiscal Year	Project	Type	Current Principal	Rate	Interest	Premium	Net Interest Accrual	Total
610	2032 Albeni Falls	Historical	57	4.375%	2	-	-	2
611	2032 Boise	Historical	64	4.876%	3	-	-	3
612	2032 Bonneville Dam	Historical	14,609	4.875%	712	-	-	712
613	2032 Chief Joseph	Historical	3,500	4.875%	171	-	-	171
614	2032 Columbia Basin	Historical	2,173	4.567%	99	-	-	99
615	2032 Columbia River Fish Mitigation	Historical	402,949	4.534%	18,270	-	-	18,270
616	2032 Dworshak	Historical	10	4.877%	-	-	-	-
617	2032 Hungry Horse Dam	Historical	137	4.654%	6	-	-	6
618	2032 Ice Harbor	Historical	14	4.874%	1	-	-	1
619	2032 John Day	Historical	1,548	4.375%	68	-	-	68
620	2032 Libby	Historical	1,567	4.875%	76	-	-	76
621	2032 Little Goose	Historical	13	4.877%	1	-	-	1
622	2032 Lower Granite	Historical	24	4.875%	1	-	-	1
623	2032 Lower Monument	Historical	9	4.871%	-	-	-	-
624	2032 Lower Snake Fish and Wildlife	Historical	74	4.874%	4	-	-	4
625	2032 McNary	Historical	215	4.875%	10	-	-	10
626	2032 The Dalles	Historical	1,651	4.875%	80	-	-	80
627	2032 Yakima Chandler/Kenniwick	Historical	15	4.377%	1	-	-	1
628	2032 Replacements	Historical	2,082,098	4.120%	85,775	-	-	85,775
629	2032 Replacements	New	240,144	2.570%	6,172	-	-	6,172
630	2032 Float	Historical	-	-	(11,653)	-	-	(11,653)
631	FY 2032 Subtotal:		2,750,871		99,800	-	-	99,800
632	2033 Albeni Falls	Historical	57	4.375%	2	-	-	2
633	2033 Boise	Historical	64	4.876%	3	-	-	3
634	2033 Bonneville Dam	Historical	14,609	4.875%	712	-	-	712
635	2033 Chief Joseph	Historical	3,500	4.875%	171	-	-	171
636	2033 Columbia Basin	Historical	2,173	4.567%	99	-	-	99
637	2033 Columbia River Fish Mitigation	Historical	402,949	4.534%	18,270	-	-	18,270
638	2033 Dworshak	Historical	10	4.877%	-	-	-	-
639	2033 Hungry Horse Dam	Historical	137	4.654%	6	-	-	6
640	2033 Ice Harbor	Historical	14	4.874%	1	-	-	1
641	2033 John Day	Historical	1,548	4.375%	68	-	-	68
642	2033 Libby	Historical	1,567	4.875%	76	-	-	76
643	2033 Little Goose	Historical	13	4.877%	1	-	-	1
644	2033 Lower Granite	Historical	24	4.875%	1	-	-	1
645	2033 Lower Monument	Historical	9	4.871%	-	-	-	-
646	2033 Lower Snake Fish and Wildlife	Historical	74	4.874%	4	-	-	4
647	2033 McNary	Historical	215	4.875%	10	-	-	10
648	2033 The Dalles	Historical	1,651	4.875%	80	-	-	80
649	2033 Yakima Chandler/Kenniwick	Historical	15	4.377%	1	-	-	1
650	2033 Replacements	Historical	1,495,596	3.621%	54,151	-	-	54,151
651	2033 Replacements	New	240,144	2.570%	6,172	-	-	6,172
652	2033 Float	Historical	-	-	(12,250)	-	-	(12,250)
653	FY 2033 Subtotal:		2,164,369		67,579	-	-	67,579
654	2034 Albeni Falls	Historical	57	4.375%	2	-	-	2
655	2034 Boise	Historical	64	4.876%	3	-	-	3
656	2034 Bonneville Dam	Historical	14,609	4.875%	712	-	-	712
657	2034 Chief Joseph	Historical	3,500	4.875%	171	-	-	171
658	2034 Columbia Basin	Historical	2,173	4.567%	99	-	-	99
659	2034 Columbia River Fish Mitigation	Historical	402,949	4.534%	18,270	-	-	18,270
660	2034 Dworshak	Historical	10	4.877%	-	-	-	-
661	2034 Hungry Horse Dam	Historical	137	4.654%	6	-	-	6
662	2034 Ice Harbor	Historical	14	4.874%	1	-	-	1
663	2034 John Day	Historical	1,548	4.375%	68	-	-	68
664	2034 Libby	Historical	1,567	4.875%	76	-	-	76
665	2034 Little Goose	Historical	13	4.877%	1	-	-	1
666	2034 Lower Granite	Historical	24	4.875%	1	-	-	1
667	2034 Lower Monument	Historical	9	4.871%	-	-	-	-
668	2034 Lower Snake Fish and Wildlife	Historical	74	4.874%	4	-	-	4
669	2034 McNary	Historical	215	4.875%	10	-	-	10
670	2034 The Dalles	Historical	1,651	4.875%	80	-	-	80
671	2034 Yakima Chandler/Kenniwick	Historical	15	4.377%	1	-	-	1
672	2034 Replacements	Historical	851,590	2.570%	21,886	-	-	21,886
673	2034 Replacements	New	240,144	2.570%	6,172	-	-	6,172
674	2034 Float	Historical	-	-	(12,405)	-	-	(12,405)
675	FY 2034 Subtotal:		1,520,363		35,159	-	-	35,159

TABLE 12C: Interest Calculation Summary
October 1, 2014 - September 30, 2017 Cost Evaluation Period
(\$000s) (FY 2017)

A	B	D	E	F	G	H	I	J
Fiscal Year	Project	Type	Current Principal	Rate	Interest	Premium	Net Interest Accrual	Total
676	2035 Albeni Falls	Historical	57	4.375%	2	-	-	2
677	2035 Boise	Historical	64	4.876%	3	-	-	3
678	2035 Bonneville Dam	Historical	14,609	4.875%	712	-	-	712
679	2035 Chief Joseph	Historical	3,500	4.875%	171	-	-	171
680	2035 Columbia Basin	Historical	2,173	4.567%	99	-	-	99
681	2035 Columbia River Fish Mitigation	Historical	402,949	4.534%	18,270	-	-	18,270
682	2035 Dworshak	Historical	10	4.877%	-	-	-	-
683	2035 Hungry Horse Dam	Historical	137	4.654%	6	-	-	6
684	2035 Ice Harbor	Historical	14	4.874%	1	-	-	1
685	2035 John Day	Historical	1,548	4.375%	68	-	-	68
686	2035 Libby	Historical	1,567	4.875%	76	-	-	76
687	2035 Little Goose	Historical	13	4.877%	1	-	-	1
688	2035 Lower Granite	Historical	24	4.875%	1	-	-	1
689	2035 Lower Monument	Historical	9	4.871%	-	-	-	-
690	2035 Lower Snake Fish and Wildlife	Historical	74	4.874%	4	-	-	4
691	2035 McNary	Historical	215	4.875%	10	-	-	10
692	2035 The Dalles	Historical	1,651	4.875%	80	-	-	80
693	2035 Yakima Chandler/Kenniwick	Historical	15	4.377%	1	-	-	1
694	2035 Replacements	Historical	240,144	2.570%	6,172	-	-	6,172
695	2035 Replacements	New	240,144	2.570%	6,172	-	-	6,172
696	2035 Float	Historical	-	-	(12,615)	-	-	(12,615)
697	FY 2035 Subtotal:		908,917		19,235	-	-	19,235
698	2036 Albeni Falls	Historical	57	4.375%	2	-	-	2
699	2036 Boise	Historical	64	4.876%	3	-	-	3
700	2036 Bonneville Dam	Historical	14,609	4.875%	712	-	-	712
701	2036 Chief Joseph	Historical	3,500	4.875%	171	-	-	171
702	2036 Columbia Basin	Historical	2,173	4.567%	99	-	-	99
703	2036 Columbia River Fish Mitigation	Historical	402,949	4.534%	18,270	-	-	18,270
704	2036 Dworshak	Historical	10	4.877%	-	-	-	-
705	2036 Hungry Horse Dam	Historical	137	4.654%	6	-	-	6
706	2036 Ice Harbor	Historical	14	4.874%	1	-	-	1
707	2036 John Day	Historical	1,548	4.375%	68	-	-	68
708	2036 Libby	Historical	1,567	4.875%	76	-	-	76
709	2036 Little Goose	Historical	13	4.877%	1	-	-	1
710	2036 Lower Granite	Historical	24	4.875%	1	-	-	1
711	2036 Lower Monument	Historical	9	4.871%	-	-	-	-
712	2036 Lower Snake Fish and Wildlife	Historical	74	4.874%	4	-	-	4
713	2036 McNary	Historical	215	4.875%	10	-	-	10
714	2036 The Dalles	Historical	1,651	4.875%	80	-	-	80
715	2036 Yakima Chandler/Kenniwick	Historical	15	4.377%	1	-	-	1
716	2036 Replacements	Historical	240,144	2.570%	6,172	-	-	6,172
717	2036 Replacements	New	240,144	2.570%	6,172	-	-	6,172
718	2036 Float	Historical	-	-	(12,614)	-	-	(12,614)
719	FY 2036 Subtotal:		908,917		19,236	-	-	19,236
720	2037 Albeni Falls	Historical	57	4.375%	2	-	-	2
721	2037 Boise	Historical	64	4.876%	3	-	-	3
722	2037 Bonneville Dam	Historical	14,609	4.875%	712	-	-	712
723	2037 Chief Joseph	Historical	3,500	4.875%	171	-	-	171
724	2037 Columbia Basin	Historical	2,173	4.567%	99	-	-	99
725	2037 Columbia River Fish Mitigation	Historical	402,949	4.534%	18,270	-	-	18,270
726	2037 Dworshak	Historical	10	4.877%	-	-	-	-
727	2037 Hungry Horse Dam	Historical	137	4.654%	6	-	-	6
728	2037 Ice Harbor	Historical	14	4.874%	1	-	-	1
729	2037 John Day	Historical	1,548	4.375%	68	-	-	68
730	2037 Libby	Historical	1,567	4.875%	76	-	-	76
731	2037 Little Goose	Historical	13	4.877%	1	-	-	1
732	2037 Lower Granite	Historical	24	4.875%	1	-	-	1
733	2037 Lower Monument	Historical	9	4.871%	-	-	-	-
734	2037 Lower Snake Fish and Wildlife	Historical	74	4.874%	4	-	-	4
735	2037 McNary	Historical	215	4.875%	10	-	-	10
736	2037 The Dalles	Historical	1,651	4.875%	80	-	-	80
737	2037 Yakima Chandler/Kenniwick	Historical	15	4.377%	1	-	-	1
738	2037 Replacements	Historical	240,144	2.570%	6,172	-	-	6,172
739	2037 Replacements	New	240,144	2.570%	6,172	-	-	6,172
740	2037 Float	Historical	-	-	(12,622)	-	-	(12,622)
741	FY 2037 Subtotal:		908,917		19,228	-	-	19,228

TABLE 12C: Interest Calculation Summary
October 1, 2014 - September 30, 2017 Cost Evaluation Period
(\$000s) (FY 2017)

A	B	D	E	F	G	H	I	J
Fiscal Year	Project	Type	Current Principal	Rate	Interest	Premium	Net Interest Accrual	Total
742	2038 Albeni Falls	Historical	57	4.375%	2	-	-	2
743	2038 Boise	Historical	64	4.876%	3	-	-	3
744	2038 Bonneville Dam	Historical	14,609	4.875%	712	-	-	712
745	2038 Chief Joseph	Historical	3,500	4.875%	171	-	-	171
746	2038 Columbia Basin	Historical	2,173	4.567%	99	-	-	99
747	2038 Columbia River Fish Mitigation	Historical	402,949	4.534%	18,270	-	-	18,270
748	2038 Dworshak	Historical	10	4.877%	-	-	-	-
749	2038 Hungry Horse Dam	Historical	137	4.654%	6	-	-	6
750	2038 Ice Harbor	Historical	14	4.874%	1	-	-	1
751	2038 John Day	Historical	1,548	4.375%	68	-	-	68
752	2038 Libby	Historical	1,567	4.875%	76	-	-	76
753	2038 Little Goose	Historical	13	4.877%	1	-	-	1
754	2038 Lower Granite	Historical	24	4.875%	1	-	-	1
755	2038 Lower Monument	Historical	9	4.871%	-	-	-	-
756	2038 Lower Snake Fish and Wildlife	Historical	74	4.874%	4	-	-	4
757	2038 McNary	Historical	215	4.875%	10	-	-	10
758	2038 The Dalles	Historical	1,651	4.875%	80	-	-	80
759	2038 Yakima Chandler/Kenniwick	Historical	15	4.377%	1	-	-	1
760	2038 Replacements	Historical	240,144	2.570%	6,172	-	-	6,172
761	2038 Replacements	New	240,144	2.570%	6,172	-	-	6,172
762	2038 Float	Historical	-	-	(12,756)	-	-	(12,756)
763	FY 2038 Subtotal:		908,917		19,094	-	-	19,094
764	2039 Albeni Falls	Historical	57	4.375%	2	-	-	2
765	2039 Boise	Historical	64	4.876%	3	-	-	3
766	2039 Bonneville Dam	Historical	14,609	4.875%	712	-	-	712
767	2039 Chief Joseph	Historical	3,500	4.875%	171	-	-	171
768	2039 Columbia Basin	Historical	2,173	4.567%	99	-	-	99
769	2039 Columbia River Fish Mitigation	Historical	402,949	4.534%	18,270	-	-	18,270
770	2039 Dworshak	Historical	10	4.877%	-	-	-	-
771	2039 Hungry Horse Dam	Historical	137	4.654%	6	-	-	6
772	2039 Ice Harbor	Historical	14	4.874%	1	-	-	1
773	2039 John Day	Historical	1,548	4.375%	68	-	-	68
774	2039 Libby	Historical	1,567	4.875%	76	-	-	76
775	2039 Little Goose	Historical	13	4.877%	1	-	-	1
776	2039 Lower Granite	Historical	24	4.875%	1	-	-	1
777	2039 Lower Monument	Historical	9	4.871%	-	-	-	-
778	2039 Lower Snake Fish and Wildlife	Historical	74	4.874%	4	-	-	4
779	2039 McNary	Historical	215	4.875%	10	-	-	10
780	2039 The Dalles	Historical	1,651	4.875%	80	-	-	80
781	2039 Yakima Chandler/Kenniwick	Historical	15	4.377%	1	-	-	1
782	2039 Replacements	Historical	240,144	2.570%	6,172	-	-	6,172
783	2039 Replacements	New	240,144	2.570%	6,172	-	-	6,172
784	2039 Float	Historical	-	-	(13,186)	-	-	(13,186)
785	FY 2039 Subtotal:		908,917		18,664	-	-	18,664
786	2040 Albeni Falls	Historical	57	4.375%	2	-	-	2
787	2040 Boise	Historical	64	4.876%	3	-	-	3
788	2040 Bonneville Dam	Historical	14,609	4.875%	712	-	-	712
789	2040 Chief Joseph	Historical	3,500	4.875%	171	-	-	171
790	2040 Columbia Basin	Historical	2,173	4.567%	99	-	-	99
791	2040 Columbia River Fish Mitigation	Historical	402,949	4.534%	18,270	-	-	18,270
792	2040 Dworshak	Historical	10	4.877%	-	-	-	-
793	2040 Hungry Horse Dam	Historical	137	4.654%	6	-	-	6
794	2040 Ice Harbor	Historical	14	4.874%	1	-	-	1
795	2040 John Day	Historical	1,548	4.375%	68	-	-	68
796	2040 Libby	Historical	1,567	4.875%	76	-	-	76
797	2040 Little Goose	Historical	13	4.877%	1	-	-	1
798	2040 Lower Granite	Historical	24	4.875%	1	-	-	1
799	2040 Lower Monument	Historical	9	4.871%	-	-	-	-
800	2040 Lower Snake Fish and Wildlife	Historical	74	4.874%	4	-	-	4
801	2040 McNary	Historical	215	4.875%	10	-	-	10
802	2040 The Dalles	Historical	1,651	4.875%	80	-	-	80
803	2040 Yakima Chandler/Kenniwick	Historical	15	4.377%	1	-	-	1
804	2040 Replacements	Historical	240,144	2.570%	6,172	-	-	6,172
805	2040 Replacements	New	240,144	2.570%	6,172	-	-	6,172
806	2040 Float	Historical	-	-	(13,217)	-	-	(13,217)
807	FY 2040 Subtotal:		908,917		18,633	-	-	18,633

TABLE 12C: Interest Calculation Summary
October 1, 2014 - September 30, 2017 Cost Evaluation Period
(\$000s) (FY 2017)

A	B	D	E	F	G	H	I	J
Fiscal Year	Project	Type	Current Principal	Rate	Interest	Premium	Net Interest Accrual	Total
808	2041 Albeni Falls	Historical	57	4.375%	2	-	-	2
809	2041 Boise	Historical	64	4.876%	3	-	-	3
810	2041 Bonneville Dam	Historical	14,609	4.875%	712	-	-	712
811	2041 Chief Joseph	Historical	3,500	4.875%	171	-	-	171
812	2041 Columbia Basin	Historical	2,173	4.567%	99	-	-	99
813	2041 Columbia River Fish Mitigation	Historical	402,949	4.534%	18,270	-	-	18,270
814	2041 Dworshak	Historical	10	4.877%	-	-	-	-
815	2041 Hungry Horse Dam	Historical	137	4.654%	6	-	-	6
816	2041 Ice Harbor	Historical	14	4.874%	1	-	-	1
817	2041 John Day	Historical	1,548	4.375%	68	-	-	68
818	2041 Libby	Historical	1,567	4.875%	76	-	-	76
819	2041 Little Goose	Historical	13	4.877%	1	-	-	1
820	2041 Lower Granite	Historical	24	4.875%	1	-	-	1
821	2041 Lower Monument	Historical	9	4.871%	-	-	-	-
822	2041 Lower Snake Fish and Wildlife	Historical	74	4.874%	4	-	-	4
823	2041 McNary	Historical	215	4.875%	10	-	-	10
824	2041 The Dalles	Historical	1,651	4.875%	80	-	-	80
825	2041 Yakima Chandler/Kenniwick	Historical	15	4.377%	1	-	-	1
826	2041 Replacements	Historical	240,144	2.570%	6,172	-	-	6,172
827	2041 Replacements	New	240,144	2.570%	6,172	-	-	6,172
828	2041 Float	Historical	-	-	(13,310)	-	-	(13,310)
829	FY 2041 Subtotal:		908,917		18,540			18,540
830	2042 Albeni Falls	Historical	57	4.375%	2	-	-	2
831	2042 Boise	Historical	64	4.876%	3	-	-	3
832	2042 Bonneville Dam	Historical	14,609	4.875%	712	-	-	712
833	2042 Chief Joseph	Historical	3,500	4.875%	171	-	-	171
834	2042 Columbia Basin	Historical	2,173	4.567%	99	-	-	99
835	2042 Columbia River Fish Mitigation	Historical	402,949	4.534%	18,270	-	-	18,270
836	2042 Dworshak	Historical	10	4.877%	-	-	-	-
837	2042 Hungry Horse Dam	Historical	137	4.654%	6	-	-	6
838	2042 Ice Harbor	Historical	14	4.874%	1	-	-	1
839	2042 John Day	Historical	1,548	4.375%	68	-	-	68
840	2042 Libby	Historical	1,567	4.875%	76	-	-	76
841	2042 Little Goose	Historical	13	4.877%	1	-	-	1
842	2042 Lower Granite	Historical	24	4.875%	1	-	-	1
843	2042 Lower Monument	Historical	9	4.871%	-	-	-	-
844	2042 Lower Snake Fish and Wildlife	Historical	74	4.874%	4	-	-	4
845	2042 McNary	Historical	215	4.875%	10	-	-	10
846	2042 The Dalles	Historical	1,651	4.875%	80	-	-	80
847	2042 Yakima Chandler/Kenniwick	Historical	15	4.377%	1	-	-	1
848	2042 Replacements	Historical	240,144	2.570%	6,172	-	-	6,172
849	2042 Replacements	New	240,144	2.570%	6,172	-	-	6,172
850	2042 Float	Historical	-	-	(13,310)	-	-	(13,310)
851	FY 2042 Subtotal:		908,917		18,540			18,540
852	2043 Albeni Falls	Historical	57	4.375%	2	-	-	2
853	2043 Boise	Historical	64	4.876%	3	-	-	3
854	2043 Bonneville Dam	Historical	14,609	4.875%	712	-	-	712
855	2043 Chief Joseph	Historical	3,500	4.875%	171	-	-	171
856	2043 Columbia Basin	Historical	2,173	4.567%	99	-	-	99
857	2043 Columbia River Fish Mitigation	Historical	402,949	4.534%	18,270	-	-	18,270
858	2043 Dworshak	Historical	10	4.877%	-	-	-	-
859	2043 Hungry Horse Dam	Historical	137	4.654%	6	-	-	6
860	2043 Ice Harbor	Historical	14	4.874%	1	-	-	1
861	2043 John Day	Historical	1,548	4.375%	68	-	-	68
862	2043 Libby	Historical	1,567	4.875%	76	-	-	76
863	2043 Little Goose	Historical	13	4.877%	1	-	-	1
864	2043 Lower Granite	Historical	24	4.875%	1	-	-	1
865	2043 Lower Monument	Historical	9	4.871%	-	-	-	-
866	2043 Lower Snake Fish and Wildlife	Historical	74	4.874%	4	-	-	4
867	2043 McNary	Historical	215	4.875%	10	-	-	10
868	2043 The Dalles	Historical	1,651	4.875%	80	-	-	80
869	2043 Yakima Chandler/Kenniwick	Historical	15	4.377%	1	-	-	1
870	2043 Replacements	Historical	240,144	2.570%	6,172	-	-	6,172
871	2043 Replacements	New	240,144	2.570%	6,172	-	-	6,172
872	2043 Float	Historical	-	-	(13,310)	-	-	(13,310)
873	FY 2043 Subtotal:		908,917		18,540			18,540
874	2044 Albeni Falls	Historical	57	4.375%	2	-	-	2
875	2044 Boise	Historical	64	4.876%	3	-	-	3
876	2044 Bonneville Dam	Historical	14,609	4.875%	712	-	-	712
877	2044 Chief Joseph	Historical	3,500	4.875%	171	-	-	171
878	2044 Columbia Basin	Historical	2,173	4.567%	99	-	-	99
879	2044 Columbia River Fish Mitigation	Historical	402,949	4.534%	18,270	-	-	18,270
880	2044 Dworshak	Historical	10	4.877%	-	-	-	-
881	2044 Hungry Horse Dam	Historical	137	4.654%	6	-	-	6
882	2044 Ice Harbor	Historical	14	4.874%	1	-	-	1
883	2044 John Day	Historical	1,548	4.375%	68	-	-	68
884	2044 Libby	Historical	1,567	4.875%	76	-	-	76
885	2044 Little Goose	Historical	13	4.877%	1	-	-	1
886	2044 Lower Granite	Historical	24	4.875%	1	-	-	1
887	2044 Lower Monument	Historical	9	4.871%	-	-	-	-
888	2044 Lower Snake Fish and Wildlife	Historical	74	4.874%	4	-	-	4
889	2044 McNary	Historical	215	4.875%	10	-	-	10
890	2044 The Dalles	Historical	1,651	4.875%	80	-	-	80
891	2044 Yakima Chandler/Kenniwick	Historical	15	4.377%	1	-	-	1
892	2044 Replacements	Historical	240,144	2.570%	6,172	-	-	6,172
893	2044 Replacements	New	240,144	2.570%	6,172	-	-	6,172
894	2044 Float	Historical	-	-	(11,678)	-	-	(11,678)
895	FY 2044 Subtotal:		908,917		20,172			20,172

TABLE 12C: Interest Calculation Summary
October 1, 2014 - September 30, 2017 Cost Evaluation Period
(\$000s) (FY 2017)

A	B	D	E	F	G	H	I	J
Fiscal Year	Project	Type	Current Principal	Rate	Interest	Premium	Net Interest Accrual	Total
896	2045 Albeni Falls	Historical	57	4.375%	2	-	-	2
897	2045 Boise	Historical	64	4.876%	3	-	-	3
898	2045 Bonneville Dam	Historical	14,609	4.875%	712	-	-	712
899	2045 Chief Joseph	Historical	3,500	4.875%	171	-	-	171
900	2045 Columbia Basin	Historical	2,173	4.567%	99	-	-	99
901	2045 Columbia River Fish Mitigation	Historical	402,949	4.534%	18,270	-	-	18,270
902	2045 Dworshak	Historical	10	4.877%	-	-	-	-
903	2045 Hungry Horse Dam	Historical	137	4.654%	6	-	-	6
904	2045 Ice Harbor	Historical	14	4.874%	1	-	-	1
905	2045 John Day	Historical	1,548	4.375%	68	-	-	68
906	2045 Libby	Historical	1,567	4.875%	76	-	-	76
907	2045 Little Goose	Historical	13	4.877%	1	-	-	1
908	2045 Lower Granite	Historical	24	4.875%	1	-	-	1
909	2045 Lower Monument	Historical	9	4.871%	-	-	-	-
910	2045 Lower Snake Fish and Wildlife	Historical	74	4.874%	4	-	-	4
911	2045 McNary	Historical	215	4.875%	10	-	-	10
912	2045 The Dalles	Historical	1,651	4.875%	80	-	-	80
913	2045 Yakima Chandler/Kenniwick	Historical	15	4.377%	1	-	-	1
914	2045 Replacements	Historical	240,144	2.570%	6,172	-	-	6,172
915	2045 Replacements	New	240,144	2.570%	6,172	-	-	6,172
916	2045 Float	Historical	-	-	(6,819)	-	-	(6,819)
917	FY 2045 Subtotal:		908,917		25,031	-	-	25,031
918	2046 Albeni Falls	Historical	57	4.375%	2	-	-	2
919	2046 Boise	Historical	64	4.876%	3	-	-	3
920	2046 Bonneville Dam	Historical	14,609	4.875%	712	-	-	712
921	2046 Chief Joseph	Historical	3,500	4.875%	171	-	-	171
922	2046 Columbia Basin	Historical	2,173	4.567%	99	-	-	99
923	2046 Columbia River Fish Mitigation	Historical	402,949	4.534%	18,270	-	-	18,270
924	2046 Dworshak	Historical	10	4.877%	-	-	-	-
925	2046 Hungry Horse Dam	Historical	137	4.654%	6	-	-	6
926	2046 Ice Harbor	Historical	14	4.874%	1	-	-	1
927	2046 John Day	Historical	1,548	4.375%	68	-	-	68
928	2046 Libby	Historical	1,567	4.875%	76	-	-	76
929	2046 Little Goose	Historical	13	4.877%	1	-	-	1
930	2046 Lower Granite	Historical	24	4.875%	1	-	-	1
931	2046 Lower Monument	Historical	9	4.871%	-	-	-	-
932	2046 Lower Snake Fish and Wildlife	Historical	74	4.874%	4	-	-	4
933	2046 McNary	Historical	215	4.875%	10	-	-	10
934	2046 The Dalles	Historical	1,651	4.875%	80	-	-	80
935	2046 Yakima Chandler/Kenniwick	Historical	15	4.377%	1	-	-	1
936	2046 Replacements	Historical	240,144	2.570%	6,172	-	-	6,172
937	2046 Replacements	New	240,144	2.570%	6,172	-	-	6,172
938	2046 Float	Historical	-	-	(6,819)	-	-	(6,819)
939	FY 2046 Subtotal:		908,917		25,031	-	-	25,031
940	2047 Albeni Falls	Historical	57	4.375%	2	-	-	2
941	2047 Boise	Historical	64	4.876%	3	-	-	3
942	2047 Bonneville Dam	Historical	14,609	4.875%	712	-	-	712
943	2047 Chief Joseph	Historical	3,500	4.875%	171	-	-	171
944	2047 Columbia Basin	Historical	2,173	4.567%	99	-	-	99
945	2047 Columbia River Fish Mitigation	Historical	402,949	4.534%	18,270	-	-	18,270
946	2047 Dworshak	Historical	10	4.877%	-	-	-	-
947	2047 Hungry Horse Dam	Historical	137	4.654%	6	-	-	6
948	2047 Ice Harbor	Historical	14	4.874%	1	-	-	1
949	2047 John Day	Historical	1,548	4.375%	68	-	-	68
950	2047 Libby	Historical	1,567	4.875%	76	-	-	76
951	2047 Little Goose	Historical	13	4.877%	1	-	-	1
952	2047 Lower Granite	Historical	24	4.875%	1	-	-	1
953	2047 Lower Monument	Historical	9	4.871%	-	-	-	-
954	2047 Lower Snake Fish and Wildlife	Historical	74	4.874%	4	-	-	4
955	2047 McNary	Historical	215	4.875%	10	-	-	10
956	2047 The Dalles	Historical	1,651	4.875%	80	-	-	80
957	2047 Yakima Chandler/Kenniwick	Historical	15	4.377%	1	-	-	1
958	2047 Replacements	Historical	240,144	2.570%	6,172	-	-	6,172
959	2047 Replacements	New	240,144	2.570%	6,172	-	-	6,172
960	2047 Float	Historical	-	-	(6,819)	-	-	(6,819)
961	FY 2047 Subtotal:		908,917		25,031	-	-	25,031

TABLE 12C: Interest Calculation Summary
October 1, 2014 - September 30, 2017 Cost Evaluation Period
(\$000s) (FY 2017)

A	B	D	E	F	G	H	I	J
Fiscal Year	Project	Type	Current Principal	Rate	Interest	Premium	Net Interest Accrual	Total
962	2048 Albeni Falls	Historical	57	4.375%	2	-	-	2
963	2048 Boise	Historical	64	4.876%	3	-	-	3
964	2048 Bonneville Dam	Historical	14,609	4.875%	712	-	-	712
965	2048 Chief Joseph	Historical	3,500	4.875%	171	-	-	171
966	2048 Columbia Basin	Historical	2,173	4.567%	99	-	-	99
967	2048 Columbia River Fish Mitigation	Historical	482,949	4.534%	18,270	-	-	18,270
968	2048 Dworshak	Historical	10	4.877%	-	-	-	-
969	2048 Hungry Horse Dam	Historical	137	4.654%	6	-	-	6
970	2048 Ice Harbor	Historical	14	4.874%	1	-	-	1
971	2048 John Day	Historical	1,548	4.375%	68	-	-	68
972	2048 Libby	Historical	1,567	4.875%	76	-	-	76
973	2048 Little Goose	Historical	13	4.877%	1	-	-	1
974	2048 Lower Granite	Historical	24	4.875%	1	-	-	1
975	2048 Lower Monument	Historical	9	4.871%	-	-	-	-
976	2048 Lower Snake Fish and Wildlife	Historical	74	4.874%	4	-	-	4
977	2048 McNary	Historical	215	4.875%	10	-	-	10
978	2048 The Dalles	Historical	1,651	4.875%	80	-	-	80
979	2048 Yakima Chandler/Kenniwick	Historical	15	4.377%	1	-	-	1
980	2048 Replacements	Historical	240,144	2.570%	6,172	-	-	6,172
981	2048 Replacements	New	240,144	2.570%	6,172	-	-	6,172
982	2048 Float	Historical	-	-	(6,819)	-	-	(6,819)
983	FY 2048 Subtotal:		908,917		25,031	-	-	25,031
984	2049 Albeni Falls	Historical	57	4.375%	2	-	-	2
985	2049 Boise	Historical	64	4.876%	3	-	-	3
986	2049 Bonneville Dam	Historical	14,609	4.875%	712	-	-	712
987	2049 Chief Joseph	Historical	3,500	4.875%	171	-	-	171
988	2049 Columbia Basin	Historical	2,173	4.567%	99	-	-	99
989	2049 Columbia River Fish Mitigation	Historical	362,949	4.538%	16,470	-	-	16,470
990	2049 Dworshak	Historical	10	4.877%	-	-	-	-
991	2049 Hungry Horse Dam	Historical	137	4.654%	6	-	-	6
992	2049 Ice Harbor	Historical	14	4.874%	1	-	-	1
993	2049 John Day	Historical	1,548	4.375%	68	-	-	68
994	2049 Libby	Historical	1,567	4.875%	76	-	-	76
995	2049 Little Goose	Historical	13	4.877%	1	-	-	1
996	2049 Lower Granite	Historical	24	4.875%	1	-	-	1
997	2049 Lower Monument	Historical	9	4.871%	-	-	-	-
998	2049 Lower Snake Fish and Wildlife	Historical	74	4.874%	4	-	-	4
999	2049 McNary	Historical	215	4.875%	10	-	-	10
1000	2049 The Dalles	Historical	1,651	4.875%	80	-	-	80
1001	2049 Yakima Chandler/Kenniwick	Historical	15	4.377%	1	-	-	1
1002	2049 Replacements	Historical	240,144	2.570%	6,172	-	-	6,172
1003	2049 Replacements	New	240,144	2.570%	6,172	-	-	6,172
1004	2049 Float	Historical	-	-	(6,819)	-	-	(6,819)
1005	FY 2049 Subtotal:		868,917		23,231	-	-	23,231
1006	2050 Albeni Falls	Historical	57	4.375%	2	-	-	2
1007	2050 Boise	Historical	64	4.876%	3	-	-	3
1008	2050 Bonneville Dam	Historical	14,609	4.875%	712	-	-	712
1009	2050 Chief Joseph	Historical	3,500	4.875%	171	-	-	171
1010	2050 Columbia Basin	Historical	2,173	4.567%	99	-	-	99
1011	2050 Columbia River Fish Mitigation	Historical	322,949	4.542%	14,670	-	-	14,670
1012	2050 Dworshak	Historical	10	4.877%	-	-	-	-
1013	2050 Hungry Horse Dam	Historical	137	4.654%	6	-	-	6
1014	2050 Ice Harbor	Historical	14	4.874%	1	-	-	1
1015	2050 John Day	Historical	1,548	4.375%	68	-	-	68
1016	2050 Libby	Historical	1,567	4.875%	76	-	-	76
1017	2050 Little Goose	Historical	13	4.877%	1	-	-	1
1018	2050 Lower Granite	Historical	24	4.875%	1	-	-	1
1019	2050 Lower Monument	Historical	9	4.871%	-	-	-	-
1020	2050 Lower Snake Fish and Wildlife	Historical	74	4.874%	4	-	-	4
1021	2050 McNary	Historical	215	4.875%	10	-	-	10
1022	2050 The Dalles	Historical	1,651	4.875%	80	-	-	80
1023	2050 Yakima Chandler/Kenniwick	Historical	15	4.377%	1	-	-	1
1024	2050 Replacements	Historical	240,144	2.570%	6,172	-	-	6,172
1025	2050 Replacements	New	240,144	2.570%	6,172	-	-	6,172
1026	2050 Float	Historical	-	-	(6,819)	-	-	(6,819)
1027	FY 2050 Subtotal:		828,917		21,431	-	-	21,431
1028	2051 Albeni Falls	Historical	57	4.375%	2	-	-	2
1029	2051 Boise	Historical	64	4.876%	3	-	-	3
1030	2051 Bonneville Dam	Historical	14,609	4.875%	712	-	-	712
1031	2051 Chief Joseph	Historical	3,500	4.875%	171	-	-	171
1032	2051 Columbia Basin	Historical	2,173	4.567%	99	-	-	99
1033	2051 Columbia River Fish Mitigation	Historical	282,949	4.548%	12,870	-	-	12,870
1034	2051 Dworshak	Historical	10	4.877%	-	-	-	-
1035	2051 Hungry Horse Dam	Historical	137	4.654%	6	-	-	6
1036	2051 Ice Harbor	Historical	14	4.874%	1	-	-	1
1037	2051 John Day	Historical	1,548	4.375%	68	-	-	68
1038	2051 Libby	Historical	1,567	4.875%	76	-	-	76
1039	2051 Little Goose	Historical	13	4.877%	1	-	-	1
1040	2051 Lower Granite	Historical	24	4.875%	1	-	-	1
1041	2051 Lower Monument	Historical	9	4.871%	-	-	-	-
1042	2051 Lower Snake Fish and Wildlife	Historical	74	4.874%	4	-	-	4
1043	2051 McNary	Historical	215	4.875%	10	-	-	10
1044	2051 The Dalles	Historical	1,651	4.875%	80	-	-	80
1045	2051 Yakima Chandler/Kenniwick	Historical	15	4.377%	1	-	-	1
1046	2051 Replacements	Historical	240,144	2.570%	6,172	-	-	6,172
1047	2051 Replacements	New	240,144	2.570%	6,172	-	-	6,172
1048	2051 Float	Historical	-	-	(6,820)	-	-	(6,820)
1049	FY 2051 Subtotal:		788,917		19,630	-	-	19,630

TABLE 12C: Interest Calculation Summary
October 1, 2014 - September 30, 2017 Cost Evaluation Period
(\$000s) (FY 2017)

A	B	D	E	F	G	H	I	J
Fiscal Year	Project	Type	Current Principal	Rate	Interest	Premium	Net Interest Accrual	Total
1050	2052 Albeni Falls	Historical	57	4.375%	2	-	-	2
1051	2052 Boise	Historical	64	4.876%	3	-	-	3
1052	2052 Bonneville Dam	Historical	14,609	4.875%	712	-	-	712
1053	2052 Chief Joseph	Historical	3,500	4.875%	171	-	-	171
1054	2052 Columbia Basin	Historical	2,173	4.567%	99	-	-	99
1055	2052 Columbia River Fish Mitigation	Historical	242,949	4.556%	11,070	-	-	11,070
1056	2052 Dworshak	Historical	10	4.877%	-	-	-	-
1057	2052 Hungry Horse Dam	Historical	137	4.654%	6	-	-	6
1058	2052 Ice Harbor	Historical	14	4.874%	1	-	-	1
1059	2052 John Day	Historical	1,548	4.375%	68	-	-	68
1060	2052 Libby	Historical	1,567	4.875%	76	-	-	76
1061	2052 Little Goose	Historical	13	4.877%	1	-	-	1
1062	2052 Lower Granite	Historical	24	4.875%	1	-	-	1
1063	2052 Lower Monument	Historical	9	4.871%	-	-	-	-
1064	2052 Lower Snake Fish and Wildlife	Historical	74	4.874%	4	-	-	4
1065	2052 McNary	Historical	215	4.875%	10	-	-	10
1066	2052 The Dalles	Historical	1,651	4.875%	80	-	-	80
1067	2052 Yakima Chandler/Kenniwick	Historical	15	4.377%	1	-	-	1
1068	2052 Replacements	Historical	240,144	2.570%	6,172	-	-	6,172
1069	2052 Replacements	New	240,144	2.570%	6,172	-	-	6,172
1070	2052 Float	Historical	-	-	(6,819)	-	-	(6,819)
1071	FY 2052 Subtotal:		748,917		17,831			17,831
1072	2053 Albeni Falls	Historical	57	4.375%	2	-	-	2
1073	2053 Boise	Historical	64	4.876%	3	-	-	3
1074	2053 Bonneville Dam	Historical	14,609	4.875%	712	-	-	712
1075	2053 Chief Joseph	Historical	3,500	4.875%	171	-	-	171
1076	2053 Columbia Basin	Historical	2,173	4.567%	99	-	-	99
1077	2053 Columbia River Fish Mitigation	Historical	202,949	4.568%	9,270	-	-	9,270
1078	2053 Dworshak	Historical	10	4.877%	-	-	-	-
1079	2053 Hungry Horse Dam	Historical	137	4.654%	6	-	-	6
1080	2053 Ice Harbor	Historical	14	4.874%	1	-	-	1
1081	2053 John Day	Historical	1,548	4.375%	68	-	-	68
1082	2053 Libby	Historical	1,567	4.875%	76	-	-	76
1083	2053 Little Goose	Historical	13	4.877%	1	-	-	1
1084	2053 Lower Granite	Historical	24	4.875%	1	-	-	1
1085	2053 Lower Monument	Historical	9	4.871%	-	-	-	-
1086	2053 Lower Snake Fish and Wildlife	Historical	74	4.874%	4	-	-	4
1087	2053 McNary	Historical	215	4.875%	10	-	-	10
1088	2053 The Dalles	Historical	1,651	4.875%	80	-	-	80
1089	2053 Yakima Chandler/Kenniwick	Historical	15	4.377%	1	-	-	1
1090	2053 Replacements	Historical	240,144	2.570%	6,172	-	-	6,172
1091	2053 Replacements	New	240,144	2.570%	6,172	-	-	6,172
1092	2053 Float	Historical	-	-	(6,819)	-	-	(6,819)
1093	FY 2053 Subtotal:		708,917		16,031			16,031
1094	2054 Albeni Falls	Historical	57	4.375%	2	-	-	2
1095	2054 Boise	Historical	64	4.876%	3	-	-	3
1096	2054 Bonneville Dam	Historical	14,609	4.875%	712	-	-	712
1097	2054 Chief Joseph	Historical	3,500	4.875%	171	-	-	171
1098	2054 Columbia Basin	Historical	2,173	4.567%	99	-	-	99
1099	2054 Columbia River Fish Mitigation	Historical	162,949	4.584%	7,470	-	-	7,470
1100	2054 Dworshak	Historical	10	4.877%	-	-	-	-
1101	2054 Hungry Horse Dam	Historical	137	4.654%	6	-	-	6
1102	2054 Ice Harbor	Historical	14	4.874%	1	-	-	1
1103	2054 John Day	Historical	1,548	4.375%	68	-	-	68
1104	2054 Libby	Historical	1,567	4.875%	76	-	-	76
1105	2054 Little Goose	Historical	13	4.877%	1	-	-	1
1106	2054 Lower Granite	Historical	24	4.875%	1	-	-	1
1107	2054 Lower Monument	Historical	9	4.871%	-	-	-	-
1108	2054 Lower Snake Fish and Wildlife	Historical	74	4.874%	4	-	-	4
1109	2054 McNary	Historical	215	4.875%	10	-	-	10
1110	2054 The Dalles	Historical	1,651	4.875%	80	-	-	80
1111	2054 Yakima Chandler/Kenniwick	Historical	15	4.377%	1	-	-	1
1112	2054 Replacements	Historical	240,144	2.570%	6,172	-	-	6,172
1113	2054 Replacements	New	240,144	2.570%	6,172	-	-	6,172
1114	2054 Float	Historical	-	-	(6,819)	-	-	(6,819)
1115	FY 2054 Subtotal:		668,917		14,231			14,231
1116	2055 Albeni Falls	Historical	57	4.375%	2	-	-	2
1117	2055 Boise	Historical	64	4.876%	3	-	-	3
1118	2055 Bonneville Dam	Historical	14,609	4.875%	712	-	-	712
1119	2055 Chief Joseph	Historical	3,500	4.875%	171	-	-	171
1120	2055 Columbia Basin	Historical	2,173	4.567%	99	-	-	99
1121	2055 Columbia River Fish Mitigation	Historical	122,949	4.611%	5,670	-	-	5,670
1122	2055 Dworshak	Historical	10	4.877%	-	-	-	-
1123	2055 Hungry Horse Dam	Historical	137	4.654%	6	-	-	6
1124	2055 Ice Harbor	Historical	14	4.874%	1	-	-	1
1125	2055 John Day	Historical	1,548	4.375%	68	-	-	68
1126	2055 Libby	Historical	1,567	4.875%	76	-	-	76
1127	2055 Little Goose	Historical	13	4.877%	1	-	-	1
1128	2055 Lower Granite	Historical	24	4.875%	1	-	-	1
1129	2055 Lower Monument	Historical	9	4.871%	-	-	-	-
1130	2055 Lower Snake Fish and Wildlife	Historical	74	4.874%	4	-	-	4
1131	2055 McNary	Historical	215	4.875%	10	-	-	10
1132	2055 The Dalles	Historical	1,651	4.875%	80	-	-	80
1133	2055 Yakima Chandler/Kenniwick	Historical	15	4.377%	1	-	-	1
1134	2055 Replacements	Historical	240,144	2.570%	6,172	-	-	6,172
1135	2055 Replacements	New	240,144	2.570%	6,172	-	-	6,172
1136	2055 Float	Historical	-	-	(6,819)	-	-	(6,819)
1137	FY 2055 Subtotal:		628,917		12,431			12,431

TABLE 12C: Interest Calculation Summary
October 1, 2014 - September 30, 2017 Cost Evaluation Period
(\$000s) (FY 2017)

A	B	D	E	F	G	H	I	J
Fiscal Year	Project	Type	Current Principal	Rate	Interest	Premium	Net Interest Accrual	Total
1138	2056 Albeni Falls	Historical	57	4.375%	2	-	-	2
1139	2056 Boise	Historical	64	4.876%	3	-	-	3
1140	2056 Bonneville Dam	Historical	14,609	4.875%	712	-	-	712
1141	2056 Chief Joseph	Historical	3,500	4.875%	171	-	-	171
1142	2056 Columbia Basin	Historical	2,173	4.567%	99	-	-	99
1143	2056 Columbia River Fish Mitigation	Historical	82,949	4.665%	3,870	-	-	3,870
1144	2056 Dworshak	Historical	10	4.877%	-	-	-	-
1145	2056 Hungry Horse Dam	Historical	137	4.654%	6	-	-	6
1146	2056 Ice Harbor	Historical	14	4.874%	1	-	-	1
1147	2056 John Day	Historical	1,548	4.375%	68	-	-	68
1148	2056 Libby	Historical	1,567	4.875%	76	-	-	76
1149	2056 Little Goose	Historical	13	4.877%	1	-	-	1
1150	2056 Lower Granite	Historical	24	4.875%	1	-	-	1
1151	2056 Lower Monument	Historical	9	4.871%	-	-	-	-
1152	2056 Lower Snake Fish and Wildlife	Historical	74	4.874%	4	-	-	4
1153	2056 McNary	Historical	215	4.875%	10	-	-	10
1154	2056 The Dalles	Historical	1,651	4.875%	80	-	-	80
1155	2056 Yakima Chandler/Kenniwick	Historical	15	4.377%	1	-	-	1
1156	2056 Replacements	Historical	240,144	2.570%	6,172	-	-	6,172
1157	2056 Replacements	New	240,144	2.570%	6,172	-	-	6,172
1158	2056 Float	Historical	-	-	(6,820)	-	-	(6,820)
1159	FY 2056 Subtotal:		588,917		10,630			10,630
1160	2057 Albeni Falls	Historical	57	4.375%	2	-	-	2
1161	2057 Boise	Historical	64	4.876%	3	-	-	3
1162	2057 Bonneville Dam	Historical	14,609	4.875%	712	-	-	712
1163	2057 Chief Joseph	Historical	3,500	4.875%	171	-	-	171
1164	2057 Columbia Basin	Historical	2,173	4.567%	99	-	-	99
1165	2057 Columbia River Fish Mitigation	Historical	36,554	4.875%	1,782	-	-	1,782
1166	2057 Dworshak	Historical	10	4.877%	-	-	-	-
1167	2057 Hungry Horse Dam	Historical	137	4.654%	6	-	-	6
1168	2057 Ice Harbor	Historical	14	4.874%	1	-	-	1
1169	2057 John Day	Historical	1,548	4.375%	68	-	-	68
1170	2057 Libby	Historical	1,567	4.875%	76	-	-	76
1171	2057 Little Goose	Historical	13	4.877%	1	-	-	1
1172	2057 Lower Granite	Historical	24	4.875%	1	-	-	1
1173	2057 Lower Monument	Historical	9	4.871%	-	-	-	-
1174	2057 Lower Snake Fish and Wildlife	Historical	74	4.874%	4	-	-	4
1175	2057 McNary	Historical	215	4.875%	10	-	-	10
1176	2057 The Dalles	Historical	1,651	4.875%	80	-	-	80
1177	2057 Yakima Chandler/Kenniwick	Historical	15	4.377%	1	-	-	1
1178	2057 Replacements	Historical	240,144	2.570%	6,172	-	-	6,172
1179	2057 Replacements	New	240,144	2.570%	6,172	-	-	6,172
1180	2057 Float	Historical	-	-	(6,820)	-	-	(6,820)
1181	FY 2057 Subtotal:		542,522		8,543			8,543
1182	2058 Albeni Falls	Historical	57	4.375%	2	-	-	2
1183	2058 Boise	Historical	64	4.876%	3	-	-	3
1184	2058 Bonneville Dam	Historical	14,609	4.875%	712	-	-	712
1185	2058 Chief Joseph	Historical	3,500	4.875%	171	-	-	171
1186	2058 Columbia Basin	Historical	2,173	4.567%	99	-	-	99
1187	2058 Columbia River Fish Mitigation	Historical	36,554	4.875%	1,782	-	-	1,782
1188	2058 Dworshak	Historical	10	4.877%	-	-	-	-
1189	2058 Hungry Horse Dam	Historical	137	4.654%	6	-	-	6
1190	2058 Ice Harbor	Historical	14	4.874%	1	-	-	1
1191	2058 John Day	Historical	1,548	4.375%	68	-	-	68
1192	2058 Libby	Historical	1,567	4.875%	76	-	-	76
1193	2058 Little Goose	Historical	13	4.877%	1	-	-	1
1194	2058 Lower Granite	Historical	24	4.875%	1	-	-	1
1195	2058 Lower Monument	Historical	9	4.871%	-	-	-	-
1196	2058 Lower Snake Fish and Wildlife	Historical	74	4.874%	4	-	-	4
1197	2058 McNary	Historical	215	4.875%	10	-	-	10
1198	2058 The Dalles	Historical	1,651	4.875%	80	-	-	80
1199	2058 Yakima Chandler/Kenniwick	Historical	15	4.377%	1	-	-	1
1200	2058 Replacements	Historical	240,144	2.570%	6,172	-	-	6,172
1201	2058 Replacements	New	240,144	2.570%	6,172	-	-	6,172
1202	2058 Float	Historical	-	-	(6,820)	-	-	(6,820)
1203	FY 2058 Subtotal:		542,522		8,543			8,543
1204	2059 Albeni Falls	Historical	57	4.375%	2	-	-	2
1205	2059 Columbia Basin	Historical	1,338	4.375%	59	-	-	59
1206	2059 Hungry Horse Dam	Historical	60	4.376%	3	-	-	3
1207	2059 John Day	Historical	1,548	4.375%	68	-	-	68
1208	2059 Yakima Chandler/Kenniwick	Historical	15	4.377%	1	-	-	1
1209	2059 Replacements	Historical	240,144	2.570%	6,172	-	-	6,172
1210	2059 Replacements	New	240,144	2.570%	6,172	-	-	6,172
1211	2059 Float	Historical	-	-	(6,819)	-	-	(6,819)
1212	FY 2059 Subtotal:		483,307		5,656			5,656
1213	2060 Replacements	Historical	240,144	2.570%	6,172	-	-	6,172
1214	2060 Replacements	New	240,144	2.570%	6,172	-	-	6,172
1215	2060 Float	Historical	-	-	(6,819)	-	-	(6,819)
1216	FY 2060 Subtotal:		480,288		5,524			5,524
1217	2061 Replacements	Historical	240,144	2.570%	6,172	-	-	6,172
1218	2061 Replacements	New	240,144	2.570%	6,172	-	-	6,172
1219	2061 Float	Historical	-	-	(6,819)	-	-	(6,819)
1220	FY 2061 Subtotal:		480,288		5,524			5,524
1221	2062 Replacements	Historical	240,144	2.570%	6,172	-	-	6,172
1222	2062 Replacements	New	240,144	2.570%	6,172	-	-	6,172
1223	2062 Float	Historical	-	-	(6,819)	-	-	(6,819)
1224	FY 2062 Subtotal:		480,288		5,524			5,524

TABLE 12C: Interest Calculation Summary
October 1, 2014 - September 30, 2017 Cost Evaluation Period
(\$000s) (FY 2017)

A	B	D	E	F	G	H	I	J
Fiscal Year	Project	Type	Current Principal	Rate	Interest	Premium	Net Interest Accrual	Total
1225	2063 Replacements	Historical	240,144	2.570%	6,172	-	-	6,172
1226	2063 Replacements	New	240,144	2.570%	6,172	-	-	6,172
1227	2063 Float	Historical	-	-	(6,819)	-	-	(6,819)
1228	FY 2063 Subtotal:		480,288		5,524	-	-	5,524
1229	2064 Replacements	Historical	240,144	2.570%	6,172	-	-	6,172
1230	2064 Replacements	New	240,144	2.570%	6,172	-	-	6,172
1231	2064 Float	Historical	-	-	(6,819)	-	-	(6,819)
1232	FY 2064 Subtotal:		480,288		5,524	-	-	5,524
1233	2065 Replacements	Historical	240,144	2.570%	6,172	-	-	6,172
1234	2065 Replacements	New	240,144	2.570%	6,172	-	-	6,172
1235	2065 Float	Historical	-	-	(6,820)	-	-	(6,820)
1236	FY 2065 Subtotal:		480,288		5,524	-	-	5,524
1237	2066 Replacements	Historical	240,144	2.570%	6,172	-	-	6,172
1238	2066 Replacements	New	240,144	2.570%	6,172	-	-	6,172
1239	2066 Float	Historical	-	-	(6,819)	-	-	(6,819)
1240	FY 2066 Subtotal:		480,288		5,524	-	-	5,524
1241	2067 Replacements	Historical	240,144	2.570%	6,172	-	-	6,172
1242	2067 Replacements	New	240,144	2.570%	6,172	-	-	6,172
1243	2067 Float	Historical	-	-	(6,819)	-	-	(6,819)
1244	FY 2067 Subtotal:		480,288		5,524	-	-	5,524
1245	Grand Total:		\$118,352,115		\$4,547,992	-	(\$9,556)	\$4,538,436

TABLE 12D
Application of Amortization
October 1, 2014 - September 30, 2017 Cost Evaluation Period
(\$000s) (FY 2017)

A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R
Fiscal Year	Project	Debt Type	In Service	Bond Due Date	Initial Principal	Current Principal	Original Rate	Effective Rate	Refinance Type	Refinanced Date	Rolled Maturity Date	Roll Rate	Principal Paid	Premium	Discount	Accrual	Reversal
1	2015	Conservation	-	4/30/2010	4/30/2015	20,000	20,000	2.677%	2.677%				20,000				
2	2015	Construction (AS)	-	8/31/2010	8/31/2015	5,000	5,000	1.619%	1.619%				5,000				
3	2015	Conservation	-	8/31/2010	8/31/2015	15,000	15,000	1.619%	1.619%				15,000				
4	2015	Conservation	-	1/31/2015	9/30/2015	15,000	15,000	0.204%	0.204%				15,000				
5	2015	Conservation	-	6/20/2012	9/30/2015	15,000	15,000	0.671%	0.671%				15,000				
6	2015	Conservation	-	5/3/2012	9/30/2015	30,000	30,000	0.676%	0.676%				30,000				
7	2015	Conservation	-	9/30/2010	9/30/2015	10,000	10,000	1.534%	1.534%				10,000				
8	2015	Ice Harbor	Corps of Engineers	9/30/1976	9/30/2026	20,472	20,472	7.150%	7.150%				20,472				
9	2015	Libby	Corps of Engineers	9/30/1976	9/30/2026	153,432	146,624	7.150%	7.150%				146,624				
10	2015	Ice Harbor	Corps of Engineers	9/30/1976	9/30/2026	228	228	7.150%	7.150%				228				
11	2015	Columbia Basin 3rd Powerhouse	Bureau of Reclamation	9/30/1976	9/30/2026	41,330	41,330	7.150%	7.150%				41,330				
12	2015	Columbia Basin 3rd Powerhouse	Bureau of Reclamation	9/30/1976	9/30/2026	8,037	8,037	7.150%	7.150%				8,037				
13	2015	Libby	Corps of Engineers	9/30/1977	9/30/2026	1,465	1,465	7.150%	7.150%				1,465				
14	2015	Libby	Corps of Engineers	9/30/1978	9/30/2026	1,465	1,465	7.150%	7.150%				1,465				
15	2015	Libby	Corps of Engineers	9/30/1979	9/30/2026	1,465	1,465	7.150%	7.150%				1,465				
16	2015	Libby	Corps of Engineers	9/30/1980	9/30/2026	1,465	1,465	7.150%	7.150%				1,465				
17	2015	Libby	Corps of Engineers	9/30/1981	9/30/2026	1,465	1,465	7.150%	7.150%				1,465				
18	2015	Libby	Corps of Engineers	9/30/1982	9/30/2026	1,465	1,465	7.150%	7.150%				1,465				
19	2015	Libby	Corps of Engineers	9/30/1983	9/30/2026	1,465	1,465	7.150%	7.150%				1,465				
20	2015	Ice Harbor	Corps of Engineers	9/30/1985	9/30/2026	21	21	7.150%	7.150%				21				
21	2015	Libby	Corps of Engineers	9/30/1985	9/30/2026	518	518	7.150%	7.150%				518				
22	2015	Libby	Corps of Engineers	9/30/1986	9/30/2026	283	283	7.150%	7.150%				283				
23	2015	Libby	Corps of Engineers	9/30/1987	9/30/2026	2	2	7.150%	7.150%				2				
24	2015	Libby	Corps of Engineers	9/30/1989	9/30/2026	1	1	7.150%	7.150%				1				
25	2015	Columbia Basin	Bureau of Reclamation	9/30/1996	9/30/2026	72	72	7.150%	7.150%				72				
26	2015	McNary	Corps of Engineers	9/30/1996	9/30/2026	74	74	7.150%	7.150%				74				
27	2015	McNary	Corps of Engineers	9/30/1996	9/30/2026	277	277	7.150%	7.150%				277				
28	2015	Lost Creek	Corps of Engineers	9/30/1977	9/30/2027	14,293	14,201	7.150%	7.150%				2,267				
29		FY 2015 Subtotal:	-	-	-	359,295	352,395	-	-				340,461				
30	2016	Construction (AS)	-	6/22/2011	6/30/2016	7,000	7,000	1.957%	1.957%				7,000				
31	2016	Construction (AS)	-	8/12/2011	8/31/2016	3,500	3,500	1.423%	1.423%				3,500				
32	2016	Chief Joseph	Corps of Engineers	9/30/1977	9/30/2027	30,512	30,512	7.150%	7.150%				21,535				
33	2016	Lost Creek	Corps of Engineers	9/30/1977	9/30/2027	14,293	11,934	7.150%	7.150%				11,934				
34	2016	Columbia Basin 3rd Powerhouse	Bureau of Reclamation	9/30/1977	9/30/2027	42,764	42,764	7.150%	7.150%				42,764				
35	2016	Columbia Basin 3rd Powerhouse	Bureau of Reclamation	9/30/1977	9/30/2027	7,964	7,964	7.150%	7.150%				7,964				
36		FY 2016 Subtotal:	-	-	-	106,033	103,674	-	-				94,697				
37	2017	Construction (AS)	-	6/20/2012	9/30/2015	7,700	7,700	0.671%	0.898%	Global	9/30/2015	9/30/2017	0.898%	7,700			
38	2017	Conservation	-	11/30/2012	11/30/2016	20,000	20,000	0.630%	0.630%				20,000				
39	2017	Construction (AS)	-	4/30/2013	4/30/2017	2,450	2,450	0.622%	0.622%				2,450				
40	2017	Construction (AS)	-	6/30/2013	6/30/2017	3,000	3,000	1.271%	1.271%				3,000				
41	2017	Construction (AS)	-	8/31/2013	8/31/2017	2,000	2,000	1.494%	1.494%				2,000				
42	2017	Bonneville Dam	Corps of Engineers	9/30/1977	9/30/2027	15,670	15,670	7.150%	7.150%				15,670				
43	2017	Chief Joseph	Corps of Engineers	9/30/1977	9/30/2027	30,512	8,977	7.150%	7.150%				8,977				
44	2017	Lost Creek	Corps of Engineers	9/30/1978	9/30/2027	58	58	7.150%	7.150%				58				
45	2017	Lost Creek	Corps of Engineers	9/30/1979	9/30/2027	60	60	7.150%	7.150%				60				
46	2017	Lost Creek	Corps of Engineers	9/30/1980	9/30/2027	60	60	7.150%	7.150%				60				
47	2017	Lost Creek	Corps of Engineers	9/30/1981	9/30/2027	60	60	7.150%	7.150%				60				
48	2017	Lost Creek	Corps of Engineers	9/30/1982	9/30/2027	60	60	7.150%	7.150%				60				
49	2017	Lost Creek	Corps of Engineers	9/30/1983	9/30/2027	60	60	7.150%	7.150%				60				
50	2017	Lost Creek	Corps of Engineers	9/30/1985	9/30/2027	12	12	7.150%	7.150%				12				
51	2017	Lost Creek	Corps of Engineers	9/30/1986	9/30/2027	6	6	7.150%	7.150%				6				
52	2017	Lost Creek	Corps of Engineers	9/30/1987	9/30/2027	4	4	7.150%	7.150%				4				
53	2017	Little Goose	Corps of Engineers	9/30/1978	9/30/2028	49,578	49,578	7.150%	7.150%				8,641				
54	2017	Lower Granite	Corps of Engineers	9/30/1978	9/30/2028	40,611	40,611	7.150%	7.150%				40,611				
55		FY 2017 Subtotal:	-	-	-	171,901	150,366	-	-				109,429				
56	2018	Conservation	-	1/31/2013	1/31/2018	9,000	9,000	1.107%	1.107%				9,000				
57	2018	Chief Joseph	Corps of Engineers	9/30/1978	9/30/2028	75,669	75,669	7.150%	7.150%				9,672				
58	2018	Columbia Basin 3rd Powerhouse	Bureau of Reclamation	9/30/1978	9/30/2028	42,399	42,399	7.150%	7.150%				42,399				
59	2018	Little Goose	Corps of Engineers	9/30/1978	9/30/2028	49,578	40,937	7.150%	7.150%				40,937				
60	2018	Columbia Basin 3rd Powerhouse	Bureau of Reclamation	9/30/1978	9/30/2028	7,896	7,896	7.150%	7.150%				7,896				
61		FY 2018 Subtotal:	-	-	-	184,542	175,901	-	-				109,984				

TABLE 12D
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A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R
Fiscal Year	Project	Debt Type	In Service	Bond Due Date	Initial Principal	Current Principal	Original Rate	Effective Rate	Refinance Type	Refinanced Date	Rolled Maturity Date	Roll Rate	Principal Paid	Premium	Discount	Accrual	Reversal
62	2019	Bureau Direct	-	10/31/2009	10/31/2018	24,000	24,000	3.719%	3.719%				24,000				
63	2019	Construction (AS)	-	11/30/2012	11/30/2018	5,250	5,250	1.109%	1.109%				5,250				
64	2019	Fish and Wildlife	-	12/31/2009	12/31/2018	26,000	26,000	4.069%	4.069%				26,000				
65	2019	Bureau Direct	-	1/16/2014	12/31/2018	43,000	43,000	1.943%	1.943%				43,000				
66	2019	Bureau Direct	-	1/16/2014	12/31/2018	38,000	38,000	1.943%	1.943%				38,000				
67	2019	Bureau Direct	-	1/16/2014	12/31/2018	26,000	26,000	1.943%	1.943%				26,000				
68	2019	Bureau Direct	-	1/16/2014	12/31/2018	21,000	21,000	1.943%	1.943%				21,000				
69	2019	Bureau Direct	-	1/16/2014	12/31/2018	14,000	14,000	1.943%	1.943%				14,000				
70	2019	Bureau Direct	-	1/31/2010	1/31/2019	10,000	10,000	3.714%	3.714%				10,000				
71	2019	Fish and Wildlife	-	8/31/2010	8/31/2019	20,000	20,000	2.646%	2.646%				20,000				
72	2019	Bureau Direct	-	9/30/2009	9/30/2019	25,000	25,000	3.699%	3.699%				25,000				
73	2019	Chief Joseph	Corps of Engineers	9/30/1978	9/30/2028	75,669	65,997	7.150%	7.150%				65,997				
74	2019	Little Goose	Corps of Engineers	9/30/1985	9/30/2028	47	47	7.150%	7.150%				47				
75	2019	Lower Monument	Corps of Engineers	9/30/1979	9/30/2029	40,669	40,669	7.150%	7.150%				7,147				
76		FY 2019 Subtotal:	-	-	-	368,635	358,963	-	-				325,441				
77	2020	Construction (AS)	-	10/31/2013	10/31/2019	4,200	4,200	2.039%	2.039%				4,200				
78	2020	Construction (AS)	-	10/31/2013	10/31/2019	5,000	5,000	2.039%	2.039%				5,000				
79	2020	Bureau Direct	-	10/31/2009	10/31/2019	20,000	20,000	3.842%	3.842%				20,000				
80	2020	Bureau Direct	-	11/30/2009	11/30/2019	7,000	7,000	3.637%	3.637%				7,000				
81	2020	Bureau Direct	-	12/31/2009	12/31/2019	13,000	13,000	4.194%	4.194%				13,000				
82	2020	Construction (AS)	-	1/31/2014	1/31/2020	1,750	1,750	2.183%	2.183%				1,750				
83	2020	Construction (AS)	-	1/31/2014	1/31/2020	2,000	2,000	2.183%	2.183%				2,000				
84	2020	Bureau Direct	-	3/31/2010	3/31/2020	30,000	30,000	4.083%	4.083%				30,000				
85	2020	Construction (AS)	-	4/30/2014	3/31/2020	1,400	1,400	1.010%	1.010%				1,400				
86	2020	Construction (AS)	-	4/30/2014	3/31/2020	2,000	2,000	1.010%	1.010%				2,000				
87	2020	Bureau Direct	-	4/30/2010	4/30/2020	18,000	18,000	3.973%	3.973%				18,000				
88	2020	Construction (AS)	-	5/31/2014	4/30/2020	700	700	1.010%	1.010%				700				
89	2020	Bureau Direct	-	5/31/2010	5/31/2020	15,000	15,000	3.574%	3.574%				15,000				
90	2020	Bureau Direct	-	6/30/2010	6/30/2020	10,000	10,000	3.243%	3.243%				10,000				
91	2020	Bureau Direct	-	6/30/2010	6/30/2020	30,000	30,000	3.243%	3.243%				30,000				
92	2020	Bureau Direct	-	7/31/2010	7/31/2020	17,000	17,000	3.118%	3.118%				17,000				
93	2020	Construction (AS)	-	7/31/2014	7/31/2020	1,050	1,050	1.010%	1.010%				1,050				
94	2020	Bureau Direct	-	11/20/2013	9/30/2020	51,000	51,000	2.473%	2.473%				51,000				
95	2020	Lower Monument	Corps of Engineers	9/30/1979	9/30/2029	40,669	33,522	7.150%	7.150%				33,522				
96	2020	Columbia Basin 3rd Powerhouse	Bureau of Reclamation	9/30/1979	9/30/2029	84,118	84,118	7.150%	7.150%				31,270				
97	2020	Columbia Basin 3rd Powerhouse	Bureau of Reclamation	9/30/1979	9/30/2029	15,666	15,666	7.150%	7.150%				15,666				
98		FY 2020 Subtotal:	-	-	-	369,553	362,406	-	-				309,557				
99	2021	Construction (AS)	-	11/30/2014	11/30/2020	2,100	2,100	1.809%	1.809%				2,100				
100	2021	Construction (AS)	-	12/31/2014	12/31/2020	1,050	1,050	1.922%	1.922%				1,050				
101	2021	Technology	-	1/31/2015	1/31/2021	35,000	35,000	1.469%	1.469%				35,000				
102	2021	Bureau Direct	-	1/31/2009	1/31/2021	25,000	25,000	3.999%	3.999%				25,000				
103	2021	Construction (AS)	-	2/28/2015	2/28/2021	1,750	1,750	1.761%	1.761%				1,750				
104	2021	Conservation	-	4/30/2015	4/30/2021	5,000	5,000	2.420%	2.420%				5,000				
105	2021	Construction (AS)	-	5/31/2015	5/31/2021	700	700	2.419%	2.419%				700				
106	2021	Conservation	-	5/31/2015	5/31/2021	6,000	6,000	2.420%	2.420%				6,000				
107	2021	Construction (AS)	-	6/30/2015	6/30/2021	1,050	1,050	2.419%	2.419%				1,050				
108	2021	Conservation	-	6/30/2015	6/30/2021	7,000	7,000	2.420%	2.420%				7,000				
109	2021	Conservation	-	7/31/2015	7/31/2021	3,000	3,000	2.420%	2.420%				3,000				
110	2021	Construction (AS)	-	7/31/2015	7/31/2021	700	700	2.420%	2.420%				700				
111	2021	Construction (AS)	-	8/31/2015	8/31/2021	700	700	2.419%	2.419%				700				
112	2021	Bureau Direct	-	11/20/2013	9/30/2021	50,000	50,000	2.812%	2.812%				50,000				
113	2021	Construction (AS)	-	9/30/2015	9/30/2021	1,750	1,750	2.419%	2.419%				1,750				
114	2021	Technology	-	9/30/2015	9/30/2021	7,000	7,000	2.419%	2.419%				7,000				
115	2021	Bureau Direct	-	9/30/2010	9/30/2021	22,000	22,000	2.883%	2.883%				22,000				
116	2021	Chief Joseph	Corps of Engineers	9/30/1979	9/30/2029	60,079	60,079	7.150%	7.150%				60,079				
117	2021	Columbia Basin 3rd Powerhouse	Bureau of Reclamation	9/30/1979	9/30/2029	84,118	52,848	7.150%	7.150%				52,848				
118	2021	Chief Joseph	Corps of Engineers	9/30/1985	9/30/2029	16,372	16,372	7.150%	7.150%				16,372				
119	2021	Lower Monument	Corps of Engineers	9/30/1985	9/30/2029	256	256	7.150%	7.150%				256				
120	2021	Chief Joseph	Corps of Engineers	9/30/1986	9/30/2029	5,363	5,363	7.150%	7.150%				5,363				
121	2021	Chief Joseph	Corps of Engineers	9/30/1987	9/30/2029	3,036	3,036	7.150%	7.150%				3,036				
122	2021	Chief Joseph	Corps of Engineers	9/30/1988	9/30/2029	2,722	2,722	7.150%	7.150%				2,722				
123	2021	Chief Joseph	Corps of Engineers	9/30/1989	9/30/2029	2,227	2,227	7.150%	7.150%				2,227				

TABLE 12D
Application of Amortization
October 1, 2014 - September 30, 2017 Cost Evaluation Period
(\$000s) (FY 2017)

A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R
Fiscal Year	Project	Debt Type	In Service	Bond Due Date	Initial Principal	Current Principal	Original Rate	Effective Rate	Refinance Type	Refinanced Date	Rolled Maturity Date	Roll Rate	Principal Paid	Premium	Discount	Accrual	Reversal
124	2021	Chief Joseph	Corps of Engineers	9/30/1990	9/30/2029	4,505	4,505	7.150%	7.150%				4,505				
125	2021	Libby	Corps of Engineers	9/30/1994	9/30/2029	286	152	7.150%	7.150%				152				
126	2021	Lower Granite	Corps of Engineers	9/30/1994	9/30/2029	3,543	1,551	7.150%	7.150%				1,551				
127	2021	Dworshak	Corps of Engineers	9/30/1995	9/30/2030	218	218	7.150%	7.150%				218				
128	2021	Libby	Corps of Engineers	9/30/1995	9/30/2030	15	15	7.150%	7.150%				15				
129	2021	Hungry Horse Dam	Bureau of Reclamation	9/30/1995	9/30/2030	536	536	7.150%	7.150%				536				
130	2021	Libby	Corps of Engineers	9/30/1995	9/30/2030	41	41	7.150%	7.150%				41				
131	2021	Hungry Horse Dam	Bureau of Reclamation	9/30/1995	9/30/2030	1,198	1,195	7.150%	7.150%				1,195				
132	2021	Libby	Corps of Engineers	9/30/1995	9/30/2030	94	94	7.150%	7.150%				94				
133	2021	Bonneville 2nd Powerhouse	Corps of Engineers	9/30/1981	9/30/2031	40,964	40,964	7.150%	7.150%				19,585				
134	2021	Bonneville 2nd Powerhouse	Corps of Engineers	9/30/1981	9/30/2031	455	455	7.150%	7.150%				455				
135		FY 2021 Subtotal:	-	-	-	395,828	362,429	-	-				341,051				
136	2022	Conservation	-	12/31/2013	12/31/2021	6,000	6,000	3.142%	3.142%				6,000				
137	2022	Construction (AS)	-	3/31/2016	3/31/2022	4,900	4,900	3.248%	3.248%				4,900				
138	2022	Technology	-	3/31/2016	3/31/2022	7,000	7,000	3.248%	3.248%				7,000				
139	2022	Construction (AS)	-	3/31/2017	3/31/2022	3,850	3,850	4.090%	4.090%				3,850				
140	2022	Technology	-	3/31/2017	3/31/2022	5,000	5,000	4.090%	4.090%				5,000				
141	2022	Conservation	-	8/31/2015	8/31/2022	6,000	6,000	2.740%	2.740%				6,000				
142	2022	Bureau Direct	-	11/20/2013	9/30/2022	19,000	19,000	3.125%	3.125%				19,000				
143	2022	Fish and Wildlife	-	11/20/2013	9/30/2022	31,000	31,000	3.125%	3.125%				31,000				
144	2022	Construction (AS)	-	9/30/2016	9/30/2022	4,900	4,900	3.248%	3.248%				4,900				
145	2022	Conservation	-	9/30/2015	9/30/2022	13,000	13,000	2.740%	2.740%				13,000				
146	2022	Construction (AS)	-	9/30/2017	9/30/2022	3,850	3,850	4.090%	4.090%				3,850				
147	2022	Bonneville 2nd Powerhouse	Corps of Engineers	9/30/1981	9/30/2031	40,964	21,379	7.150%	7.150%				21,379				
148	2022	Ice Harbor	Corps of Engineers	9/30/1996	9/30/2031	78	78	7.150%	7.150%				78				
149	2022	Columbia Basin	Bureau of Reclamation	9/30/1996	9/30/2031	109	109	7.150%	7.150%				109				
150	2022	Lost Creek	Corps of Engineers	9/30/1996	9/30/2031	31	31	7.150%	7.150%				31				
151	2022	Lower Granite	Corps of Engineers	9/30/1996	9/30/2031	206	206	7.150%	7.150%				206				
152	2022	Bonneville Dam	Corps of Engineers	9/30/1996	9/30/2031	22	22	7.150%	7.150%				22				
153	2022	Chief Joseph	Corps of Engineers	9/30/1996	9/30/2031	27	27	7.150%	7.150%				27				
154	2022	Columbia Basin	Bureau of Reclamation	9/30/1996	9/30/2031	251	251	7.150%	7.150%				251				
155	2022	Dworshak	Corps of Engineers	9/30/1996	9/30/2031	6	6	7.150%	7.150%				6				
156	2022	Dworshak	Corps of Engineers	9/30/1996	9/30/2031	203	203	7.150%	7.150%				203				
157	2022	Bonneville 2nd Powerhouse	Corps of Engineers	9/30/1982	9/30/2032	203,535	203,535	7.150%	7.150%				203,535				
158	2022	Bonneville 2nd Powerhouse	Corps of Engineers	9/30/1982	9/30/2032	2,264	2,264	7.150%	7.150%				2,264				
159	2022	Chief Joseph	Corps of Engineers	9/30/1997	9/30/2032	166	166	7.150%	7.150%				166				
160	2022	McNary	Corps of Engineers	9/30/1997	9/30/2032	30	30	7.150%	7.150%				30				
161	2022	Bonneville Dam	Corps of Engineers	9/30/1997	9/30/2032	518	518	7.150%	7.150%				518				
162	2022	Lower Snake Fish and Wildlife	Lower Snake Fish & Wildlife	9/30/1983	9/30/2033	30,488	9,472	7.150%	7.150%				3,068				
163		FY 2022 Subtotal:	-	-	-	383,398	342,797	-	-				336,393				
164	2023	Conservation	-	1/31/2011	1/31/2023	40,000	40,000	4.046%	4.046%				40,000				
165	2023	Bureau Direct	-	4/30/2009	4/30/2023	25,000	25,000	4.391%	4.391%				25,000				
166	2023	Conservation	-	4/30/2011	4/30/2023	35,000	35,000	3.932%	3.932%				35,000				
167	2023	Conservation	-	8/12/2011	8/31/2023	40,000	40,000	3.206%	3.206%				40,000				
168	2023	Conservation	-	11/20/2013	9/30/2023	27,000	27,000	3.375%	3.375%				27,000				
169	2023	Fish and Wildlife	-	11/20/2013	9/30/2023	23,000	23,000	3.375%	3.375%				23,000				
170	2023	Bonneville 2nd Powerhouse	Corps of Engineers	9/30/1983	9/30/2033	62,409	62,409	7.150%	7.150%				62,409				
171	2023	Lower Snake Fish and Wildlife	Lower Snake Fish & Wildlife	9/30/1983	9/30/2033	30,488	6,404	7.150%	7.150%				6,404				
172	2023	Bonneville 2nd Powerhouse	Corps of Engineers	9/30/1983	9/30/2033	694	694	7.150%	7.150%				694				
173	2023	Columbia Basin 3rd Powerhouse	Bureau of Reclamation	9/30/1983	9/30/2033	712	712	7.150%	7.150%				712				
174	2023	Columbia Basin 3rd Powerhouse	Bureau of Reclamation	9/30/1983	9/30/2033	13,003	13,003	7.150%	7.150%				13,003				
175	2023	Columbia Basin 3rd Powerhouse	Bureau of Reclamation	9/30/1984	9/30/2033	16,965	16,965	7.150%	7.150%				16,965				
176	2023	Columbia Basin 3rd Powerhouse	Bureau of Reclamation	9/30/1984	9/30/2033	13,192	13,192	7.150%	7.150%				13,192				
177	2023	Columbia Basin 3rd Powerhouse	Bureau of Reclamation	9/30/1984	9/30/2033	3,160	3,160	7.150%	7.150%				3,160				
178	2023	Columbia Basin 3rd Powerhouse	Bureau of Reclamation	9/30/1985	9/30/2033	2,060	2,060	7.150%	7.150%				1,019				
179	2023	Columbia Basin 3rd Powerhouse	Bureau of Reclamation	9/30/1985	9/30/2033	41,772	41,772	7.150%	7.150%				41,772				
180	2023	Columbia Basin 3rd Powerhouse	Bureau of Reclamation	9/30/1985	9/30/2033	107	107	7.150%	7.150%				107				
181		FY 2023 Subtotal:	-	-	-	374,562	350,478	-	-				349,437				
182	2024	Conservation	-	12/31/2014	12/31/2023	7,000	7,000	2.403%	2.403%				7,000				
183	2024	Conservation	-	12/31/2013	12/31/2023	55,000	55,000	1.010%	1.010%				55,000				
184	2024	Conservation	-	1/31/2015	1/31/2024	7,000	7,000	1.908%	1.908%				7,000				
185	2024	Fish and Wildlife	-	1/31/2015	1/31/2024	5,000	5,000	1.908%	1.908%				5,000				

TABLE 12D
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Fiscal Year	Project	Debt Type	In Service	Bond Due Date	Initial Principal	Current Principal	Original Rate	Effective Rate	Refinance Type	Refinanced Date	Rolled Maturity Date	Roll Rate	Principal Paid	Premium	Discount	Accrual	Reversal
186	2024	Conservation	-	2/28/2015	2/29/2024	8,000	8,000	2.251%	2.251%				8,000				
187	2024	Conservation	-	5/31/2014	4/30/2024	15,000	15,000	1.010%	1.010%				15,000				
188	2024	Fish and Wildlife	-	6/30/2009	6/30/2024	20,000	20,000	4.556%	4.556%				20,000				
189	2024	Bonneville 2nd Powerhouse	Corps of Engineers	9/30/1985	9/30/2033	9,138	9,138	7.150%	7.150%				9,138				
190	2024	Columbia Basin 3rd Powerhouse	Bureau of Reclamation	9/30/1985	9/30/2033	2,060	1,041	7.150%	7.150%				1,041				
191	2024	Bonneville 2nd Powerhouse	Corps of Engineers	9/30/1986	9/30/2033	30,578	30,578	7.150%	7.150%				30,578				
192	2024	Columbia Basin 3rd Powerhouse	Bureau of Reclamation	9/30/1986	9/30/2033	1,851	1,851	7.150%	7.150%				1,851				
193	2024	Columbia Basin 3rd Powerhouse	Bureau of Reclamation	9/30/1986	9/30/2033	15,538	15,538	7.150%	7.150%				15,538				
194	2024	Bonneville 2nd Powerhouse	Corps of Engineers	9/30/1987	9/30/2033	2,801	2,801	7.150%	7.150%				2,801				
195	2024	Columbia Basin 3rd Powerhouse	Bureau of Reclamation	9/30/1987	9/30/2033	1,730	1,730	7.150%	7.150%				1,730				
196	2024	Columbia Basin 3rd Powerhouse	Bureau of Reclamation	9/30/1987	9/30/2033	14,439	14,439	7.150%	7.150%				14,439				
197	2024	Bonneville 2nd Powerhouse	Corps of Engineers	9/30/1988	9/30/2033	1,271	1,271	7.150%	7.150%				1,271				
198	2024	Columbia Basin 3rd Powerhouse	Bureau of Reclamation	9/30/1988	9/30/2033	2,294	2,294	7.150%	7.150%				2,294				
199	2024	Columbia Basin 3rd Powerhouse	Bureau of Reclamation	9/30/1988	9/30/2033	4,351	4,351	7.150%	7.150%				4,351				
200	2024	Bonneville 2nd Powerhouse	Corps of Engineers	9/30/1989	9/30/2033	1,232	1,232	7.150%	7.150%				1,232				
201	2024	Columbia Basin 3rd Powerhouse	Bureau of Reclamation	9/30/1989	9/30/2033	10,902	10,902	7.150%	7.150%				10,902				
202	2024	Bonneville 2nd Powerhouse	Corps of Engineers	9/30/1990	9/30/2033	1,588	1,588	7.150%	7.150%				1,588				
203	2024	Columbia Basin 3rd Powerhouse	Bureau of Reclamation	9/30/1990	9/30/2033	6,383	6,383	7.150%	7.150%				6,383				
204	2024	Lower Snake Fish and Wildlife	Lower Snake Fish & Wildlife	9/30/1985	9/30/2035	47,921	47,921	7.150%	7.150%				47,921				
205	2024	John Day	Corps of Engineers	9/30/1995	9/30/2035	22	22	7.150%	7.150%				22				
206	2024	John Day	Corps of Engineers	9/30/1995	9/30/2035	52	52	7.150%	7.150%				52				
207	2024	John Day	Corps of Engineers	9/30/1995	9/30/2035	121	121	7.150%	7.150%				121				
208	2024	Lower Monument	Corps of Engineers	9/30/1996	9/30/2036	264	264	7.150%	7.150%				264				
209	2024	Lower Snake Fish and Wildlife	Lower Snake Fish & Wildlife	9/30/1987	9/30/2037	72,536	72,536	7.150%	7.150%				72,536				
210	2024	Libby	Corps of Engineers	9/30/1988	9/30/2038	18,043	14,781	7.150%	7.150%				14,781				
211	2024	Lower Snake Fish and Wildlife	Lower Snake Fish & Wildlife	9/30/1988	9/30/2038	805	805	7.150%	7.150%				805				
212	2024	Lower Snake Fish and Wildlife	Lower Snake Fish & Wildlife	9/30/1990	9/30/2040	1,557	1,557	7.150%	7.150%				1,557				
213	2024	Little Goose	Corps of Engineers	9/30/1995	9/30/2040	17	17	7.150%	7.150%				17				
214	2024	Little Goose	Corps of Engineers	9/30/1995	9/30/2040	450	450	7.150%	7.150%				450				
215	2024	Little Goose	Corps of Engineers	9/30/1995	9/30/2040	733	733	7.150%	7.150%				733				
216	2024	Lower Snake Fish and Wildlife	Lower Snake Fish & Wildlife	9/30/1991	9/30/2041	4,411	4,411	7.150%	7.150%				4,411				
217	2024	Ice Harbor	Corps of Engineers	9/30/1996	9/30/2041	371	371	7.150%	7.150%				371				
218	2024	Lower Snake Fish and Wildlife	Lower Snake Fish & Wildlife	9/30/1993	9/30/2043	71,632	71,632	7.150%	7.150%				71,632				
219		FY 2024 Subtotal:	-	-	-	442,091	437,810	-	-				400,236				
220	2025	Conservation	-	6/30/2014	10/31/2024	5,000	5,000	1.010%	1.010%				5,000				
221	2025	Conservation	-	10/31/2014	12/31/2024	10,000	10,000	1.010%	1.010%				10,000				
222	2025	Conservation	-	3/31/2015	3/31/2025	5,000	5,000	2.295%	2.295%				5,000				
223	2025	Conservation	-	5/31/2014	4/30/2025	3,000	3,000	1.010%	1.010%				3,000				
224	2025	Conservation	-	4/30/2014	6/30/2025	30,000	30,000	1.010%	1.010%				30,000				
225	2025	Conservation	-	7/31/2014	7/31/2025	12,000	12,000	1.010%	1.010%				12,000				
226	2025	Conservation	-	8/31/2014	9/30/2025	4,000	4,000	1.010%	1.010%				4,000				
227	2025	Lower Snake Fish and Wildlife	Lower Snake Fish & Wildlife	9/30/1993	9/30/2043	71,632	37,575	7.150%	7.150%				37,575				
228	2025	Bonneville 2nd Powerhouse	Corps of Engineers	9/30/1994	9/30/2044	5,700	5,700	7.150%	7.150%				5,700				
229	2025	Chief Joseph	Corps of Engineers	9/30/1994	9/30/2044	4,280	4,017	7.150%	7.150%				4,017				
230	2025	Lower Snake Fish and Wildlife	Lower Snake Fish & Wildlife	9/30/1994	9/30/2044	4,722	4,722	7.150%	7.150%				4,722				
231	2025	Columbia Basin 3rd Powerhouse	Bureau of Reclamation	9/30/1994	9/30/2044	12,631	12,631	7.150%	7.150%				12,631				
232	2025	Bonneville 2nd Powerhouse	Corps of Engineers	9/30/1995	9/30/2045	3,791	3,791	7.150%	7.150%				3,791				
233	2025	Columbia River Fish Mitigation	Corps of Engineers	9/30/1995	9/30/2045	43,343	39,282	7.150%	7.150%				39,282				
234	2025	Detroit Lake/Big Cliff	Corps of Engineers	9/30/1995	9/30/2045	38	38	7.150%	7.150%				38				
235	2025	Lookout Dam	Corps of Engineers	9/30/1995	9/30/2045	80	39	7.150%	7.150%				39				
236	2025	Lost Creek	Corps of Engineers	9/30/1995	9/30/2045	94	94	7.150%	7.150%				94				
237	2025	Lower Monument	Corps of Engineers	9/30/1995	9/30/2045	41	41	7.150%	7.150%				41				
238	2025	McNary	Corps of Engineers	9/30/1995	9/30/2045	16	16	7.150%	7.150%				16				
239	2025	Albeni Falls	Corps of Engineers	9/30/1995	9/30/2045	443	443	7.150%	7.150%				443				
240	2025	Chief Joseph	Corps of Engineers	9/30/1995	9/30/2045	147	147	7.150%	7.150%				147				
241	2025	Dworshak	Corps of Engineers	9/30/1995	9/30/2045	1,162	1,162	7.150%	7.150%				1,162				
242	2025	John Day	Corps of Engineers	9/30/1995	9/30/2045	37	37	7.150%	7.150%				37				
243	2025	Lookout Dam	Corps of Engineers	9/30/1995	9/30/2045	33	33	7.150%	7.150%				33				
244	2025	Lower Monument	Corps of Engineers	9/30/1995	9/30/2045	99	99	7.150%	7.150%				99				
245	2025	Albeni Falls	Corps of Engineers	9/30/1995	9/30/2045	531	531	7.150%	7.150%				531				
246	2025	Chief Joseph	Corps of Engineers	9/30/1995	9/30/2045	562	562	7.150%	7.150%				562				
247	2025	Lower Monument	Corps of Engineers	9/30/1995	9/30/2045	624	624	7.150%	7.150%				624				

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Fiscal Year	Project	Debt Type	In Service	Bond Due Date	Initial Principal	Current Principal	Original Rate	Effective Rate	Refinance Type	Refinanced Date	Rolled Maturity Date	Roll Rate	Principal Paid	Premium	Discount	Accrual	Reversal
248	2025	Albeni Falls	Corps of Engineers	9/30/1995	9/30/2045	1,105	1,105	7.150%	7.150%				1,105				
249	2025	Bonneville Dam	Corps of Engineers	9/30/1995	9/30/2045	243	243	7.150%	7.150%				243				
250	2025	Chief Joseph	Corps of Engineers	9/30/1995	9/30/2045	712	712	7.150%	7.150%				712				
251	2025	Columbia Basin	Bureau of Reclamation	9/30/1995	9/30/2045	287	287	7.150%	7.150%				287				
252	2025	Hungry Horse Dam	Bureau of Reclamation	9/30/1995	9/30/2045	6,190	6,190	7.150%	7.150%				6,190				
253	2025	Lower Monument	Corps of Engineers	9/30/1995	9/30/2045	1,122	1,122	7.150%	7.150%				1,122				
254	2025	Bonneville Dam	Corps of Engineers	9/30/1995	9/30/2045	410	410	7.150%	7.150%				410				
255	2025	Chief Joseph	Corps of Engineers	9/30/1995	9/30/2045	784	784	7.150%	7.150%				784				
256	2025	Columbia Basin	Bureau of Reclamation	9/30/1995	9/30/2045	2,511	2,453	7.150%	7.150%				2,453				
257	2025	Bonneville Dam	Corps of Engineers	9/30/1995	9/30/2045	440	440	7.150%	7.150%				440				
258	2025	John Day	Corps of Engineers	9/30/1995	9/30/2045	608	608	7.150%	7.150%				608				
259	2025	John Day	Corps of Engineers	9/30/1995	9/30/2045	7,653	7,653	7.150%	7.150%				7,653				
260	2025	Boise	Bureau of Reclamation	9/30/1996	9/30/2046	442	442	7.150%	7.150%				442				
261	2025	Bonneville 2nd Powerhouse	Corps of Engineers	9/30/1996	9/30/2046	376	376	7.150%	7.150%				376				
262	2025	Bonneville Dam	Corps of Engineers	9/30/1996	9/30/2046	18	18	7.150%	7.150%				18				
263	2025	Chief Joseph	Corps of Engineers	9/30/1996	9/30/2046	3	3	7.150%	7.150%				3				
264	2025	Columbia River Fish Mitigation	Corps of Engineers	9/30/1996	9/30/2046	2,431	2,431	7.150%	7.150%				2,431				
265	2025	Dworshak	Corps of Engineers	9/30/1996	9/30/2046	3	3	7.150%	7.150%				3				
266	2025	Green Peter/Foster	Corps of Engineers	9/30/1996	9/30/2046	26	26	7.150%	7.150%				26				
267	2025	Hills Creek	Corps of Engineers	9/30/1996	9/30/2046	28	28	7.150%	7.150%				28				
268	2025	Hungry Horse Dam	Bureau of Reclamation	9/30/1996	9/30/2046	15	15	7.150%	7.150%				15				
269	2025	Little Goose	Corps of Engineers	9/30/1996	9/30/2046	10	10	7.150%	7.150%				10				
270	2025	Lost Creek	Corps of Engineers	9/30/1996	9/30/2046	24	24	7.150%	7.150%				24				
271	2025	Lower Granite	Corps of Engineers	9/30/1996	9/30/2046	9	9	7.150%	7.150%				9				
272	2025	Lower Monument	Corps of Engineers	9/30/1996	9/30/2046	10	10	7.150%	7.150%				10				
273	2025	Lower Snake Fish and Wildlife	Lower Snake Fish & Wildlife	9/30/1996	9/30/2046	12,085	12,085	7.150%	7.150%				12,085				
274	2025	Bonneville Dam	Corps of Engineers	9/30/1996	9/30/2046	18	18	7.150%	7.150%				18				
275	2025	Chief Joseph	Corps of Engineers	9/30/1996	9/30/2046	4	4	7.150%	7.150%				4				
276	2025	Dworshak	Corps of Engineers	9/30/1996	9/30/2046	4	4	7.150%	7.150%				4				
277	2025	Hungry Horse Dam	Bureau of Reclamation	9/30/1996	9/30/2046	2	2	7.150%	7.150%				2				
278	2025	Little Goose	Corps of Engineers	9/30/1996	9/30/2046	10	10	7.150%	7.150%				10				
279	2025	Boise	Bureau of Reclamation	9/30/1996	9/30/2046	656	656	7.150%	7.150%				656				
280	2025	Little Goose	Corps of Engineers	9/30/1996	9/30/2046	211	211	7.150%	7.150%				211				
281	2025	The Dalles	Corps of Engineers	9/30/1996	9/30/2046	1,991	1,991	7.150%	7.150%				1,991				
282	2025	Bonneville Dam	Corps of Engineers	9/30/1996	9/30/2046	80	80	7.150%	7.150%				80				
283	2025	Chief Joseph	Corps of Engineers	9/30/1996	9/30/2046	355	355	7.150%	7.150%				355				
284	2025	Columbia Basin	Bureau of Reclamation	9/30/1996	9/30/2046	426	426	7.150%	7.150%				426				
285	2025	Little Goose	Corps of Engineers	9/30/1996	9/30/2046	241	241	7.150%	7.150%				241				
286	2025	Lower Granite	Corps of Engineers	9/30/1996	9/30/2046	625	625	7.150%	7.150%				625				
287	2025	McNary	Corps of Engineers	9/30/1996	9/30/2046	619	619	7.150%	7.150%				619				
288	2025	Bonneville Dam	Corps of Engineers	9/30/1996	9/30/2046	109	109	7.150%	7.150%				109				
289	2025	Chief Joseph	Corps of Engineers	9/30/1996	9/30/2046	729	729	7.150%	7.150%				729				
290	2025	Columbia Basin	Bureau of Reclamation	9/30/1996	9/30/2046	368	368	7.150%	7.150%				368				
291	2025	Dworshak	Corps of Engineers	9/30/1996	9/30/2046	46	46	7.150%	7.150%				46				
292	2025	Little Goose	Corps of Engineers	9/30/1996	9/30/2046	520	520	7.150%	7.150%				520				
293	2025	Bonneville Dam	Corps of Engineers	9/30/1996	9/30/2046	142	142	7.150%	7.150%				142				
294	2025	Little Goose	Corps of Engineers	9/30/1996	9/30/2046	3,909	3,909	7.150%	7.150%				3,909				
295	2025	Bonneville Dam	Corps of Engineers	9/30/1996	9/30/2046	223	223	7.150%	7.150%				223				
296	2025	Bonneville Dam	Corps of Engineers	9/30/1996	9/30/2046	751	751	7.150%	7.150%				751				
297	2025	Bonneville Dam	Corps of Engineers	9/30/1996	9/30/2046	1,322	1,322	7.150%	7.150%				1,322				
298	2025	Albeni Falls	Corps of Engineers	9/30/1997	9/30/2047	431	431	7.150%	7.150%				431				
299	2025	Columbia Basin	Bureau of Reclamation	9/30/1997	9/30/2047	3,393	3,393	7.150%	7.150%				3,393				
300	2025	Cougar	Corps of Engineers	9/30/1997	9/30/2047	26	26	7.150%	7.150%				26				
301	2025	Dworshak	Corps of Engineers	9/30/1997	9/30/2047	7,588	7,588	7.150%	7.150%				7,588				
302	2025	Little Goose	Corps of Engineers	9/30/1997	9/30/2047	1	1	7.150%	7.150%				1				
303	2025	Lower Granite	Corps of Engineers	9/30/1997	9/30/2047	677	677	7.150%	7.150%				677				
304	2025	Lower Snake Fish and Wildlife	Lower Snake Fish & Wildlife	9/30/1997	9/30/2047	2,173	2,173	7.150%	7.150%				2,173				
305	2025	Boise	Bureau of Reclamation	9/30/1997	9/30/2047	2,266	2,266	7.150%	7.150%				2,266				
306	2025	Chief Joseph	Corps of Engineers	9/30/1997	9/30/2047	657	657	7.150%	7.150%				657				
307	2025	Hungry Horse Dam	Bureau of Reclamation	9/30/1997	9/30/2047	111	111	7.150%	7.150%				111				
308	2025	Ice Harbor	Corps of Engineers	9/30/1997	9/30/2047	67	67	7.150%	7.150%				67				
309	2025	John Day	Corps of Engineers	9/30/1997	9/30/2047	179	179	7.150%	7.150%				179				

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Fiscal Year	Project	Debt Type	In Service	Bond Due Date	Initial Principal	Current Principal	Original Rate	Effective Rate	Refinance Type	Refinanced Date	Rolled Maturity Date	Roll Rate	Principal Paid	Premium	Discount	Accrual	Reversal
310	2025	Libby	Corps of Engineers	9/30/1997	9/30/2047	660	660	7.150%	7.150%								660
311	2025	Minidoka/Palisades	Bureau of Reclamation	9/30/1997	9/30/2047	50,911	50,911	7.150%	7.150%								50,911
312	2025	Bonneville Dam	Corps of Engineers	9/30/1997	9/30/2047	161	161	7.150%	7.150%								161
313	2025	Bonneville Dam	Corps of Engineers	9/30/1999	9/30/2049	19,368	19,368	5.375%	5.375%								19,368
314	2025	Columbia River Fish Mitigation	Corps of Engineers	9/30/1999	9/30/2049	14,115	14,115	5.375%	5.375%								14,115
315	2025	Dworshak	Corps of Engineers	9/30/1999	9/30/2049	630	630	5.375%	5.375%								630
316	2025	Ice Harbor	Corps of Engineers	9/30/1999	9/30/2049	5,516	5,516	5.375%	5.375%								5,516
317	2025	John Day	Corps of Engineers	9/30/1999	9/30/2049	3,510	3,510	5.375%	5.375%								3,510
318	2025	Lower Granite	Corps of Engineers	9/30/1999	9/30/2049	856	856	5.375%	5.375%								856
319	2025	Lower Snake Fish and Wildlife	Lower Snake Fish & Wildlife	9/30/1999	9/30/2049	7	7	5.375%	5.375%								7
320	2025	Bonneville Dam	Corps of Engineers	9/30/2000	9/30/2050	24,446	24,446	6.125%	6.125%								24,446
321	2025	Columbia River Fish Mitigation	Corps of Engineers	9/30/2000	9/30/2050	47,006	47,006	6.125%	6.125%								47,006
322	2025	Hills Creek	Corps of Engineers	9/30/2000	9/30/2050	2,630	2,630	6.125%	6.125%								2,630
323	2025	Ice Harbor	Corps of Engineers	9/30/2000	9/30/2050	548	548	6.125%	6.125%								548
324	2025	John Day	Corps of Engineers	9/30/2000	9/30/2050	2,761	2,761	6.125%	6.125%								2,761
325	2025	Lookout Dam	Corps of Engineers	9/30/2000	9/30/2050	5,098	5,098	6.125%	6.125%								5,098
326	2025	Lower Snake Fish and Wildlife	Lower Snake Fish & Wildlife	9/30/2000	9/30/2050	1,529	1,529	6.125%	6.125%								1,529
327	2025	The Dalles	Corps of Engineers	9/30/2000	9/30/2050	2,588	2,588	6.125%	6.125%								2,588
328	2025	Bonneville Dam	Corps of Engineers	9/30/2001	9/30/2051	2,530	2,530	5.875%	5.875%								2,530
329	2025	Chief Joseph	Corps of Engineers	9/30/2001	9/30/2051	345	345	5.875%	5.875%								345
330	2025	Columbia Basin	Bureau of Reclamation	9/30/2001	9/30/2051	69,226	69,226	5.875%	5.875%								69,226
331	2025	Columbia River Fish Mitigation	Corps of Engineers	9/30/2001	9/30/2051	6,168	6,168	5.875%	5.875%								6,168
332	2025	Detroit Lake/Big Cliff	Corps of Engineers	9/30/2001	9/30/2051	282	282	5.875%	5.875%								282
333	2025	Green Peter/Foster	Corps of Engineers	9/30/2001	9/30/2051	200	200	5.875%	5.875%								200
334	2025	Hills Creek	Corps of Engineers	9/30/2001	9/30/2051	8	8	5.875%	5.875%								8
335	2025	Hungry Horse Dam	Bureau of Reclamation	9/30/2001	9/30/2051	552	552	5.875%	5.875%								552
336	2025	Ice Harbor	Corps of Engineers	9/30/2001	9/30/2051	764	764	5.875%	5.875%								764
337	2025	John Day	Corps of Engineers	9/30/2001	9/30/2051	619	619	5.875%	5.875%								619
338	2025	Libby	Corps of Engineers	9/30/2001	9/30/2051	5,562	5,562	5.875%	5.875%								5,562
339	2025	Little Goose	Corps of Engineers	9/30/2001	9/30/2051	4,608	4,608	5.875%	5.875%								4,608
340	2025	Lost Creek	Corps of Engineers	9/30/2001	9/30/2051	147	147	5.875%	5.875%								147
341	2025	Lower Granite	Corps of Engineers	9/30/2001	9/30/2051	2,025	2,025	5.875%	5.875%								2,025
342	2025	Lower Monument	Corps of Engineers	9/30/2001	9/30/2051	3,301	3,301	5.875%	5.875%								3,301
343	2025	Lower Snake Fish and Wildlife	Lower Snake Fish & Wildlife	9/30/2001	9/30/2051	325	325	5.875%	5.875%								325
344	2025	McNary	Corps of Engineers	9/30/2001	9/30/2051	1,046	1,046	5.875%	5.875%								1,046
345	2025	Minidoka/Palisades	Bureau of Reclamation	9/30/2001	9/30/2051	42	42	5.875%	5.875%								42
346	2025	RRP - Green Springs	Bureau of Reclamation	9/30/2001	9/30/2051	11,145	11,145	5.875%	5.875%								11,145
347	2025	Yakima Roza	Bureau of Reclamation	9/30/2001	9/30/2051	15	14	5.875%	5.875%								14
348	2025	Bonneville Dam	Corps of Engineers	9/30/2002	9/30/2052	448	448	5.500%	5.500%								448
349	2025	Chief Joseph	Corps of Engineers	9/30/2002	9/30/2052	2	2	5.500%	5.500%								2
350	2025	Columbia River Fish Mitigation	Corps of Engineers	9/30/2002	9/30/2052	8,797	8,797	5.500%	5.500%								8,797
351	2025	Detroit Lake/Big Cliff	Corps of Engineers	9/30/2002	9/30/2052	18	18	5.500%	5.500%								18
352	2025	Dworshak	Corps of Engineers	9/30/2002	9/30/2052	199	199	5.500%	5.500%								199
353	2025	Hills Creek	Corps of Engineers	9/30/2002	9/30/2052	2	2	5.500%	5.500%								2
354	2025	Ice Harbor	Corps of Engineers	9/30/2002	9/30/2052	1,014	1,014	5.500%	5.500%								1,014
355	2025	Little Goose	Corps of Engineers	9/30/2002	9/30/2052	27	27	5.500%	5.500%								27
356	2025	Lower Granite	Corps of Engineers	9/30/2002	9/30/2052	1,275	1,275	5.500%	5.500%								1,275
357	2025	Lower Monument	Corps of Engineers	9/30/2002	9/30/2052	29	29	5.500%	5.500%								29
358	2025	Lower Snake Fish and Wildlife	Lower Snake Fish & Wildlife	9/30/2002	9/30/2052	890	890	5.500%	5.500%								890
359	2025	The Dalles	Corps of Engineers	9/30/2002	9/30/2052	1,226	1,226	5.500%	5.500%								1,226
360	2025	John Day	Corps of Engineers	9/30/2004	9/30/2054	2,830	2,830	5.375%	5.375%								2,096
361	2025	Little Goose	Corps of Engineers	9/30/2004	9/30/2054	68	67	5.375%	5.375%								67
362	2025	Lower Monument	Corps of Engineers	9/30/2004	9/30/2054	3,423	3,423	5.375%	5.375%								3,423
363	2025	Lower Snake Fish and Wildlife	Lower Snake Fish & Wildlife	9/30/2004	9/30/2054	230	230	5.375%	5.375%								230
364	2025	McNary	Corps of Engineers	9/30/2004	9/30/2054	6,138	6,138	5.375%	5.375%								6,138
365	2025	The Dalles	Corps of Engineers	9/30/2004	9/30/2054	182	182	5.375%	5.375%								182
366		FY 2025 Subtotal:	-	-	-	605,526	567,045	-	-				566,311				

TABLE 12D
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A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R
Fiscal Year	Project	Debt Type	In Service	Bond Due Date	Initial Principal	Current Principal	Original Rate	Effective Rate	Refinance Type	Refinanced Date	Rolled Maturity Date	Roll Rate	Principal Paid	Premium	Discount	Accrual	Reversal
367	2026	Conservation	-	10/31/2013	10/31/2025	34,000	34,000	3.568%	3.568%				34,000				
368	2026	Conservation	-	1/31/2014	1/31/2026	5,000	5,000	3.621%	3.621%				5,000				
369	2026	Fish and Wildlife	-	1/31/2011	1/31/2026	50,000	50,000	4.440%	4.440%				50,000				
370	2026	Fish and Wildlife	-	2/28/2011	2/28/2026	15,000	15,000	4.398%	4.398%				15,000				
371	2026	Fish and Wildlife	-	6/22/2011	6/30/2026	15,000	15,000	4.205%	4.205%				15,000				
372	2026	Bureau Direct	-	1/31/2011	1/31/2039	35,000	35,000	5.040%	5.040%				261		5		
373	2026	Bureau Direct	-	6/30/2009	6/30/2039	25,000	25,000	5.192%	5.192%				25,000		856		
374	2026	Corps	-	5/31/2017	5/31/2044	13,000	13,000	5.060%	5.060%				13,000				
375	2026	Bureau Direct	-	6/30/2017	6/30/2044	8,000	8,000	5.060%	5.060%				8,000				
376	2026	Bureau Direct	-	7/31/2017	7/31/2044	9,000	9,000	5.060%	5.060%				9,000				
377	2026	Corps	-	6/30/2017	6/30/2045	16,000	16,000	5.090%	5.090%				16,000				
378	2026	Corps	-	7/31/2017	7/31/2045	16,000	16,000	5.090%	5.090%				16,000				
379	2026	Corps	-	8/31/2017	8/31/2046	14,000	14,000	5.110%	5.110%				14,000				
380	2026	Bureau Direct	-	9/30/2017	9/30/2046	15,000	15,000	5.110%	5.110%				15,000				
381	2026	Bureau Direct	-	8/31/2017	8/31/2047	11,000	11,000	5.140%	5.140%				11,000				
382	2026	Corps	-	9/30/2017	9/30/2047	19,000	19,000	5.140%	5.140%				19,000				
383	2026	Bonneville Dam	Corps of Engineers	9/30/2003	9/30/2053	4,581	4,581	5.125%	5.125%				4,581				
384	2026	Columbia River Fish Mitigation	Corps of Engineers	9/30/2003	9/30/2053	68,440	68,440	5.125%	5.125%				68,440				
385	2026	Detroit Lake/Big Cliff	Corps of Engineers	9/30/2003	9/30/2053	223	223	5.125%	5.125%				223				
386	2026	Dworshak	Corps of Engineers	9/30/2003	9/30/2053	761	761	5.125%	5.125%				761				
387	2026	Ice Harbor	Corps of Engineers	9/30/2003	9/30/2053	50	50	5.125%	5.125%				50				
388	2026	Little Goose	Corps of Engineers	9/30/2003	9/30/2053	146	146	5.125%	5.125%				146				
389	2026	Lookout Dam	Corps of Engineers	9/30/2003	9/30/2053	135	135	5.125%	5.125%				135				
390	2026	Lower Granite	Corps of Engineers	9/30/2003	9/30/2053	42	42	5.125%	5.125%				42				
391	2026	Lower Monument	Corps of Engineers	9/30/2003	9/30/2053	22	22	5.125%	5.125%				22				
392	2026	Lower Snake Fish and Wildlife	Lower Snake Fish & Wildlife	9/30/2003	9/30/2053	98	98	5.125%	5.125%				98				
393	2026	McNary	Corps of Engineers	9/30/2003	9/30/2053	97	97	5.125%	5.125%				97				
394	2026	Chief Joseph	Corps of Engineers	9/30/2003	9/30/2053	992	992	5.125%	5.125%				992				
395	2026	Bonneville Dam	Corps of Engineers	9/30/2004	9/30/2054	26,741	26,741	5.375%	5.375%				26,741				
396	2026	Columbia River Fish Mitigation	Corps of Engineers	9/30/2004	9/30/2054	60,581	60,581	5.375%	5.375%				60,581				
397	2026	Cougar	Corps of Engineers	9/30/2004	9/30/2054	3,622	3,622	5.375%	5.375%				3,622				
398	2026	Ice Harbor	Corps of Engineers	9/30/2004	9/30/2054	3,321	3,321	5.375%	5.375%				3,321				
399	2026	John Day	Corps of Engineers	9/30/2004	9/30/2054	2,830	734	5.375%	5.375%				734				
400	2026	Albeni Falls	Corps of Engineers	9/30/2005	9/30/2055	481	481	5.125%	5.125%				481				
401	2026	Boise	Bureau of Reclamation	9/30/2005	9/30/2055	903	903	5.125%	5.125%				903				
402	2026	Bonneville Dam	Corps of Engineers	9/30/2005	9/30/2055	19,725	19,725	5.125%	5.125%				19,725				
403	2026	Columbia Basin	Bureau of Reclamation	9/30/2005	9/30/2055	10,963	10,963	5.125%	5.125%				10,963				
404	2026	Columbia River Fish Mitigation	Corps of Engineers	9/30/2005	9/30/2055	52,039	52,039	5.125%	5.125%				52,039				
405	2026	Cougar	Corps of Engineers	9/30/2005	9/30/2055	8,130	8,130	5.125%	5.125%				8,130				
406	2026	Detroit Lake/Big Cliff	Corps of Engineers	9/30/2005	9/30/2055	1,031	1,031	5.125%	5.125%				1,031				
407	2026	Dworshak	Corps of Engineers	9/30/2005	9/30/2055	713	713	5.125%	5.125%				713				
408	2026	Hills Creek	Corps of Engineers	9/30/2005	9/30/2055	46	46	5.125%	5.125%				46				
409	2026	Hungry Horse Dam	Bureau of Reclamation	9/30/2005	9/30/2055	2,951	2,951	5.125%	5.125%				2,951				
410	2026	John Day	Corps of Engineers	9/30/2005	9/30/2055	2,828	2,827	5.125%	5.125%				2,827				
411	2026	Lookout Dam	Corps of Engineers	9/30/2005	9/30/2055	7,355	7,355	5.125%	5.125%				7,355				
412	2026	Lower Granite	Corps of Engineers	9/30/2005	9/30/2055	393	393	5.125%	5.125%				393				
413	2026	Lower Monument	Corps of Engineers	9/30/2005	9/30/2055	527	527	5.125%	5.125%				527				
414	2026	Lower Snake Fish and Wildlife	Lower Snake Fish & Wildlife	9/30/2005	9/30/2055	4	4	5.125%	5.125%				4				
415	2026	McNary	Corps of Engineers	9/30/2005	9/30/2055	550	550	5.125%	5.125%				550				
416	2026	The Dalles	Corps of Engineers	9/30/2005	9/30/2055	36,019	36,019	5.125%	5.125%				36,019				
417	2026	Yakima Chandler/Kenniwick	Bureau of Reclamation	9/30/2005	9/30/2055	833	833	5.125%	5.125%				833				
418		FY 2026 Subtotal:	-	-	-	618,170	616,074	-	-				581,335		861		
419	2027	Fish and Wildlife	-	10/31/2013	12/31/2026	28,000	28,000	3.717%	3.717%				28,000				
420	2027	Conservation	-	11/30/2014	3/31/2027	6,000	6,000	1.010%	1.010%				6,000				
421	2027	Fish and Wildlife	-	5/31/2014	4/30/2027	11,000	11,000	1.010%	1.010%				11,000				
422	2027	Fish and Wildlife	-	10/31/2013	5/31/2027	11,000	11,000	3.762%	3.762%				11,000				
423	2027	Fish and Wildlife	-	11/30/2013	5/31/2027	5,000	5,000	1.010%	1.010%				5,000				
424	2027	Fish and Wildlife	-	10/31/2016	10/31/2029	3,000	3,000	4.700%	4.700%				3,000				
425	2027	Fish and Wildlife	-	11/30/2016	11/30/2029	2,000	2,000	4.700%	4.700%				2,000				
426	2027	Fish and Wildlife	-	12/31/2016	12/31/2030	3,000	3,000	4.720%	4.720%				3,000				
427	2027	Fish and Wildlife	-	1/31/2017	1/31/2031	2,000	2,000	4.720%	4.720%				2,000				
428	2027	Fish and Wildlife	-	2/28/2017	2/28/2032	1,000	1,000	4.750%	4.750%				1,000				

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Fiscal Year	Project	Debt Type	In Service	Bond Due Date	Initial Principal	Current Principal	Original Rate	Effective Rate	Refinance Type	Refinanced Date	Rolled Maturity Date	Roll Rate	Principal Paid	Premium	Discount	Accrual	Reversal
429	2027	Fish and Wildlife	-	3/31/2017	3/31/2032	1,000	1,000	4.750%	4.750%				1,000				
430	2027	Fish and Wildlife	-	4/30/2017	4/30/2032	1,000	1,000	4.750%	4.750%				1,000				
431	2027	Fish and Wildlife	-	5/31/2017	5/31/2032	1,000	1,000	4.750%	4.750%				1,000				
432	2027	Fish and Wildlife	-	6/30/2017	6/30/2032	2,000	2,000	4.750%	4.750%				2,000				
433	2027	Fish and Wildlife	-	7/31/2017	7/31/2032	3,000	3,000	4.750%	4.750%				3,000				
434	2027	Fish and Wildlife	-	8/31/2017	8/31/2032	2,000	2,000	4.750%	4.750%				2,000				
435	2027	Fish and Wildlife	-	9/30/2017	9/30/2032	10,000	10,000	4.750%	4.750%				10,000				
436	2027	Bureau Direct	-	6/22/2011	6/30/2036	30,000	30,000	4.629%	4.629%				29,804			196	
437	2027	Bureau Direct	-	6/22/2011	6/30/2038	30,000	30,000	4.700%	4.700%				29,742			258	
438	2027	Bureau Direct	-	8/31/2016	8/31/2038	7,000	7,000	4.610%	4.610%				7,000				
439	2027	Corps	-	8/31/2016	8/31/2038	9,000	9,000	4.610%	4.610%				9,000				
440	2027	Bureau Direct	-	9/30/2016	9/30/2038	9,000	9,000	4.610%	4.610%				9,000				
441	2027	Corps	-	9/30/2016	9/30/2038	12,000	12,000	4.610%	4.610%				12,000				
442	2027	Bureau Direct	-	10/31/2016	10/31/2038	7,000	7,000	4.930%	4.930%				7,000				
443	2027	Corps	-	10/31/2016	10/31/2038	10,000	10,000	4.930%	4.930%				10,000				
444	2027	Bureau Direct	-	11/30/2016	11/30/2038	9,000	9,000	4.930%	4.930%				9,000				
445	2027	Bureau Direct	-	1/31/2011	1/31/2039	35,000	34,739	5.040%	5.040%				34,739			688	
446	2027	Corps	-	11/30/2016	11/30/2039	12,000	12,000	4.960%	4.960%				12,000				
447	2027	Corps	-	12/31/2016	12/31/2039	12,000	12,000	4.960%	4.960%				12,000				
448	2027	Bureau Direct	-	12/31/2016	12/31/2039	7,000	7,000	4.960%	4.960%				7,000				
449	2027	Bureau Direct	-	2/28/2011	2/29/2040	50,000	50,000	4.995%	4.995%				50,000			649	
450	2027	Corps	-	1/31/2017	1/31/2041	13,000	13,000	4.980%	4.980%				13,000				
451	2027	Bureau Direct	-	1/31/2017	1/31/2041	10,000	10,000	4.980%	4.980%				10,000				
452	2027	Bureau Direct	-	2/28/2017	2/28/2041	1,000	1,000	4.980%	4.980%				1,000				
453	2027	Corps	-	2/28/2017	2/28/2042	14,000	14,000	5.010%	5.010%				14,000				
454	2027	Corps	-	3/31/2017	3/31/2042	11,000	11,000	5.010%	5.010%				11,000				
455	2027	Bureau Direct	-	3/31/2017	3/31/2042	7,000	7,000	5.010%	5.010%				7,000				
456	2027	Corps	-	4/30/2017	4/30/2043	14,000	14,000	5.040%	5.040%				14,000				
457	2027	Bureau Direct	-	4/30/2017	4/30/2043	10,000	10,000	5.040%	5.040%				10,000				
458	2027	Bureau Direct	-	5/31/2017	5/31/2043	8,000	8,000	5.040%	5.040%				8,000				
459	2027	Boise	Bureau of Reclamation	9/30/2007	9/30/2057	76	76	5.000%	5.000%				76				
460	2027	Bonneville Dam	Corps of Engineers	9/30/2007	9/30/2057	1,124	1,124	5.000%	5.000%				1,124				
461	2027	Columbia Basin	Bureau of Reclamation	9/30/2007	9/30/2057	929	929	5.000%	5.000%				929				
462	2027	Columbia River Fish Mitigation	Corps of Engineers	9/30/2007	9/30/2057	53,525	53,525	5.000%	5.000%				53,525				
463	2027	Cougar	Corps of Engineers	9/30/2007	9/30/2057	120	120	5.000%	5.000%				120				
464	2027	Hungry Horse Dam	Bureau of Reclamation	9/30/2007	9/30/2057	294	294	5.000%	5.000%				294				
465	2027	John Day	Corps of Engineers	9/30/2007	9/30/2057	233	233	5.000%	5.000%				233				
466	2027	Lookout Dam	Corps of Engineers	9/30/2007	9/30/2057	572	572	5.000%	5.000%				572				
467	2027	The Dalles	Corps of Engineers	9/30/2007	9/30/2057	140	140	5.000%	5.000%				140				
468	2027	Columbia River Fish Mitigation	Corps of Engineers	9/30/2017	9/30/2067	129,451	129,451	4.580%	4.580%				115,842				
469		FY 2027 Subtotal:	-	-	-	605,463	605,202	-	-				591,138	1,337	454		
470	2028	Fish and Wildlife	-	3/31/2015	3/31/2028	3,000	3,000	2.511%	2.511%				3,000				
471	2028	Fish and Wildlife	-	1/31/2014	1/31/2029	7,000	7,000	3.896%	3.896%				7,000			3	
472	2028	Fish and Wildlife	-	1/31/2016	1/31/2029	3,000	3,000	4.260%	4.260%				3,000				
473	2028	Fish and Wildlife	-	2/28/2016	2/28/2029	3,000	3,000	4.260%	4.260%				3,000				
474	2028	Fish and Wildlife	-	3/31/2016	3/31/2029	3,000	3,000	4.260%	4.260%				3,000				
475	2028	Fish and Wildlife	-	9/30/2015	9/30/2029	1,000	1,000	3.877%	3.877%				1,000				
476	2028	Fish and Wildlife	-	4/30/2016	4/30/2030	2,000	2,000	4.300%	4.300%				2,000				
477	2028	Fish and Wildlife	-	5/31/2016	5/31/2030	2,000	2,000	4.300%	4.300%				2,000				
478	2028	Fish and Wildlife	-	6/30/2016	6/30/2030	4,000	4,000	4.300%	4.300%				4,000				
479	2028	Fish and Wildlife	-	7/31/2016	7/31/2030	6,000	6,000	4.300%	4.300%				6,000				
480	2028	Fish and Wildlife	-	8/31/2016	8/31/2030	3,000	3,000	4.300%	4.300%				3,000				
481	2028	Fish and Wildlife	-	9/30/2016	9/30/2031	17,000	17,000	4.340%	4.340%				17,000				
482	2028	Bureau Direct	-	9/30/2015	9/30/2033	6,000	6,000	4.060%	4.060%				6,000				
483	2028	Corps	-	9/30/2015	9/30/2033	24,000	24,000	4.060%	4.060%				24,000				
484	2028	Bureau Direct	-	10/31/2015	10/31/2033	5,000	5,000	4.460%	4.460%				5,000				
485	2028	Corps	-	10/31/2015	10/31/2033	7,000	7,000	4.460%	4.460%				7,000				
486	2028	Corps	-	11/30/2015	11/30/2033	8,000	8,000	4.460%	4.460%				8,000				
487	2028	Bureau Direct	-	11/30/2015	11/30/2033	6,000	6,000	4.460%	4.460%				6,000				
488	2028	Corps	-	12/31/2015	12/31/2033	8,000	8,000	4.460%	4.460%				8,000				
489	2028	Bureau Direct	-	12/31/2015	12/31/2033	4,000	4,000	4.460%	4.460%				4,000				
490	2028	Bureau Direct	-	10/31/2010	10/31/2034	20,000	20,000	4.211%	4.211%				19,575				425

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A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R
Fiscal Year	Project	Debt Type	In Service	Bond Due Date	Initial Principal	Current Principal	Original Rate	Effective Rate	Refinance Type	Refinanced Date	Rolled Maturity Date	Roll Rate	Principal Paid	Premium	Discount	Accrual	Reversal
491	2028	Corps	-	1/31/2016	1/31/2035	9,000	9,000	4.500%	4.500%				9,000				
492	2028	Bureau Direct	-	1/31/2016	1/31/2035	6,000	6,000	4.500%	4.500%				6,000				
493	2028	Corps	-	2/29/2016	2/28/2035	9,000	9,000	4.500%	4.500%				9,000				
494	2028	Bureau Direct	-	2/28/2016	2/28/2035	1,000	1,000	4.500%	4.500%				1,000				
495	2028	Bureau Direct	-	3/31/2016	3/31/2035	4,000	4,000	4.500%	4.500%				4,000				
496	2028	Corps	-	3/31/2016	3/31/2036	7,000	7,000	4.530%	4.530%				7,000				
497	2028	Corps	-	4/30/2016	4/30/2036	9,000	9,000	4.530%	4.530%				9,000				
498	2028	Bureau Direct	-	4/30/2016	4/30/2036	6,000	6,000	4.530%	4.530%				6,000				
499	2028	Corps	-	5/31/2016	5/31/2036	9,000	9,000	4.530%	4.530%				9,000				
500	2028	Bureau Direct	-	5/31/2016	5/31/2036	5,000	5,000	4.530%	4.530%				5,000				
501	2028	Corps	-	6/30/2016	6/30/2037	11,000	11,000	4.570%	4.570%				11,000				
502	2028	Bureau Direct	-	6/30/2016	6/30/2037	5,000	5,000	4.570%	4.570%				5,000				
503	2028	Bureau Direct	-	7/31/2016	7/31/2037	5,000	5,000	4.570%	4.570%				5,000				
504	2028	Corps	-	7/31/2016	7/31/2037	11,000	11,000	4.570%	4.570%				11,000				
505	2028	Bureau Direct	-	8/12/2011	8/31/2037	30,000	30,000	4.208%	4.208%				28,856			1,144	
506	2028	Boise	Bureau of Reclamation	9/30/2006	9/30/2056	15	15	4.500%	4.500%				15				
507	2028	Bonneville Dam	Corps of Engineers	9/30/2006	9/30/2056	2,628	2,628	4.500%	4.500%				2,628				
508	2028	Columbia Basin	Bureau of Reclamation	9/30/2006	9/30/2056	1,987	1,987	4.500%	4.500%				1,987				
509	2028	Cougar	Corps of Engineers	9/30/2006	9/30/2056	109	109	4.500%	4.500%				109				
510	2028	Dworshak	Corps of Engineers	9/30/2006	9/30/2056	73	73	4.500%	4.500%				73				
511	2028	John Day	Corps of Engineers	9/30/2006	9/30/2056	601	601	4.500%	4.500%				601				
512	2028	Lower Monument	Corps of Engineers	9/30/2006	9/30/2056	285	285	4.500%	4.500%				285				
513	2028	Lower Snake Fish and Wildlife	Lower Snake Fish & Wildlife	9/30/2006	9/30/2056	379	379	4.500%	4.500%				379				
514	2028	The Dalles	Corps of Engineers	9/30/2006	9/30/2056	2,030	2,030	4.500%	4.500%				2,030				
515	2028	McNary	Corps of Engineers	9/30/2006	9/30/2056	4,080	4,080	4.500%	4.500%				4,080				
516	2028	Bonneville Dam	Corps of Engineers	9/30/2009	9/30/2059	2,744	2,744	4.375%	4.375%				2,744				
517	2028	Chief Joseph	Corps of Engineers	9/30/2009	9/30/2059	24,727	24,727	4.375%	4.375%				24,727				
518	2028	Columbia River Fish Mitigation	Corps of Engineers	9/30/2009	9/30/2059	103,203	103,203	4.375%	4.375%				103,203				
519	2028	Cougar	Corps of Engineers	9/30/2009	9/30/2059	121	121	4.375%	4.375%				121				
520	2028	Dworshak	Corps of Engineers	9/30/2009	9/30/2059	2,480	2,480	4.375%	4.375%				2,480				
521	2028	Ice Harbor	Corps of Engineers	9/30/2009	9/30/2059	2,615	2,615	4.375%	4.375%				2,615				
522	2028	Little Goose	Corps of Engineers	9/30/2009	9/30/2059	3,171	3,171	4.375%	4.375%				3,171				
523	2028	Lower Granite	Corps of Engineers	9/30/2009	9/30/2059	5,669	5,669	4.375%	4.375%				5,669				
524	2028	Lower Monument	Corps of Engineers	9/30/2009	9/30/2059	2,332	2,332	4.375%	4.375%				2,332				
525	2028	Lower Snake Fish and Wildlife	Lower Snake Fish & Wildlife	9/30/2009	9/30/2059	1,540	1,540	4.375%	4.375%				1,540				
526	2028	Boise	Bureau of Reclamation	9/30/2009	9/30/2059	2	2	4.375%	4.375%				2				
527	2028	Little Goose	Corps of Engineers	9/30/2010	9/30/2060	30	30	4.250%	4.250%				30				
528	2028	Lower Granite	Corps of Engineers	9/30/2010	9/30/2060	1,156	1,156	4.250%	4.250%				1,156				
529	2028	Albeni Falls	Corps of Engineers	9/30/2010	9/30/2060	42	42	4.250%	4.250%				42				
530	2028	Bonneville Dam	Corps of Engineers	9/30/2010	9/30/2060	1,425	1,425	4.250%	4.250%				1,425				
531	2028	Columbia Basin	Bureau of Reclamation	9/30/2010	9/30/2060	877	877	4.250%	4.250%				877				
532	2028	Columbia River Fish Mitigation	Corps of Engineers	9/30/2010	9/30/2060	56,832	56,832	4.250%	4.250%				56,832				
533	2028	Cougar	Corps of Engineers	9/30/2010	9/30/2060	59	59	4.250%	4.250%				59				
534	2028	Hungry Horse Dam	Bureau of Reclamation	9/30/2010	9/30/2060	779	779	4.250%	4.250%				779				
535	2028	Ice Harbor	Corps of Engineers	9/30/2010	9/30/2060	207	207	4.250%	4.250%				207				
536	2028	John Day	Corps of Engineers	9/30/2010	9/30/2060	356	356	4.250%	4.250%				356				
537	2028	Libby	Corps of Engineers	9/30/2010	9/30/2060	40	40	4.250%	4.250%				40				
538	2028	Lower Snake Fish and Wildlife	Lower Snake Fish & Wildlife	9/30/2010	9/30/2060	6	6	4.250%	4.250%				6				
539	2028	Hungry Horse Dam	Bureau of Reclamation	9/30/2014	9/30/2064	12	12	3.875%	3.875%				12				
540	2028	Lower Granite	Corps of Engineers	9/30/2014	9/30/2064	2,644	2,644	3.875%	3.875%				191				
541	2028	Lower Monument	Corps of Engineers	9/30/2014	9/30/2064	1,431	1,431	3.875%	3.875%				1,431				
542	2028	McNary	Corps of Engineers	9/30/2014	9/30/2064	759	759	3.875%	3.875%				759				
543	2028	Columbia River Fish Mitigation	Corps of Engineers	9/30/2016	9/30/2066	52,353	52,353	4.420%	4.420%				52,353				
544	2028	Columbia River Fish Mitigation	Corps of Engineers	9/30/2017	9/30/2067	129,451	13,609	4.580%	4.580%				13,609				
545	2028	FY 2028 Subtotal:	-	-	-	678,250	562,408	-	-				558,385	3	1,570		
546	2029	Fish and Wildlife	-	10/31/2013	10/31/2028	22,000	22,000	3.880%	3.880%				22,000				
547	2029	Fish and Wildlife	-	10/31/2015	10/31/2028	5,000	5,000	4.260%	4.260%				5,000				
548	2029	Fish and Wildlife	-	11/30/2015	11/30/2028	3,000	3,000	4.260%	4.260%				3,000				
549	2029	Fish and Wildlife	-	12/31/2015	12/31/2028	4,000	4,000	4.260%	4.260%				4,000				
550	2029	Fish and Wildlife	-	10/31/2014	1/31/2029	15,000	15,000	1.010%	1.010%				15,000				
551	2029	Fish and Wildlife	-	4/30/2014	2/28/2029	7,000	7,000	1.010%	1.010%				7,000				
552	2029	Fish and Wildlife	-	8/31/2014	7/31/2029	5,000	5,000	1.010%	1.010%				5,000				

TABLE 12D
Application of Amortization
October 1, 2014 - September 30, 2017 Cost Evaluation Period
(\$000s) (FY 2017)

A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R
Fiscal Year	Project	Debt Type	In Service	Bond Due Date	Initial Principal	Current Principal	Original Rate	Effective Rate	Refinance Type	Refinanced Date	Rolled Maturity Date	Roll Rate	Principal Paid	Premium	Discount	Accrual	Reversal
553	2029	Hungry Horse Dam	Bureau of Reclamation	9/30/2011	9/30/2061	503	503	3.750%	3.750%								503
554	2029	Bonneville Dam	Corps of Engineers	9/30/2011	9/30/2061	10,962	10,962	3.750%	3.750%								10,962
555	2029	Chief Joseph	Corps of Engineers	9/30/2011	9/30/2061	4	4	3.750%	3.750%								4
556	2029	Columbia Basin	Bureau of Reclamation	9/30/2011	9/30/2061	1,723	1,723	3.750%	3.750%								1,723
557	2029	Columbia River Fish Mitigation	Corps of Engineers	9/30/2011	9/30/2061	106,014	106,014	3.750%	3.750%								106,014
558	2029	Cougar	Corps of Engineers	9/30/2011	9/30/2061	282	282	3.750%	3.750%								282
559	2029	Green Peter/Foster	Corps of Engineers	9/30/2011	9/30/2061	87	87	3.750%	3.750%								87
560	2029	Hills Creek	Corps of Engineers	9/30/2011	9/30/2061	12	12	3.750%	3.750%								12
561	2029	Ioe Harbor	Corps of Engineers	9/30/2011	9/30/2061	819	819	3.750%	3.750%								819
562	2029	John Day	Corps of Engineers	9/30/2011	9/30/2061	175	175	3.750%	3.750%								175
563	2029	Libby	Corps of Engineers	9/30/2011	9/30/2061	152	152	3.750%	3.750%								152
564	2029	Lookout Dam	Corps of Engineers	9/30/2011	9/30/2061	17	17	3.750%	3.750%								17
565	2029	Lost Creek	Corps of Engineers	9/30/2011	9/30/2061	7	7	3.750%	3.750%								7
566	2029	Lower Granite	Corps of Engineers	9/30/2011	9/30/2061	8	8	3.750%	3.750%								8
567	2029	Lower Snake Fish and Wildlife	Lower Snake Fish & Wildlife	9/30/2011	9/30/2061	122	122	3.750%	3.750%								122
568	2029	McNary	Corps of Engineers	9/30/2011	9/30/2061	565	565	3.750%	3.750%								565
569	2029	Cougar	Corps of Engineers	9/30/2012	9/30/2062	139	139	3.375%	3.375%								139
570	2029	Hungry Horse Dam	Bureau of Reclamation	9/30/2012	9/30/2062	3	3	3.375%	3.375%								3
571	2029	Minidoka/Palisades	Bureau of Reclamation	9/30/2012	9/30/2062	7	7	3.375%	3.375%								7
572	2029	Green Peter/Foster	Corps of Engineers	9/30/2012	9/30/2062	28	28	3.375%	3.375%								28
573	2029	Chief Joseph	Corps of Engineers	9/30/2012	9/30/2062	28	28	3.375%	3.375%								28
574	2029	Columbia Basin	Bureau of Reclamation	9/30/2012	9/30/2062	11	11	3.375%	3.375%								11
575	2029	Columbia River Fish Mitigation	Corps of Engineers	9/30/2012	9/30/2062	101,616	101,616	3.375%	3.375%								101,616
576	2029	Hills Creek	Corps of Engineers	9/30/2012	9/30/2062	142	142	3.375%	3.375%								142
577	2029	Ioe Harbor	Corps of Engineers	9/30/2012	9/30/2062	115	115	3.375%	3.375%								115
578	2029	John Day	Corps of Engineers	9/30/2012	9/30/2062	6,161	6,161	3.375%	3.375%								6,161
579	2029	Libby	Corps of Engineers	9/30/2012	9/30/2062	16	16	3.375%	3.375%								16
580	2029	Lookout Dam	Corps of Engineers	9/30/2012	9/30/2062	294	294	3.375%	3.375%								294
581	2029	Lower Monument	Corps of Engineers	9/30/2012	9/30/2062	89	89	3.375%	3.375%								89
582	2029	McNary	Corps of Engineers	9/30/2012	9/30/2062	12	11	3.375%	3.375%								11
583	2029	RRP - Green Springs	Bureau of Reclamation	9/30/2012	9/30/2062	2	2	3.375%	3.375%								2
584	2029	Columbia Basin	Bureau of Reclamation	9/30/2013	9/30/2063	3,083	3,083	2.875%	2.875%								3,083
585	2029	Columbia River Fish Mitigation	Corps of Engineers	9/30/2013	9/30/2063	95,274	95,274	2.875%	2.875%								87,508
586	2029	Detroit Lake/Big Cliff	Corps of Engineers	9/30/2013	9/30/2063	528	528	2.875%	2.875%								528
587	2029	John Day	Corps of Engineers	9/30/2013	9/30/2063	17	17	2.875%	2.875%								17
588	2029	Little Goose	Corps of Engineers	9/30/2013	9/30/2063	66	66	2.875%	2.875%								66
589	2029	McNary	Corps of Engineers	9/30/2013	9/30/2063	1,000	1,000	2.875%	2.875%								1,000
590	2029	RRP - Green Springs	Bureau of Reclamation	9/30/2013	9/30/2063	1	1	2.875%	2.875%								1
591	2029	Cougar	Corps of Engineers	9/30/2014	9/30/2064	12	12	3.875%	3.875%								12
592	2029	Bonneville Dam	Corps of Engineers	9/30/2014	9/30/2064			3.875%	3.875%								
593	2029	Columbia River Fish Mitigation	Corps of Engineers	9/30/2014	9/30/2064	99,170	99,170	3.875%	3.875%								99,170
594	2029	Detroit Lake/Big Cliff	Corps of Engineers	9/30/2014	9/30/2064	18	18	3.875%	3.875%								18
595	2029	Dworshak	Corps of Engineers	9/30/2014	9/30/2064	50	50	3.875%	3.875%								50
596	2029	Green Peter/Foster	Corps of Engineers	9/30/2014	9/30/2064	385	385	3.875%	3.875%								385
597	2029	Lower Granite	Corps of Engineers	9/30/2014	9/30/2064	2,444	2,454	3.875%	3.875%								2,454
598	2029	Lower Snake Fish and Wildlife	Lower Snake Fish & Wildlife	9/30/2014	9/30/2064	222	222	3.875%	3.875%								222
599	2029	Columbia River Fish Mitigation	Corps of Engineers	9/30/2015	9/30/2065	121,391	121,391	3.250%	3.250%								121,391
600		FY 2029 Subtotal:	-	-	-	614,972	614,782	-	-								607,015

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Fiscal Year	Project	Debt Type	In Service	Bond Due Date	Initial Principal	Current Principal	Original Rate	Effective Rate	Refinance Type	Refinanced Date	Rolled Maturity Date	Roll Rate	Principal Paid	Premium	Discount	Accrual	Reversal
601	2030	Fish and Wildlife	-	11/30/2014	3/31/2030	8,000	8,000	1.010%	1.010%				8,000				
602	2030	Bureau Direct	-	9/30/2014	5/31/2032	16,000	16,000	1.010%	1.010%				15,127		873		
603	2030	Bureau Direct	-	9/30/2014	5/31/2032	10,000	10,000	1.010%	1.010%				9,454		546		
604	2030	Bureau Direct	-	9/30/2014	6/30/2033	11,000	11,000	1.010%	1.010%				9,976		1,024		
605	2030	Bureau Direct	-	9/30/2014	6/30/2033	12,000	12,000	1.010%	1.010%				10,883		1,117		
606	2030	Bureau Direct	-	9/30/2014	7/31/2033	15,000	15,000	1.010%	1.010%				13,603		1,397		
607	2030	Bureau Direct	-	2/27/2012	2/28/2034	55,000	55,000	1.010%	1.010%				49,039		5,961		
608	2030	Bureau Direct	-	6/30/2013	1/31/2039	35,000	35,000	1.010%	1.010%				27,521		7,479		
609	2030	Replacements	-	3/31/2018	3/31/2063	240,144	240,144	5.140%	5.140%				240,144				
610	2030	Bonneville Dam	Corps of Engineers	9/30/2013	9/30/2063	268	268	2.875%	2.875%				268				
611	2030	Chief Joseph	Corps of Engineers	9/30/2013	9/30/2063	10	10	2.875%	2.875%				10				
612	2030	Columbia River Fish Mitigation	Corps of Engineers	9/30/2013	9/30/2063	95,274	7,766	2.875%	2.875%				7,766				
613	2030	Cougar	Corps of Engineers	9/30/2013	9/30/2063	4,088	4,088	2.875%	2.875%				4,088				
614	2030	Replacements	-	3/31/2019	3/31/2064	240,144	240,144	5.140%	5.140%				240,144				
615	2030	Replacements	-	3/31/2020	3/31/2065	240,144	240,144	5.140%	5.140%				65,261				
616		FY 2030 Subtotal:	-	-	-	982,073	894,565	-	-				781,286		18,396		
617	2031	Bureau Direct	-	6/30/2013	1/31/2039	35,000		1.010%	1.010%								
618	2031	Replacements	-	3/31/2020	3/31/2065	240,144	174,884	5.140%	5.140%				174,884				
619	2031	Replacements	-	3/31/2021	3/31/2066	240,144	240,144	5.140%	5.140%				240,144				
620	2031	Replacements	-	3/31/2022	3/31/2067	240,144	240,144	5.140%	5.140%				240,144				
621	2031	Replacements	-	3/31/2023	3/31/2068	240,144	240,144	5.140%	5.140%				79,199				
622		FY 2031 Subtotal:	-	-	-	995,577	895,316	-	-				734,371				
623	2032	Replacements	-	3/31/2023	3/31/2068	240,144	160,945	5.140%	5.140%				160,945				
624	2032	Replacements	-	3/31/2024	3/31/2069	240,144	240,144	5.140%	5.140%				240,144				
625	2032	Replacements	-	3/31/2025	3/31/2070	240,144	240,144	5.140%	5.140%				240,144				
626	2032	Replacements	-	3/31/2026	3/31/2071	240,144	240,144	5.140%	5.140%				185,413				
627		FY 2032 Subtotal:	-	-	-	960,577	881,377	-	-				826,646				
628	2033	Replacements	-	3/31/2026	3/31/2071	240,144	54,731	5.140%	5.140%				54,731				
629	2033	Replacements	-	3/31/2027	3/31/2072	240,144	240,144	5.140%	5.140%				240,144				
630	2033	Replacements	-	3/31/2028	3/31/2073	240,144	240,144	5.140%	5.140%				240,144				
631	2033	Replacements	-	3/31/2029	3/31/2074	240,144	240,144	5.140%	5.140%				240,144				
632	2033	Replacements	-	3/31/2030	3/31/2075	240,144	240,144	5.140%	5.140%				188,987				
633		FY 2033 Subtotal:	-	-	-	1,200,721	1,015,308	-	-				884,151				
634	2034	Replacements	-	3/31/2030	3/31/2075	240,144	131,157	5.140%	5.140%				131,157				
635	2034	Replacements	-	3/31/2031	3/31/2076	240,144	240,144	5.140%	5.140%				240,144				
636	2034	Replacements	-	3/31/2032	3/31/2077	240,144	240,144	5.140%	5.140%				240,144				
637	2034	Replacements	-	3/31/2033	3/31/2078	240,144	240,144	5.140%	5.140%				240,144				
638		FY 2034 Subtotal:	-	-	-	960,577	851,590	-	-				851,590				
639	2035	Replacements	-	3/31/2034	3/31/2079	240,144	240,144	5.140%	5.140%				240,144				
640		FY 2035 Subtotal:	-	-	-	240,144	240,144	-	-				240,144				
641	2036	Replacements	-	3/31/2035	3/31/2080	240,144	240,144	5.140%	5.140%				240,144				
642		FY 2036 Subtotal:	-	-	-	240,144	240,144	-	-				240,144				
643	2037	Replacements	-	3/31/2036	3/31/2081	240,144	240,144	5.140%	5.140%				240,144				
644		FY 2037 Subtotal:	-	-	-	240,144	240,144	-	-				240,144				
645	2038	Replacements	-	3/31/2037	3/31/2082	240,144	240,144	5.140%	5.140%				240,144				
646		FY 2038 Subtotal:	-	-	-	240,144	240,144	-	-				240,144				
647	2039	Replacements	-	3/31/2038	3/31/2083	240,144	240,144	5.140%	5.140%				240,144				
648		FY 2039 Subtotal:	-	-	-	240,144	240,144	-	-				240,144				
649	2040	Replacements	-	3/31/2039	3/31/2084	240,144	240,144	5.140%	5.140%				240,144				
650		FY 2040 Subtotal:	-	-	-	240,144	240,144	-	-				240,144				
651	2041	Replacements	-	3/31/2040	3/31/2085	240,144	240,144	5.140%	5.140%				240,144				
652		FY 2041 Subtotal:	-	-	-	240,144	240,144	-	-				240,144				
653	2042	Replacements	-	3/31/2041	3/31/2086	240,144	240,144	5.140%	5.140%				240,144				
654		FY 2042 Subtotal:	-	-	-	240,144	240,144	-	-				240,144				
655	2043	Replacements	-	3/31/2042	3/31/2087	240,144	240,144	5.140%	5.140%				240,144				
656		FY 2043 Subtotal:	-	-	-	240,144	240,144	-	-				240,144				
657	2044	Replacements	-	3/31/2043	3/31/2088	240,144	240,144	5.140%	5.140%				240,144				
658		FY 2044 Subtotal:	-	-	-	240,144	240,144	-	-				240,144				
659	2045	Replacements	-	3/31/2044	3/31/2089	240,144	240,144	5.140%	5.140%				240,144				
660		FY 2045 Subtotal:	-	-	-	240,144	240,144	-	-				240,144				
661	2046	Replacements	-	3/31/2045	3/31/2090	240,144	240,144	5.140%	5.140%				240,144				
662		FY 2046 Subtotal:	-	-	-	240,144	240,144	-	-				240,144				

TABLE 12D
Application of Amortization
October 1, 2014 - September 30, 2017 Cost Evaluation Period
(\$000s) (FY 2017)

A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R
Fiscal Year	Project	Debt Type	In Service	Bond Due Date	Initial Principal	Current Principal	Original Rate	Effective Rate	Refinance Type	Refinanced Date	Rolled Maturity Date	Roll Rate	Principal Paid	Premium	Discount	Accrual	Reversal
663	2047	Replacements	-	3/31/2046	3/31/2091	240,144	240,144	5.140%	5.140%				240,144				
664		FY 2047 Subtotal:	-	-	-	240,144	240,144	-	-				240,144				
665	2048	Columbia River Fish Mitigation	Corps of Engineers	9/30/2006	9/30/2056	366,395	366,395	4.500%	4.500%				40,000				
666	2048	Replacements	-	3/31/2047	3/31/2092	240,144	240,144	5.140%	5.140%				240,144				
667		FY 2048 Subtotal:	-	-	-	606,539	606,539	-	-				280,144				
668	2049	Columbia River Fish Mitigation	Corps of Engineers	9/30/2006	9/30/2056	366,395	326,395	4.500%	4.500%				40,000				
669	2049	Replacements	-	3/31/2048	3/31/2093	240,144	240,144	5.140%	5.140%				240,144				
670		FY 2049 Subtotal:	-	-	-	606,539	566,539	-	-				280,144				
671	2050	Columbia River Fish Mitigation	Corps of Engineers	9/30/2006	9/30/2056	366,395	286,395	4.500%	4.500%				40,000				
672	2050	Replacements	-	3/31/2049	3/31/2094	240,144	240,144	5.140%	5.140%				240,144				
673		FY 2050 Subtotal:	-	-	-	606,539	526,539	-	-				280,144				
674	2051	Columbia River Fish Mitigation	Corps of Engineers	9/30/2006	9/30/2056	366,395	246,395	4.500%	4.500%				40,000				
675	2051	Replacements	-	3/31/2050	3/31/2095	240,144	240,144	5.140%	5.140%				240,144				
676		FY 2051 Subtotal:	-	-	-	606,539	486,539	-	-				280,144				
677	2052	Columbia River Fish Mitigation	Corps of Engineers	9/30/2006	9/30/2056	366,395	206,395	4.500%	4.500%				40,000				
678	2052	Replacements	-	3/31/2051	3/31/2096	240,144	240,144	5.140%	5.140%				240,144				
679		FY 2052 Subtotal:	-	-	-	606,539	446,539	-	-				280,144				
680	2053	Columbia River Fish Mitigation	Corps of Engineers	9/30/2006	9/30/2056	366,395	166,395	4.500%	4.500%				40,000				
681	2053	Replacements	-	3/31/2052	3/31/2097	240,144	240,144	5.140%	5.140%				240,144				
682		FY 2053 Subtotal:	-	-	-	606,539	406,539	-	-				280,144				
683	2054	Columbia River Fish Mitigation	Corps of Engineers	9/30/2006	9/30/2056	366,395	126,395	4.500%	4.500%				40,000				
684	2054	Replacements	-	3/31/2053	3/31/2098	240,144	240,144	5.140%	5.140%				240,144				
685		FY 2054 Subtotal:	-	-	-	606,539	366,539	-	-				280,144				
686	2055	Columbia River Fish Mitigation	Corps of Engineers	9/30/2006	9/30/2056	366,395	86,395	4.500%	4.500%				40,000				
687	2055	Replacements	-	3/31/2054	3/31/2099	240,144	240,144	5.140%	5.140%				240,144				
688		FY 2055 Subtotal:	-	-	-	606,539	326,539	-	-				280,144				
689	2056	Columbia River Fish Mitigation	Corps of Engineers	9/30/2006	9/30/2056	366,395	46,395	4.500%	4.500%				46,395				
690	2056	Replacements	-	3/31/2055	3/31/2100	240,144	240,144	5.140%	5.140%				240,144				
691		FY 2056 Subtotal:	-	-	-	606,539	286,539	-	-				286,539				
692	2057	Replacements	-	3/31/2056	3/31/2101	240,144	240,144	5.140%	5.140%				240,144				
693		FY 2057 Subtotal:	-	-	-	240,144	240,144	-	-				240,144				
694	2058	Boise	Bureau of Reclamation	9/30/2008	9/30/2058	64	64	4.875%	4.875%				64				
695	2058	Bonneville Dam	Corps of Engineers	9/30/2008	9/30/2058	14,609	14,609	4.875%	4.875%				14,609				
696	2058	Columbia River Fish Mitigation	Corps of Engineers	9/30/2008	9/30/2058	36,554	36,554	4.875%	4.875%				36,554				
697	2058	Dworshak	Corps of Engineers	9/30/2008	9/30/2058	10	10	4.875%	4.875%				10				
698	2058	Hungry Horse Dam	Bureau of Reclamation	9/30/2008	9/30/2058	76	76	4.875%	4.875%				76				
699	2058	Ice Harbor	Corps of Engineers	9/30/2008	9/30/2058	14	14	4.875%	4.875%				14				
700	2058	Libby	Corps of Engineers	9/30/2008	9/30/2058	1,567	1,567	4.875%	4.875%				1,567				
701	2058	Little Goose	Corps of Engineers	9/30/2008	9/30/2058	13	13	4.875%	4.875%				13				
702	2058	Lower Granite	Corps of Engineers	9/30/2008	9/30/2058	24	24	4.875%	4.875%				24				
703	2058	Lower Monument	Corps of Engineers	9/30/2008	9/30/2058	9	9	4.875%	4.875%				9				
704	2058	Lower Snake Fish and Wildlife	Lower Snake Fish & Wildlife	9/30/2008	9/30/2058	74	74	4.875%	4.875%				74				
705	2058	McNary	Corps of Engineers	9/30/2008	9/30/2058	215	215	4.875%	4.875%				215				
706	2058	The Dalles	Corps of Engineers	9/30/2008	9/30/2058	1,651	1,651	4.875%	4.875%				1,651				
707	2058	Chief Joseph	Corps of Engineers	9/30/2008	9/30/2058	3,500	3,500	4.875%	4.875%				3,500				
708	2058	Columbia Basin	Bureau of Reclamation	9/30/2008	9/30/2058	835	835	4.875%	4.875%				835				
709	2058	Replacements	-	3/31/2057	3/31/2102	240,144	240,144	5.140%	5.140%				240,144				
710		FY 2058 Subtotal:	-	-	-	299,360	299,360	-	-				299,360				

TABLE 12D
Application of Amortization
October 1, 2014 - September 30, 2017 Cost Evaluation Period
(\$000s) (FY 2017)

A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R
Fiscal Year	Project	Debt Type	In Service	Bond Due Date	Initial Principal	Current Principal	Original Rate	Effective Rate	Refinance Type	Refinanced Date	Rolled Maturity Date	Roll Rate	Principal Paid	Premium	Discount	Accrual	Reversal
711	2059	Albeni Falls	Corps of Engineers	9/30/2009	9/30/2059	57	57	4.375%									57
712	2059	Columbia Basin	Bureau of Reclamation	9/30/2009	9/30/2059	1,338	1,338	4.375%									1,338
713	2059	Hungry Horse Dam	Bureau of Reclamation	9/30/2009	9/30/2059	60	60	4.375%									60
714	2059	John Day	Corps of Engineers	9/30/2009	9/30/2059	1,548	1,548	4.375%									1,548
715	2059	Yakima Chandler/Kennwick	Bureau of Reclamation	9/30/2009	9/30/2059	15	15	4.375%									15
716	2059	Replacements	-	3/31/2058	3/31/2103	240,144	240,144	5.140%									240,144
717		FY 2059 Subtotal:	-	-	-	243,163	243,163	-									243,163
718	2060	Replacements	-	3/31/2059	3/31/2104	240,144	240,144	5.140%									240,144
719		FY 2060 Subtotal:	-	-	-	240,144	240,144	-									240,144
720	2061	Replacements	-	3/31/2060	3/31/2105	240,144	240,144	5.140%									240,144
721		FY 2061 Subtotal:	-	-	-	240,144	240,144	-									240,144
722	2062	Replacements	-	3/31/2061	3/31/2106	240,144	240,144	5.140%									240,144
723		FY 2062 Subtotal:	-	-	-	240,144	240,144	-									240,144
724	2063	Replacements	-	3/31/2062	3/31/2107	240,144	240,144	5.140%									240,144
725		FY 2063 Subtotal:	-	-	-	240,144	240,144	-									240,144
726	2064	Replacements	-	3/31/2063	3/31/2108	240,144	240,144	5.140%									240,144
727		FY 2064 Subtotal:	-	-	-	240,144	240,144	-									240,144
728	2065	Replacements	-	3/31/2064	3/31/2109	240,144	240,144	5.140%									240,144
729		FY 2065 Subtotal:	-	-	-	240,144	240,144	-									240,144
730	2066	Replacements	-	3/31/2065	3/31/2110	240,144	240,144	5.140%									240,144
731		FY 2066 Subtotal:	-	-	-	240,144	240,144	-									240,144
732	2067	Replacements	-	3/31/2066	3/31/2111	240,144	240,144	5.140%									240,144
733		FY 2067 Subtotal:	-	-	-	240,144	240,144	-									240,144
734	Grand Total					\$22,662,289	\$20,345,432	-					\$17,972,221	\$2,201	\$20,420		

TABLE 12F
Summary of Amortization
October 1, 2014 - September 30, 2017 Cost Evaluation Period
(\$000s) (FY 2017)

A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	AA	AB	AC	AD	
Obligation Type	General Project	Specific Project	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	
		Boise	-	-	-	-	-	-	-	-	-	-	3,365	983	76	17	-	-	-	-	-	-	-	-	-	-	-	-	-	-
		Columbia Basin	72	-	-	-	-	-	-	360	-	-	-	76,152	10,963	929	2,864	4,816	-	-	-	-	-	-	-	-	-	-	-	-
		Columbia Basin 3rd Powerhouse	49,367	50,728	-	50,295	-	46,936	52,848	-	89,930	58,529	12,631	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
		Hungry Horse Dam	-	-	-	-	-	-	1,731	-	-	-	-	6,870	2,951	294	792	506	-	-	-	-	-	-	-	-	-	-	-	-
		Minidoka/Palisades	-	-	-	-	-	-	-	-	-	-	-	50,953	-	-	-	7	-	-	-	-	-	-	-	-	-	-	-	-
		RRP - Green Springs	-	-	-	-	-	-	-	-	-	-	-	11,145	-	-	3	-	-	-	-	-	-	-	-	-	-	-	-	-
		Yakima Chandler/Kenniwick	-	-	-	-	-	-	-	-	-	-	-	-	833	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
		Yakima Roza	-	-	-	-	-	-	-	-	-	-	-	14	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
		Bureau of Reclamation Subtotal:	49,439	50,728	-	50,295	-	46,936	54,579	360	89,930	58,529	161,131	15,649	1,298	3,672	5,331	-	-	-	-	-	-	-	-	-	-	-	-	-
		Albeni Falls	-	-	-	-	-	-	-	-	-	-	-	2,510	481	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
		Bonneville 2nd Powerhouse	-	-	-	-	-	-	20,840	227,178	63,103	46,688	9,867	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
		Bonneville Dam	-	-	15,670	-	-	-	-	540	-	-	-	50,788	51,848	1,124	6,797	10,963	268	-	-	-	-	-	-	-	-	-	-	-
		Chief Joseph	-	21,535	8,977	9,672	65,997	-	94,304	193	-	-	-	8,317	992	-	24,727	31	10	-	-	-	-	-	-	-	-	-	-	-
		Columbia River Fish Mitigation	-	-	-	-	-	-	-	-	-	-	-	127,798	181,059	169,367	225,997	515,699	7,766	-	-	-	-	-	-	-	-	-	-	-
		Cougar	-	-	-	-	-	-	-	-	-	-	-	26	11,752	120	289	432	4,088	-	-	-	-	-	-	-	-	-	-	-
		Detroit Lake/Big Cliff	-	-	-	-	-	-	-	-	-	-	-	339	1,254	-	-	545	-	-	-	-	-	-	-	-	-	-	-	-
		Dworshak	-	-	-	-	-	-	218	209	-	-	-	9,631	1,474	-	2,553	50	-	-	-	-	-	-	-	-	-	-	-	-
		Green Peter/Foster	-	-	-	-	-	-	-	-	-	-	-	226	-	-	508	-	-	-	-	-	-	-	-	-	-	-	-	-
		Hills Creek	-	-	-	-	-	-	-	-	-	-	-	2,667	46	-	154	-	-	-	-	-	-	-	-	-	-	-	-	-
		Ice Harbor	20,721	-	-	-	-	-	-	-	78	-	371	7,909	3,370	-	2,822	934	-	-	-	-	-	-	-	-	-	-	-	-
		John Day	-	-	-	-	-	-	-	-	-	-	195	17,463	3,561	233	956	6,353	-	-	-	-	-	-	-	-	-	-	-	-
		Libby	157,683	-	-	-	-	-	302	-	-	-	14,781	6,222	-	40	167	-	-	-	-	-	-	-	-	-	-	-	-	-
		Little Goose	-	-	8,641	40,937	47	-	-	-	-	-	1,200	9,604	146	-	3,201	66	-	-	-	-	-	-	-	-	-	-	-	-
		Lookout Dam	-	-	-	-	-	-	-	-	-	-	-	5,170	7,490	572	311	-	-	-	-	-	-	-	-	-	-	-	-	-
		Lost Creek	2,267	11,934	380	-	-	-	31	-	-	-	265	-	-	-	7	-	-	-	-	-	-	-	-	-	-	-	-	-
		Lower Granite	-	-	40,611	-	-	-	1,551	206	-	-	5,466	434	-	7,016	2,462	-	-	-	-	-	-	-	-	-	-	-	-	-
		Lower Monument	-	-	-	-	7,147	33,522	256	-	-	264	8,650	549	-	4,049	89	-	-	-	-	-	-	-	-	-	-	-	-	-
		McNary	351	-	-	-	-	-	-	30	-	-	7,819	646	-	4,839	1,576	-	-	-	-	-	-	-	-	-	-	-	-	-
		The Dalles	-	-	-	-	-	-	-	-	-	-	5,987	36,019	140	2,030	-	-	-	-	-	-	-	-	-	-	-	-	-	-
		Corps of Engineers Subtotal:	181,022	33,469	74,279	50,609	73,191	33,522	116,671	228,465	63,103	63,419	276,645	300,323	171,555	285,358	540,341	12,133	-	-	-	-	-	-	-	-	-	-	-	-
		Lower Snake Fish and Wildlife	-	-	-	-	-	-	3,068	6,404	161,287	59,536	102	-	1,924	343	-	-	-	-	-	-	-	-	-	-	-	-	-	-
		Lower Snake Fish & Wildlife Subtotal:	-	-	-	-	-	-	3,068	6,404	161,287	59,536	102	-	1,924	343	-	-	-	-	-	-	-	-	-	-	-	-	-	-
		Appropriation Subtotal:	230,461	84,197	74,279	100,904	73,191	80,457	171,251	231,893	159,437	283,236	497,311	316,074	172,853	290,954	546,015	12,133	-	-	-	-	-	-	-	-	-	-	-	-
		Bureau Direct	-	-	-	-	201,000	211,000	97,000	19,000	25,000	-	-	68,261	219,285	101,430	-	135,604	-	-	-	-	-	-	-	-	-	-	-	-
		Principal Accrual	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
		Principal Accrual Reversal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
		Conservation	105,000	-	20,000	9,000	-	-	21,000	25,000	142,000	92,000	69,000	39,000	6,000	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
		Principal Accrual	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
		Principal Accrual Reversal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
		Construction (AS)	5,000	10,500	15,150	-	5,250	18,100	9,800	17,500	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
		Principal Accrual	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
		Principal Accrual Reversal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
		BPA Borrowing	-	-	-	-	-	-	-	-	-	-	-	78,000	107,000	112,000	-	-	-	-	-	-	-	-	-	-	-	-	-	-
		Principal Accrual	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
		Principal Accrual Reversal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
		Fish and Wildlife	-	-	-	-	46,000	-	-	31,000	23,000	25,000	-	80,000	86,000	54,000	61,000	8,000	-	-	-	-	-	-	-	-	-	-	-	-
		Principal Accrual	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
		Principal Accrual Reversal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
		Technology	-	-	-	-	-	-	42,000	13,000	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
		Principal Accrual	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
		Principal Accrual Reversal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
		BPA Borrowing Subtotal:	110,000	10,500	35,150	9,000	252,250	229,100	169,800	104,500	190,000	117,000	69,000	265,261	418,285	267,430	61,000	143,604	-	-	-	-	-	-	-	-	-	-	-	-
		Replacements	-	-	-	-	-	-	-	-	-	-	-	-	-	-	545,549	734,371	826,646	884,151	851,590	240,144	240,144	240,144</						

13. REPAYMENT THEORY AND OPERATION

13.1 Introduction

The Bonneville Power Administration (BPA) is required to collect sufficient revenues to meet the annual expenses and cover the long-term obligations of the Federal Columbia River Power System (FCRPS).

The Repayment Program is used to determine whether a given set of annual revenues is sufficient to meet a given set of annual expenses and cover a given set of long-term obligations when applied in accordance with the requirements of Department of energy (DOE) Order RA 6120.2. The Program is also used to determine by what minimum factor the future revenues can be multiplied to obtain a new set of revenues which will be sufficient.

The revenues and expenses of the cost evaluation year will be assigned to all future years. This will have the effect of levelizing the long-term obligations over all future years.

13.2 Repayment Program Logic

The diagrams on the following pages show the flow of logic in BPA's repayment program. The first diagram shows the logic of the binary search used to locate minimum sufficient revenues. A necessary part of this search is the test for sufficiency. The logic of the test for sufficiency is shown on the remaining two diagrams.

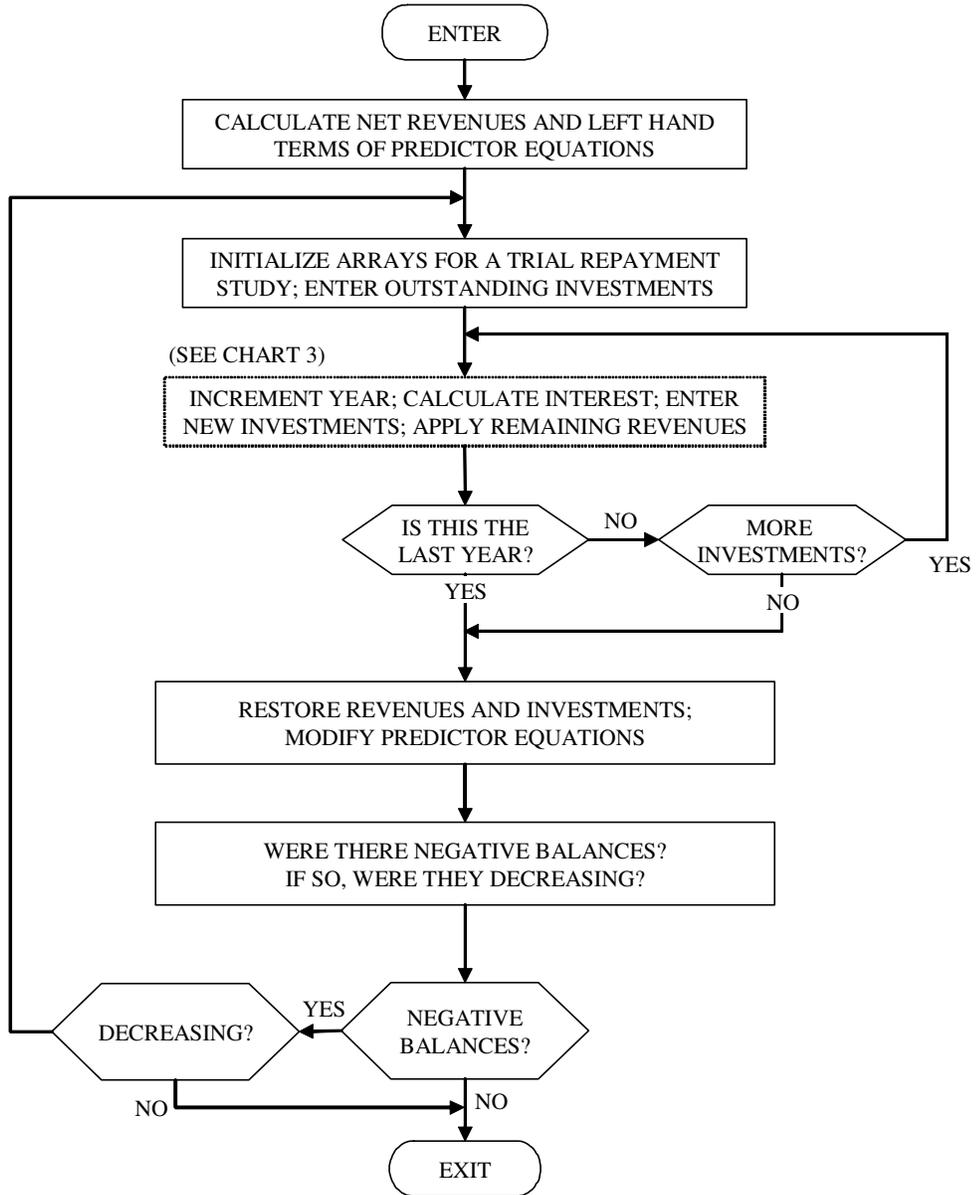
The equations which are referred to are:

- Revenue Equation: Net revenues of each year are expended on interest and payments on the principles.
- Investment equation: The payments on each investment are less than or equal to the principle of that investment (and equal to the principle of that investment after the investment is due).
- Predictor equation: For each future year the accumulated revenues less the accumulated interest less the accumulated investments due is equal to the accumulated payments on high interest rate investments which are not due.

13.3 Bond Rollover Feature

Since the 2002 Wholesale Power Rate Case, BPA has incorporated a new data manipulation feature associated with the repayment program. This does not change any methodology of the model. It allows the user to assume that short-term bond(s) associated with assets with average service lives considerably longer than the bond maturity date are refinanced on the original maturity date, and recognizes replacement bonds with new maturity dates and corresponding interest rates. This feature reflects BPA's practice of rolling over a bond when it comes due if funds are not available to pay it at that time or if market conditions justify refinancing such bonds within the allowable repayment period of the associated assets. Reflecting this practice in the model allows a more realistic calculation of interest expense.

**REPAYMENT PROGRAM
(TEST FOR SUFFICIENCY)**



**REPAYMENT PROGRAM
(APPLICATION OF REVENUES)**

