

**BUREAU OF RECLAMATION, DEPARTMENT OF THE INTERIOR  
FISCAL YEAR 1998  
ANNUAL VALUE ENGINEERING PROGRAM REPORT**

**PART I.**

Name, Title, Address and Phone Number of Agency Senior Official Responsible for Value Program (VE):  
 Felix W. Cook, Sr., Director, Technical Service Center Telephone (303) 445-2720  
 PO box 25007, Attention Code: D-8000, Denver CO 80225-0007

Technical Contact: Francis G. McLean, Reclamation Value Program Manager Telephone (303) 445-3091  
 PO box 25007, Attention Code: D-8170, Denver CO 80225-0007 FAX: (303) 445-6475

Agency Value Program (VE) Expenditures (\$'s Invested in VE this fiscal year): \$691,333

Dollar Share of Savings Provided to Contractors (Through the VECP program): \$453,800

Dollar Thresholds for each Value Program (VE) category (if different from \$1 million):  
 Construction projects are studied (unless waived for cause) if their cost exceeds \$500,000  
 Non-construction (procurement) actions are considered for study if their cost exceeds \$1,000,000.

TOTAL RECLAMATION INITIAL & LIFE-CYCLE COST SAVINGS (EXCLUDES VECP SAVINGS) ATTRIBUTABLE TO VALUE PROGRAM (VE):							
A. Summary of cost savings and avoidances reported by category (See B, below):							
Category	Cost Savings		Cost Avoidance		Total Savings + Avoidance		Grand Total Savings + Avoidance In-House + Contract
	In-House	Contract	In-House	Contract	In-House	Contract	
Summary Totals	\$4,182,000	\$0	\$130,000	\$0	\$4,312,000	\$0	\$4,312,000
B. Total Reclamation Value Program (VE) Initial & Life-Cycle Cost Savings and Cost Avoidances(excluding VECP) by Category:							
1. Acquisition	\$0	\$0	\$130,000	\$0	\$130,000	\$0	\$130,000
2. Administration	\$0	\$0	\$0	\$0	\$0	\$0	\$0
3. Other (Specific Features)							
a. Construction Activities	\$4,182,000	\$0	\$0	\$0	\$4,182,000	\$0	\$4,182,000
b. Operations & Maintenance	\$0	\$0	\$0	\$0	\$0	\$0	\$0
c. Grants & Loans	\$0	\$0	\$0	\$0	\$0	\$0	\$0

**C. Unless otherwise noted, the Bureau of Reclamation routinely validates reported cost savings, avoidance and other project data as follows:**

Reclamation uses cost estimating personnel on all studies, VECP analyses, and other VE related activities to determine the most appropriate cost savings and/or avoidance estimates. Design teams then review the data and make specific estimates for the final determination of the accepted recommended savings and/or avoidance. Design teams report their determination of savings in Accountability Reports. The savings are subject to spot review and verification by the Program Coordinator, Program Manager, and IG audit.

PART II. VALUE PROGRAM (VE) PROJECT DESCRIPTION

Region/Project Title/Description	In House, Contract, VECP or Waiver	Value Study or VECP Processing Cost	Cost Savings	Cost Avoidance	Type of Project	VECP Savings To Contractor	Award Amount	Award Date
1.MP/Glenn-Colusa Irrigation District - Fish Screen (VE)	In-House	\$30,000	\$0	\$0	Construction	\$0	\$14,858,000	3/98
MP/ VECP No. 1	VECP	\$600	\$86,300	\$0	Construction	\$105,500		
2. MP/ Bradbury Spillway Modification (VE)	In-House	\$5,000	\$0	\$0	Construction		\$7,599,000	3/98
MP/ VECP No. 1	VECP	\$43,000	\$124,500	\$0	Construction	\$276,700		
3. MP/Stony Creek Siphon (VE)	In-House	\$20,000	\$2,350,000	\$0	Construction	\$0	\$3,616,000	5/98
4. MP/No Hands Bridge (VE)	In-House	\$10,000	\$1,200,000	\$0	Construction	\$0	\$649,000	7/14/98
MP/VECP No. 1	VECP	\$700	\$1,200	\$0	Construction	\$2,300		
5. MP/San Joaquin Basin Action Plan - J Lateral	In-house	\$20,000	\$0	\$0	Construction	\$0	\$2,879,000	1/16/98
6. MP/Folsom Spillway Gate Automation	Waiver	\$0	\$0	\$0	Construction	\$0	\$1,249,000	4/7/98
7. MP/San Wooster Road & Parking Lot	Waiver	\$0	\$0	\$0	Construction	\$0	\$775,000	9/29/98
8. MP/Middle Gate Seals - TCD	Waiver	\$0	\$0	\$0	Construction	\$0	\$796,000	11/24/97
9. PN/ Reservoir A Dam SOD Modifications (VE)	In-House	\$10,000	\$0	\$0	Construction	\$0	\$1,940,000	9/8/98
10. PN/ Grand Coulee 3rd PP Turbine Runner 1-18 Prototype Models	In-House	\$1,000	\$0	\$0	Construction	\$0	\$2,000,000	4/12/98
11. PN/Grand Coulee Powerplant G22-24 Rewind	Waiver	\$0	\$0	\$0	Construction	\$0	\$625,000	6/5/98
12. PN/SCADA Remote Controls - Umatilla Project	Waiver	\$0	\$0	\$0	Construction	\$0	\$950,000	9/28/98
13. PN/Tieton Dam Spillway Rehabilitation (VE)	In-House	\$2,000	\$0	\$0	Construction	\$0	\$2,264,000	6/23/98
14 PN/Echo Pump Plant Stanfield - Umatilla Project	In-House	\$1,000	\$0	\$0	Construction	\$0	\$825,000	9/11/98
15 PN/Ochoco Dam Drain Rehabilitation - <i>Awarded 1996</i>	VECP	\$3,500	\$60,200	\$0	Construction	\$69,300	\$612,000	9/18/98
16. PN/Foam Flootation Drum Gates - Grand Coulee Dam	Waiver	\$0	\$0	\$0	Construction	\$0	\$856,000	1/22/98
17. PN/Snake River Resources Study	Waiver	\$0	\$0	\$0	Procurement	\$0	\$1,025,000	4/12/98
18. PN/Resource Management Plans - Cascade & Ririe Reservoirs (VE)	In-House	\$1,000	\$0	\$0	Procurement	\$0	\$844,000	9/28/98
19. PN/Specifications Issued by CD ROM (VE)	In-House	\$1,000	\$0	\$130,000	Procurement	\$0	\$0	NA
20. LC-Davis Dam Transformer Replacement (VP)	In-House	\$20,000	\$0	\$0	Construction	\$0	\$1,125,000	2/98
21. LC-Horse Mesa Dam Mod. (SOD) Right Abutment Drainage Adit	Waiver	\$0	\$0	\$0	Construction	\$0	\$2,000,000	1/98
22. UC/NIIP Canal Rehab Stage 11 Schedules 1&2	Waiver				Construction		\$1,500,000	11/97
23. UC/NIIP Canal Rehab Stage 12 Schedule 1	Waiver				Construction		\$1,478,000	9/22/98
24. UC/Velarde Acequia Improvements Phase 2	Waiver				Construction		\$2,500,000	11/97
25. GP/Pueblo Dam Modification	In-House	\$15,000	\$632,000	\$0	Construction	\$0	\$8,830,500	8/13/98
<b>GRAND TOTALS</b> (USBR - VECP Processing Costs = \$47,800 & Savings = \$272,200)		\$183,800	\$4,454,200	\$130,000		\$453,800	\$61,795,500	

Region/Project Title/Description	In House, Contract, VECP or Waiver	Value Study or VECP Processing Cost	Cost Savings	Cost Avoidance	Type of Project	VECP Savings To Contractor	Award Amount	Award Date
<b>Prior Year Studies [See Note]</b>								
26. LC-CAP Tucson Aqueduct-Phase III (VE)	In-House	\$9,000	\$0	\$0	Construction	\$0	\$1,203,000	06/02/94
27. LC-Aqua Fria Siphon Replacement (VE)	In-House	\$1,000	\$617,00	\$0	Construction	\$0	\$25,358,000	01/04/96
28. LC-Centennial Wash Siphon Repair (VE)	In-House	\$25,000	\$100,000	\$0	Construction	\$0	\$2,082,000	01/04/96
29. LC-Hoover Overhead Cranes	In-House	\$10,000	\$11,000	\$0	Construction	\$0	\$318,000	01/13/94
30. UC/Navajo 115 kV Transmission Line Blocks 8&9	In House	\$18,600	\$0	\$0	Construction	\$0	\$1,898,000	1996
31. GP/Estes-Mary's Lake Transformer Replacement (VP)	In House	\$15,000	\$0	\$500,000	Construction	\$0	\$368,000	09/03/97
32. GP/ Mni Wiconi - Water Treatment Plant	In House	\$42,600	\$314,000	\$0	Grant	\$0	\$16,366.00	08/14/97
33. GP/Mni Wiconi - Echo Point Intake Structure	In House	\$32,00	\$188,00	\$0	Grant	\$0	\$3,941,000	09/03/96

*(Unless otherwise noted, the steps taken to validate the reported cost savings are described in Part I.C preceding.)*

**Description of Quality or other Non-Quantifiable Improvements of Note:**

Item #	PROJECT TITLE	DESCRIPTION NOTE
10.	GC Turbine Runner 1-18 Prototypes	VE proposal was to increase number of competitors from 2 to 3 or 4 for prototypes to increase competition and maximize potential cost avoidance on \$107 million project. No way to quantify amount of cost avoidance that will be realized, but could be substantial.
14.	Echo Pump Plant- Stanfield Umatilla	The overall project concept including relift pumping plants was analyzed under the original regional VE study in 1994. During predesign in 1997 a study team came up with 7 options for water supply & pumping plant alternatives to determine the best value proposal to supply the Echo area. Greater value meeting objectives was obtained by maximizing the exchange of water from the Columbia River via the Furnish Ditch instead of pumping from the Umatilla River, but this increased the overall cost so no savings are claimed. VE Study costs were claimed in a prior year.
17.	Snake River Resources Review	There were three personal services contracts varying from \$200,000 to \$500,000 issued to consulting firms to provide components of the Snake River Resources Report. VE proposals were to accomplish more of this work in-house with existing staff who are coordinating and reviewing the contractors work, or reduce the number of oversight staffing for a short term project.
18.	Resource Management Plans	VE proposal was to do these plans in-house in lieu of contracting out the work and reviewing it. The largest contract for \$442,000 was less than the mandated level to study.
19.	Specifications Issued By CDROM	VE Study (12/97) proposed issuing contract and procurement specifications on CDROM (estimated annual cost = \$20,000) rather than in printed form (hardcopy) which cost \$53,000/year. The estimated 5-year life-cycle savings of the proposal was \$130,000. These savings do not reflect the unquantifiable administrative/clerical cost savings. Additional savings could be generated by this proposal since it has far reaching savings potential throughout the organization, even beyond contract and procurement documentation (such as instructions, guides and manuals).
20.	Davis Dam Transformer Replacement	Project benefitted by a reduction in complexity of design and ease of installation; increased reliability and the allowance of standard fittings use; ease of maintenance and removal of environmental hazards (PCB's) at no added cost.

**Note: - The studies listed under this heading have never been declared to OMB but were awarded prior to FY 1998; however, we only became aware of the award in FY 1998. The study costs and savings for these studies have been used to update the table of information for the respective years provided in Part III.**

27 & 28.	Aqua Fria & Centennial Wash	Aqua Fria Siphon Replacement & Centennial Wash Siphon Repair were combined and the contract was awarded by the Central Arizona Water Conservation District 1/4/96.
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30. Navajo 115 kV Transmission Line Value Engineering "Other Idea" resulted in a changed concept from a 115 kV to a 230kV System at increased efficiency and reduced costs. Cost estimate for original concept 3.9 million; Award amount for design based on a changed concept 1.9 million. This study was done in December of 1993, and awarded in 1996, but never reported to OMB as we only became aware of the award in FY98. There were four proposals,; one was rejected and the other three eliminated. The information in Part III under the column "FY 1996 Report Amended" is being amended to reflect the cost of the study \$18,600.
31. Estes-Mary's Lake Transformer (VP) This was studied in December 1996, and awarded 9/3/97 - Contract No. 142597CC600831 for \$368,240 but was not declared to OMB. The FY97 column in Part III is being amended to reflect the \$500,000 cost avoidance. Similarly the study cost of \$15,000 is being added to the FY 1997, Part III Row 4. Expenses Attributed to Value Studies of these Projects.
32. Mni Wiconi - Water Treatment This was studied in June 1996, and awarded 08/14/97 for \$16,366,000 but was not declared to OMB. The FY97 column in Part III is being amended to reflect the \$314,000 cost savings. Similarly, the study cost of \$42,600 is being added to the FY 1997, Part III Row 4. Expenses Attributed to Value Studies of these Projects.
33. Mni Wiconi - Echo Point Intake This was studied in November 1995, and awarded 09/03/96 for \$3,941,000 but was not declared to OMB. The FY96 column in Part III is being amended to reflect the \$188,000 cost savings. Similarly, the study cost of \$32,000 is being added to the FY 1996, Part III Row 4. Expenses Attributed to Value Studies of these Projects.

PART III. (SUMMARY LISTING OF ALL VALUE PROGRAM PROJECTS WITH CONFIRMED SAVINGS IN REPORTING FY1998)

*This part provides summary data for all projects in the reporting and 4 preceding fiscal years based on detailed project data in Part II. Note that all savings are claimed in the year of contract award.*

SUMMARY OF ALL APPORTIONED SAVINGS FOR RECLAMATION (Notes: All savings are claimed in the year of award)						
Category (Note: Figures in <b>BOLD</b> indicate amendments based on new information)	FY1994 Report (Amended)	FY1995 Report	FY1996 Report (Amended)	FY1997 Report (Amended)	Current FY1998	1994-1998 Cumulative
1. Cost Savings (includes VECP savings)	<b>\$18,222,604</b>	\$6,881,100	<b>\$13,325,302</b>	<b>\$13,581,468</b>	\$4,454,200	\$56,464,674
2. Cost Avoidance	\$1,628,000	\$4,254,500	\$6,851,835	<b>\$500,000</b>	\$130,000	\$13,364,335
3. Dollar Share of Savings Provided to Contractors	\$206,583	\$297,900	\$49,265	\$0	\$453,800	\$1,007,548
4.a Expenses Attributed to Value Studies of These Projects	<b>\$396,000</b>	\$554,739	<b>\$499,032</b>	<b>\$705,300</b>	\$136,000	\$2,291,071
4.b Costs Attributed to the Operation of the Value Program (Program + VECP costs)	\$286,000	\$429,461	\$576,000	\$512,230	\$555,333	\$2,359,024
4.c Total Expenses (4a - Value Studies + 4b - Program & VECP)	\$682,000	\$984,200	\$1,075,032	\$1,217,530	\$691,333	\$4,650,095
5. Return on Investment (ROI) = (Line 1 + Line 2 divided by Line 4c)	29.1	11.3	18.8	11.6	6.6	15.0

PART IV. (INTERIOR SPECIFIC REPORTING PORTION FOR THE REPORTING YEAR)

A. ADMINISTRATION (Training) - Indicate the number of Reclamation personnel:		
Total Permanent FTE in Reclamation @ Year-End	Trained This Fiscal Year (1998)	
	SAVE Certified Module I or II	All Other Value Training
5,843	0	0

B. 1. ADMINISTRATION (Staffing) - Identify the number of Reclamation staff personnel assigned to support the Value Engineering Program and associated costs.			
Value Engineering Staff	Number of Professional Staff - Staff Cost	Number of Technical Staff - Staff Cost	Number of Clerical Staff - Staff Cost
Full Time	1 - \$57,853 (1 FTE)	1 - \$74,916 (1 FTE)	0 - \$0 (0 FTE)
Part Time	15 - \$230,753 (1.8 FTE)	0 - \$0 (0 FTE)	2 - \$6,000 ( 0.05 FTE)
<b>TOTAL VE STAFF COSTS</b>	<b>16 - \$288,606 (2.8 FTE)</b>	<b>1 - \$74,916 (1 FTE)</b>	<b>2 - \$6,000 ( 0.05 FTE)</b>
Support Program Costs (Labor and Non-Labor)	\$138,011	\$0	\$0
<b>TOTAL ADMINISTRATIVE COSTS</b>	<b>\$426,617</b>	<b>\$74,916</b>	<b>\$6,000</b>

Project Category	Subject and Available		Studied	Formally Waived	Not Studied & Unaddressed	Percent Studied	Percent Waived	Percent Unaddressed
	In House	Contract						

C. NUMBER OF PROJECTS SUBJECT TO STUDY (AWARDED IN THE REPORTING FISCAL YEAR) (For the reporting year, identify the number of Reclamation projects subject to study under 369-DM-1)								
1. In the range of \$500,000 to \$1,000,000	11	0	2	5	4	18%	45%	36%
2. Over the threshold of \$1,000,000 (PL 104-106).	16	0	9	5	2	56%	31%	13%
3. Nonconstruction procurement over \$1,000,000.	2	0	0	1	1	0%	50%	50%

D. VALUE OF PROJECTS SUBJECT TO STUDY (AWARDED IN THE REPORTING FISCAL YEAR) (For the reporting year, identify the dollar amount of Reclamation projects subject to study under 369-DM-1)								
1. In the range of \$500,000 to \$1,000,000.	\$8,393,700	\$0	\$1,474,000	\$4,002,000	\$2,917,700	18%	48%	35%
2. Over the threshold of \$1,000,000 (PL 104-106).	\$57,699,500	\$0	\$45,111,500	\$8,727,000	\$3,861,000	78%	15%	7%
3. Nonconstruction Procurement over \$1,000,000.	\$2,292,000	\$0	\$0	\$1,025,000	\$1,267,000	0%	45%	55%

E. VALUE ENGINEERING STUDY RECOMMENDATIONS (Identify the number and acceptance of Reclamation Study Proposals for the projects awarded in the reporting fiscal year.)									
Studies Completed (Total Proposals)		Proposals Fully Accepted		Proposals Partially Accepted		Proposals Withdrawn/Eliminated		Proposals Rejected	
In House	By Contract	In House	By Contract	In House	By Contract	In House	By Contract	In House	By Contract
10 (52)	0	4	0	2	0	18	0	28	0

F. VALUE ENGINEERING CHANGE PROPOSALS (The number of Reclamation Value Engineering Change Proposals (VECP) accepted for construction projects active in the reporting fiscal year.)					
Contract Size	Number of Active Construction Contracts	Number of VECs Submitted	Number of VECs Accepted	Number of VECs Rejected	Number of VECs Withdrawn
\$500,000 to \$1,000,000	26	2	2	0	0
Over \$1,000,000	33	2	2	0	0

G. Of the Value Studies performed for projects awarded this year, how many studies were performed on Operations and Maintenance projects?	0
Of the Value Studies performed for projects awarded this year, how many were performed during the project's planning stage?	2
Of the Value Studies performed for projects awarded this year, how many studies were performed on Grant projects?	0

H. RECOGNITION (Indicate the number, type and amount of awards given by Reclamation for outstanding work in the field of Value Engineering)				
Number of Awards Issued	Number of Awards by Type		Amount of Awards by Type	
	Special Act	Monetary	Per Team	Individual
5	2	3	\$0	\$3,300