

APPENDIX A

TABLES

Table 1
Estimated Installation Cost
Turtle Creek Watershed, Nebraska
(Dollars)¹

Installation Cost Item, Structural Measures	PL 83-566 Funds	Other Funds	Total
Structure 2	\$417,600	\$134,400	\$552,000

Note:

¹ *Price base February 2006.*

Table 2
Cost Allocation and Cost-Sharing Summary
Turtle Creek Watershed, Nebraska
(Dollars)¹

Item	Installation Costs - Public Law 83-566 1/					Installation Costs - Other Funds 1/					Total Installation Cost			
	Construction 3/	Engineering	Real Property	Relocat. Payments	Project Admin.	Total Federal Cost	Construction 3/	Engineering	Real Property 4/ 5/	Natural Resource Rights		Relocat. Payments	Required Permits	Project Admin. 2/
Rehabilitation of dam	\$249,600	\$131,000	\$0	\$0	\$37,000	\$417,600	\$124,400	\$0	\$9,000	\$0	\$0	\$2,000	\$134,400	\$552,000

1/ Price Base: February 2006

2/ Includes \$0 for relocation assistance advisory service

3/ Includes \$0 of PL-566 funds and

4/ Includes \$0 for real property costs for mitigation

5/ Includes \$0 for surveys, legal fees, and other costs

\$0 of non-federal funds for cultural resource protection and mitigation measures

Table 3
Structural Data - Grade Stabilization Structure
Turtle Creek Watershed, Nebraska

Item ¹	Unit	2
Class of structure		Full flow GSS
Seismic zone		N/A
Drainage area	sq. mi.	0.94
Runoff curve No. (1-day) (AMC II)		76
Time of concentration (T _c)	hours	2.0
Principal spillway design storm (NRCS Type II 24-hour)	cfs	1510
Principal spillway type		none
Auxiliary spillway design storm (NRCS Type II 24-hour)	cfs	2186
Auxiliary spillway type		Chute ²
Auxiliary spillway bottom width	feet	80
Auxiliary spillway exit slope	percent	25
Elevation top dam	feet	1085.0
Maximum height of dam	feet	22.5
Drop	feet	17.5
Volume of fill	cy	19,800 ³
Surface area		
Chute spillway crest elevation	acres	6.8 ⁴
100-year water surface elevation	acres	21.4 ⁴
Principal spillway design storm (25-year)		
Rainfall volume (24-hour)	inches	5.3
Capacity at principal spillway design storm	cfs	1510
Auxiliary spillway design storm (100-year)		N/A
Rainfall volume (24-hour)	inches	6.7
Capacity at auxiliary spillway crest elevation	cfs	2186
Maximum reservoir water surface elevation	feet	1085.0

Notes:

N/A = Not Applicable

¹ Data Compiled: May 2006.

² Chute spillway lined with Articulated Concrete Block (ACB)

³ Remaining volume after removal of the top 7.8 feet of embankment

⁴ Based on 2005 topographic survey, no floodwater retarding volume assumed for design

Table 4
Estimated Average Annual NED Costs
Turtle Creek Watershed, Nebraska
(Dollars)¹

Evaluation Unit	Project Outlays		Total
	Amortization of Installation Cost	Operation, Maintenance, and Replacement Cost	
Grade Stabilization			
Structure 2	\$28,500	\$2,800	\$31,300

Notes:

¹ Price base February 2006 amortized over 100 years at a discount rate of 5.125 percent.

Table 5
Estimated Average Annual Watershed Protection
Damage Reduction Benefits
Turtle Creek Watershed, Nebraska
(Dollars)¹

Item	Estimated Average Annual Damages ²		Damage Reduction Benefit
	Without Project	With Project	
Onsite			
Other Urban – Greenway Property Benefits	\$0	\$40,000	\$40,000
Offsite/Public			
Grade Stabilization Benefits	\$0	\$29,000	\$29,000
Grand Total	\$0	\$69,000	\$69,000

Notes:

¹ Price base February 2006.

² All benefits are agriculture related, as the community's population is less than 50,000.

³ Damage Reduction Benefit compares the difference in benefits provided for this site between the No Action/Future Without Federal Project Alternative and the Selected Alternative.

Table 6
Comparison of NED Benefits and Costs
Turtle Creek Watershed, Nebraska
(Dollars)¹

Evaluation Unit	Average Annual Benefits ²	Average Annual Costs ³	Benefit- Cost Ratio
Grade Stabilization			
Structure 2	\$69,000	\$31,300	2.20

Notes:

¹ Price base February 2006.

² From Table 5.

³ From Table 4.

APPENDIX B
COMMENTS

**To be Incorporated into Final Watershed Plan and Environmental Assessment After
Review of Draft Document**

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APPENDIX C

SUPPORT MAPS

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