

Agenda Item: 9.

MEMORANDUM

TO: Programs, Projects, and Operations Subcommittee

FROM: Martin P. Cleveland, Construction Engineer

SUBJECT: Silver Creek and Tekamah-Mud Watershed Structure Stabilization Project

DATE: October 31, 2013

The Silver Creek and Tekamah-Mud Watershed Structure Stabilization Project is located in Burt County Nebraska and includes stabilization at four Silver Creek Watershed (#3, 18, 25, 32) and one Tekamah-Mud Watershed (42A) Structures. The front berm at those five grade stabilization structures (earthen dams) has eroded due to pond wave erosion. The stabilization of 2,600 linear feet of front berm will utilize 2,600 tons of rock riprap.

Enclosed are location maps, photos and berm stabilization cross-section. A bid summary is attached for your consideration. There were 4 bids received and the bids ranged from \$138,844 to \$200,123.85. The engineer's estimate of cost was \$149,810. The apparent low bidder is Thompson Construction Inc. with a bid of \$138,844.

It is Management's recommendation that the Subcommittee recommend to the Board of Directors that the General Manager be authorized to execute a contract for construction of Silver Creek and Tekamah-Mud Watershed Structure Stabilization Project with Thompson Construction Inc. for their total bid of \$138,844.

**SILVER CREEK AND TEKAMAH-MUD WATERSHED STRUCTURE STABILIZATION PROJECT
BID SUMMARY**

BID OPENING – Oct. 31 – 10:00A.M.

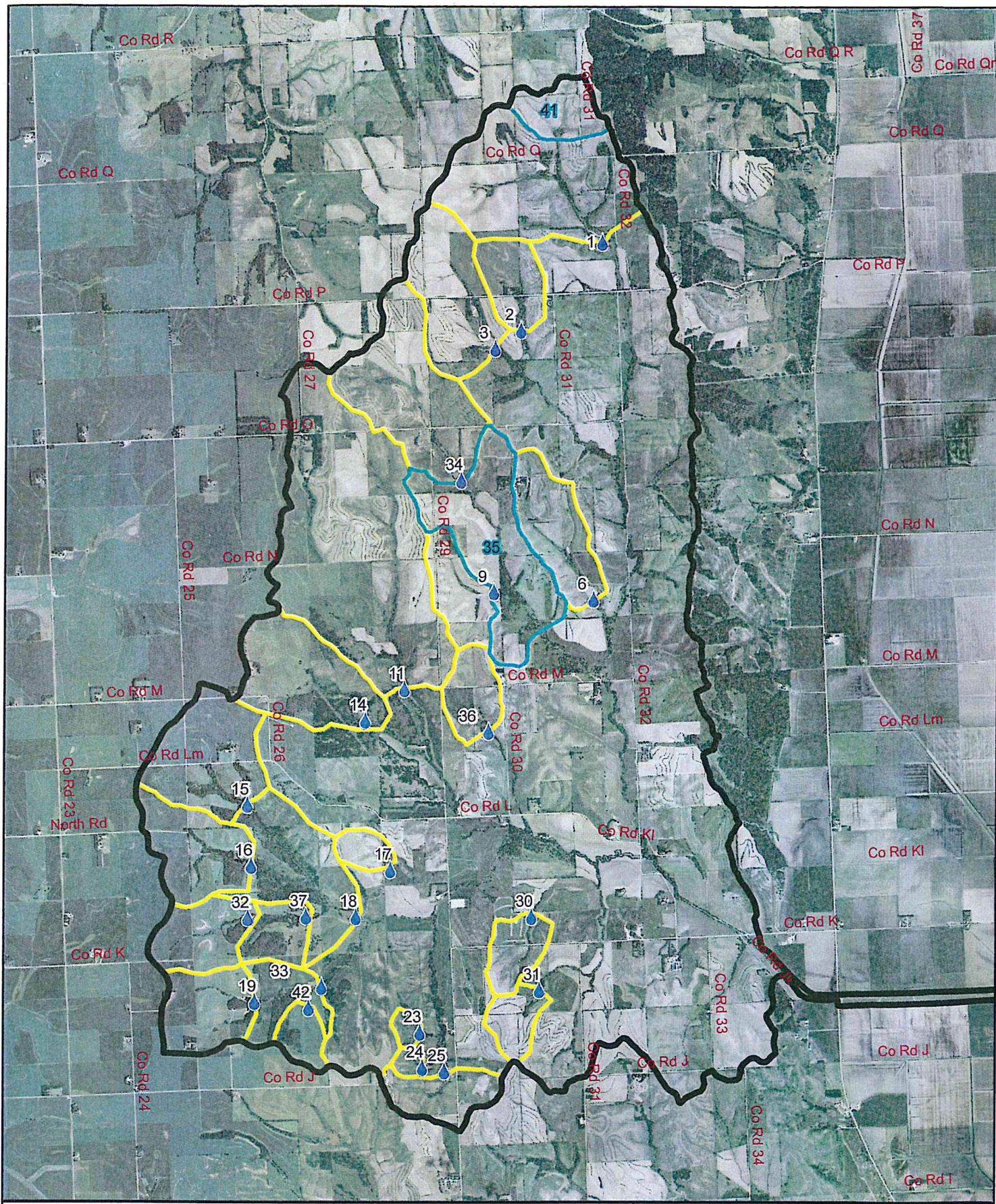
ENGINEER'S OPINION OF COST					VALLEY CORPORATION			THOMPSON CONSTRUCTION INC.		
ITEM NO.	SITE	DESCRIPTION	LENGTH (FT)	TONS	UNIT COST (\$)	TOTAL COST (\$)	UNIT COST (\$)	TOTAL COST (\$)	UNIT COST (\$)	TOTAL COST (\$)
1	SC 3	Rock Riprap (Type B)	500	500	45	22,500	49.05	24,525	46.00	23,000
2	SC 18	Rock Riprap (Type B)	600	600	45	27,000	49.05	29,430	45.00	27,000
3	SC 25	Rock Riprap (Type B)	300	300	45	13,500	49.05	14,716	45.00	13,500
4	SC 32	Rock Riprap (Type B)	300	300	45	13,500	49.05	14,715	49.00	14,700
5	TM 42A	Rock Riprap (Type B)	900	900	45	40,500	49.05	44,145	45.00	40,500
SUB-TOTAL (Item 1 thru 5)						117,000		127,530		118,700
ITEM NO.	SITE	BID ITEM DESCRIPTION	LENGTH (FT.)		UNIT COST (\$)	TOTAL COST (\$)	UNIT COST (\$)	TOTAL COST (\$)	UNIT COST (\$)	TOTAL COST (\$)
6	SC 3	Fence Removal/Reinstall	500		5	2,500	8.13	4,065	2.75	1,375
7	SC 18	Fence Removal/Reinstall	600		5	3,000	8.13	4,878	2.75	1,650
8	SC 25	Fence Removal/Reinstall	0			NA	N/A	N/A	N/A	N/A
9	SC 32	Fence Removal/Reinstall	0			NA	N/A	N/A	N/A	N/A
10	TM 42A	Fence Removal/Reinstall	900		5	4,500	8.13	7,317	2.75	2,475
SUB-TOTAL (Item 6 thru 10)						10,000		16,260		5,500
ITEM NO.	SITE	BID ITEM DESCRIPTION	CUBIC YARDS		UNIT COST (\$)	TOTAL COST (\$)	UNIT COST (\$)	TOTAL COST (\$)	UNIT COST (\$)	TOTAL COST (\$)
11	SC 3	Riprap Soil Infill	90		15	1,350	9.22	829.80	6.00	540
12	SC 18	Riprap Soil Infill	109		15	1,635	9.22	1,004.98	6.00	654
13	SC 25	Riprap Soil Infill	55		15	825	9.22	507.10	6.00	330
14	SC 32	Riprap Soil Infill	55		15	825	9.22	507.10	6.00	330
15	TM 42A	Riprap Soil Infill	165		15	2,475	9.22	1,521.30	6.00	990
SUB-TOTAL (Item 11 thru 15)						7,110		4,370.28		2,844
ITEM NO.	SITE	BID ITEM DESCRIPTION	SQ YARDS		UNIT COST (\$)	TOTAL COST (\$)	UNIT COST (\$)	TOTAL COST (\$)	UNIT COST (\$)	TOTAL COST (\$)
16	SC 3	Seeding and EC Mat	500		4.50	2,250	2.30	1,150	3.00	1,500
17	SC 18	Seeding and EC Mat	600		4.50	2,700	2.30	1,380	3.00	1,800
18	SC 25	Seeding and EC Mat	300		4.50	1,350	2.30	690	3.00	900
19	SC 32	Seeding and EC Mat	300		4.50	1,350	2.30	690	3.00	900
20	TM 42A	Seeding and EC Mat	900		4.50	4,050	2.30	2,070	3.00	2,700
SUB-TOTAL (Item 16 thru 20)						11,700		5,980		7,800
21	MOBILIZATION					4,000		4,600		4,000
TOTAL BID (1 TO 21)						\$149,810		158,740.28		138,844.00*
					Bid Bond (yes or No)			yes		yes
					Riprap Source			Martin Marietta		Martin Marietta

* Apparent low bidder Note: SC=SILVER CREEK WATERSHED SITE; TM=TEKAMAH-MUD WATERSHED SITE

**WATERSHED STRUCTURE BANK STABILIZATION PROJECT
BID SUMMARY (Continued)**

ITEM NO.	SITE	DESCRIPTION	COONEY FERTILIZER		PRUSS EXCAVATION			
			UNIT COST (\$)	TOTAL COST (\$)	UNIT COST (\$)	TOTAL COST (\$)	UNIT COST (\$)	TOTAL COST (\$)
1	SC 3	Rock Riprap (Type B)	65.50	32,750	61.25	30,625		
2	SC 18	Rock Riprap (Type B)	65.50	39,300	61.25	36,750		
3	SC 25	Rock Riprap (Type B)	65.50	19,650	61.25	18,375		
4	SC 32	Rock Riprap (Type B)	65.50	19,650	68.40	20,520		
5	TM 42A	Rock Riprap (Type B)	65.50	58,950	61.25	55,125		
		SUB-TOTAL (Item 1 thru 5)		170,300		161,395		
ITEM NO.	SITE	BID ITEM DESCRIPTION	UNIT COST (\$)	TOTAL COST (\$)	UNIT COST (\$)	TOTAL COST (\$)	UNIT COST (\$)	TOTAL COST (\$)
6	SC 3	Fence Removal/Reinstall	6.50	3,250	3.00	1,500		
7	SC 18	Fence Removal/Reinstall	6.50	3,900	3.00	1,800		
8	SC 25	Fence Removal/Reinstall	N/A	N/A	N/A	N/A		
9	SC 32	Fence Removal/Reinstall	N/A	N/A	N/A	N/A		
10	TM 42A	Fence Removal/Reinstall	6.50	5,850	3.00	2,700		
		SUB-TOTAL (Item 6 thru 10)		13,000		6,000		
ITEM NO.	SITE	BID ITEM DESCRIPTION	UNIT COST (\$)	TOTAL COST (\$)	UNIT COST (\$)	TOTAL COST (\$)	UNIT COST (\$)	TOTAL COST (\$)
11	SC 3	Riprap Soil Infill	12.50	1,125	9.00	810		
12	SC 18	Riprap Soil Infill	12.50	1,362.50	9.00	981		
13	SC 25	Riprap Soil Infill	12.50	687.50	9.00	495		
14	SC 32	Riprap Soil Infill	12.50	687.50	9.00	495		
15	TM 42A	Riprap Soil Infill	12.50	2,062.50	9.00	1,485		
		SUB-TOTAL (Item 11 thru 15)		5,925.00		4,266		
ITEM NO.	SITE	BID ITEM DESCRIPTION	UNIT COST (\$)	TOTAL COST (\$)	UNIT COST (\$)	TOTAL COST (\$)	UNIT COST (\$)	TOTAL COST (\$)
16	SC 3	Seeding and EC Mat	1.95	975	2.00	1,000		
17	SC 18	Seeding and EC Mat	1.95	1,170	2.00	1,200		
18	SC 25	Seeding and EC Mat	1.95	585	2.00	600		
19	SC 32	Seeding and EC Mat	1.95	585	2.00	600		
20	TM 42A	Seeding and EC Mat	1.95	1,755	2.00	1,800		
		SUB-TOTAL (Item 16 thru 20)		5,070		5,200		
21	MOBILIZATION			5,828.85		5,000		
		TOTAL BID (1 TO 21)		200,123.85		181,861		
		Bid Bond (yes or No)	yes		yes			
		Riprap Source	Martin Marietta		Martin Marietta			

* Apparent low bidder: Thompson Constuction Inc. SC=SILVER CREEK WATERSHED SITE; TM=TEKAMAH-MUD WATERSHED SITE
28613 MC:pb file 504



Structures

- Completed
- Deferred



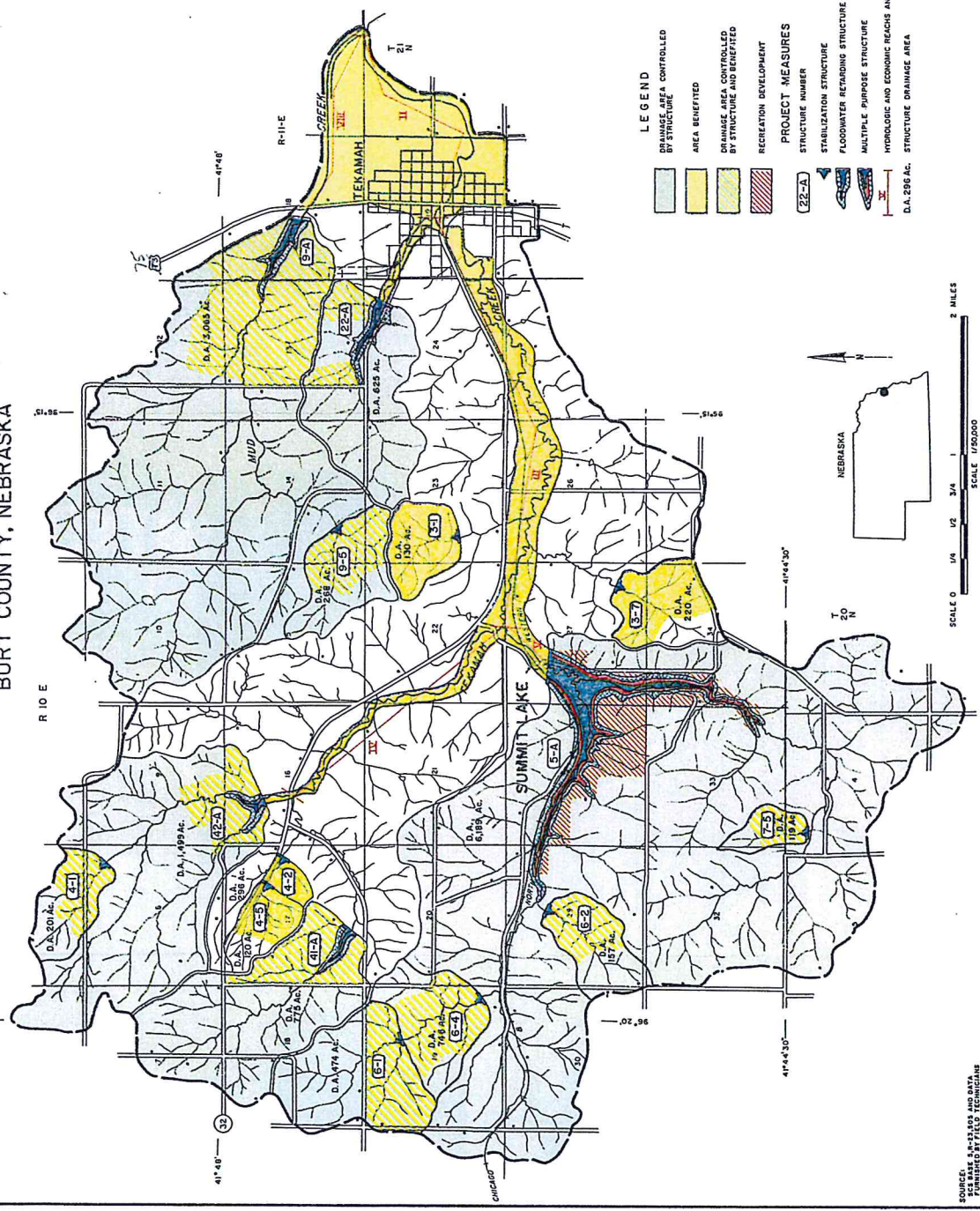
SILVER CREEK WATERSHED



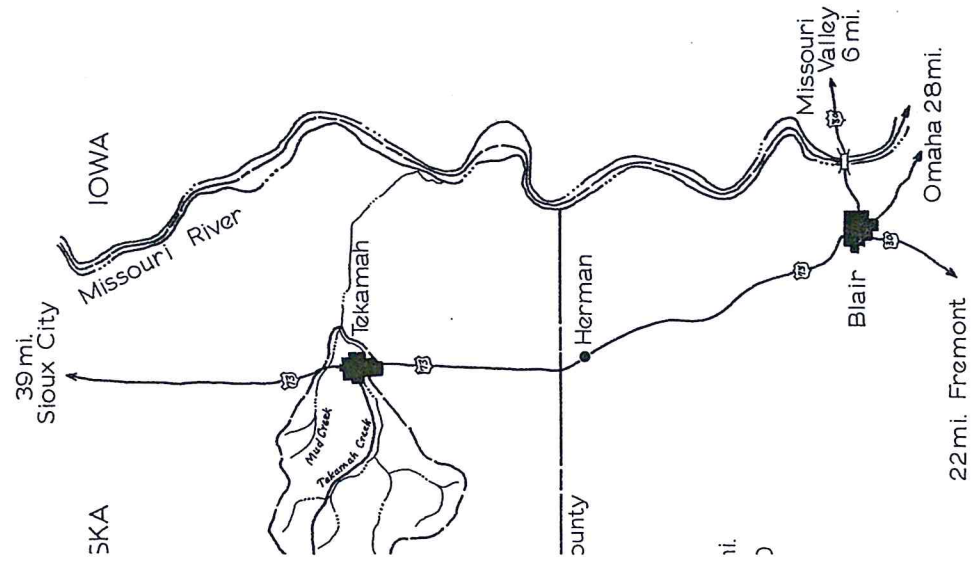
1 inch = 5,280 feet

Drawn By: Justin Novak
Date: 01/11/12

PROJECT MAP TEKAMAH-MUD CREEK WATERSHED BURT COUNTY, NEBRASKA



LOCATION MAP MUD CREEK WATERSHED BURT COUNTY, NEBRASKA



Silver Creek and Tekamah-Mud Watershed Structures Front Berm Stabilization Project

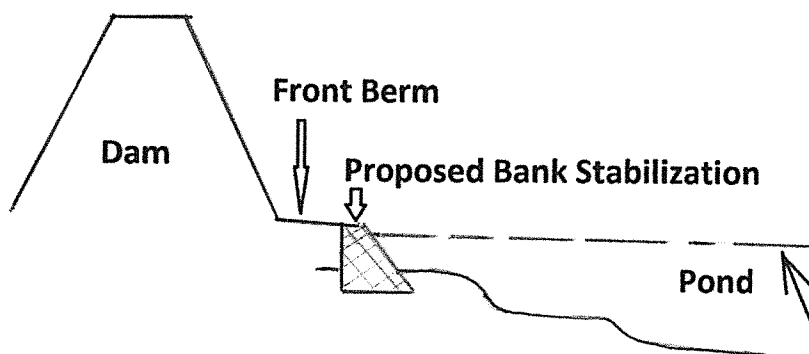
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Silver Creek Structures 3, 18, 25 and 32

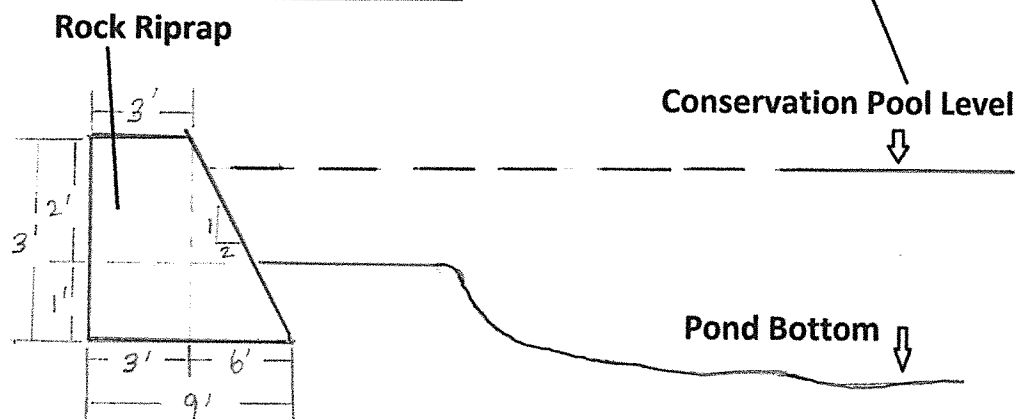
Tekamah-Mud Structure 42A

Typical Bank Stabilization Cross-section A-A

Not to Scale



Enlarged View Cross-section A-A



Notes:

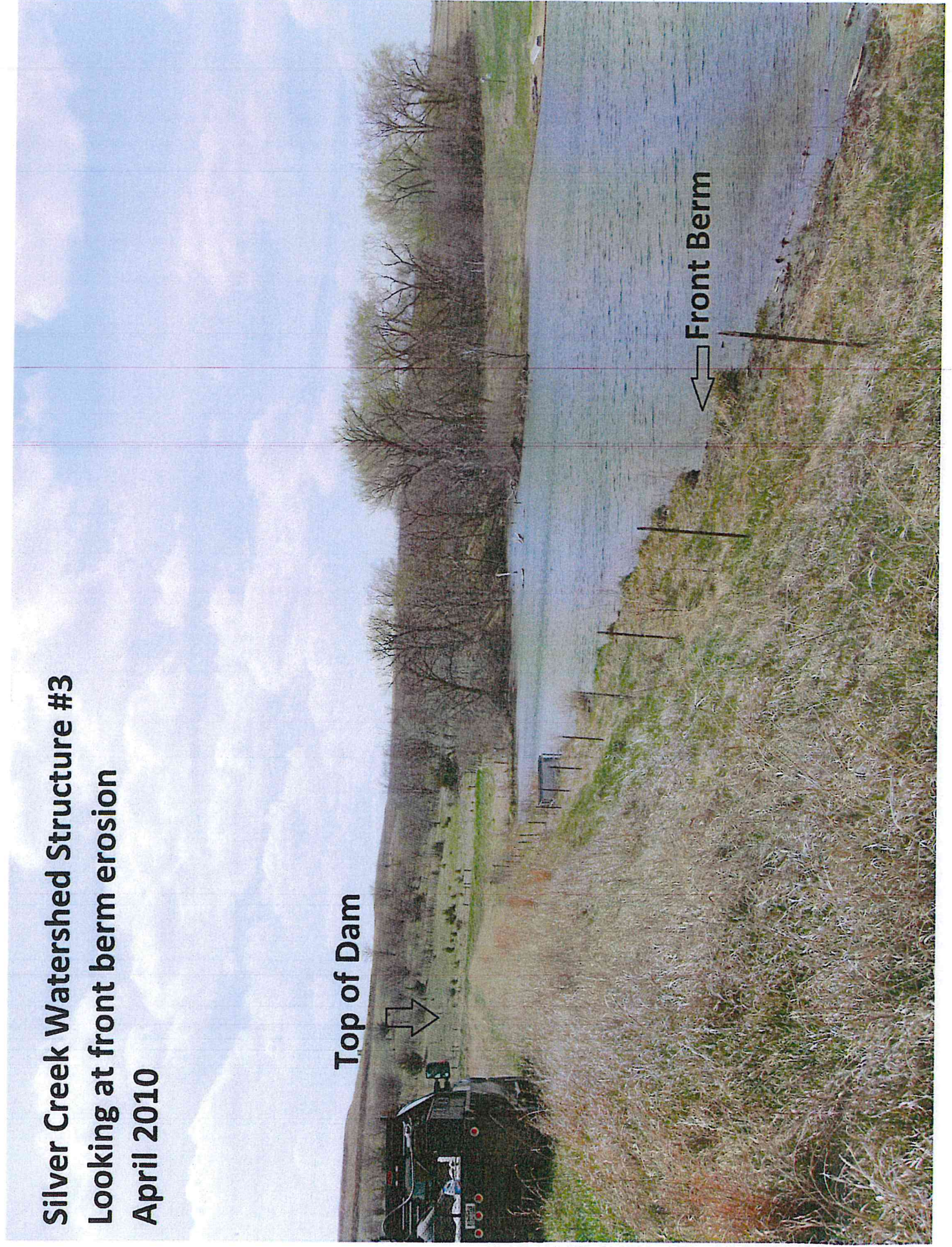
Rock Riprap to be infilled and covered with 6 inches thickness of soil and seeded.

Silver Creek Watershed Structure #3
Looking at front berm erosion
April 2010

Top of Dam



Front Berm

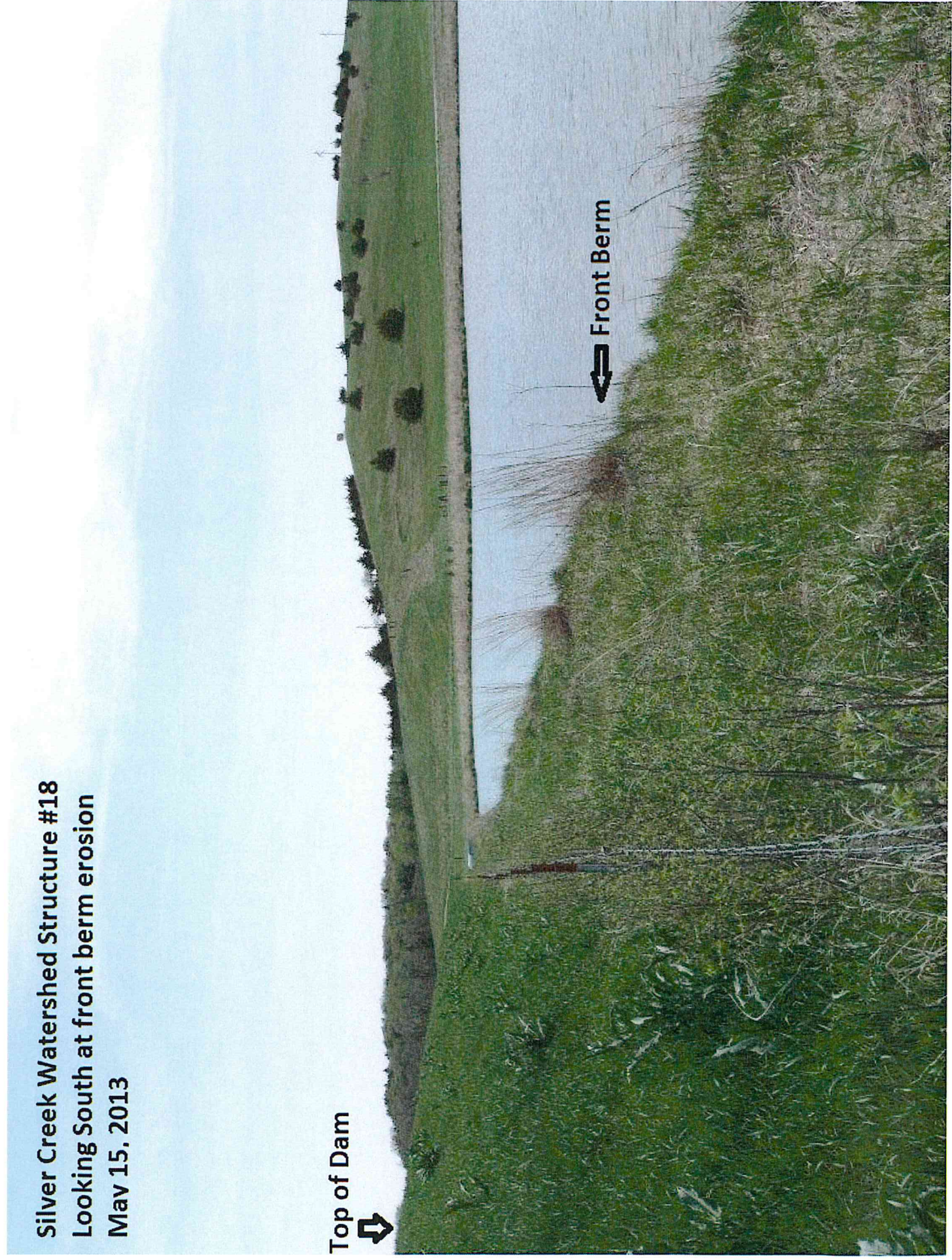


Silver Creek Watershed Structure #18
Looking South at front berm erosion
May 15, 2013

Top of Dam



Front Berm



Silver Creek Watershed Structure # 25
Looking West at front berm erosion
March 26, 2012



Silver Creek Watershed Structure #32
Looking North at front berm erosion
May 15, 2013

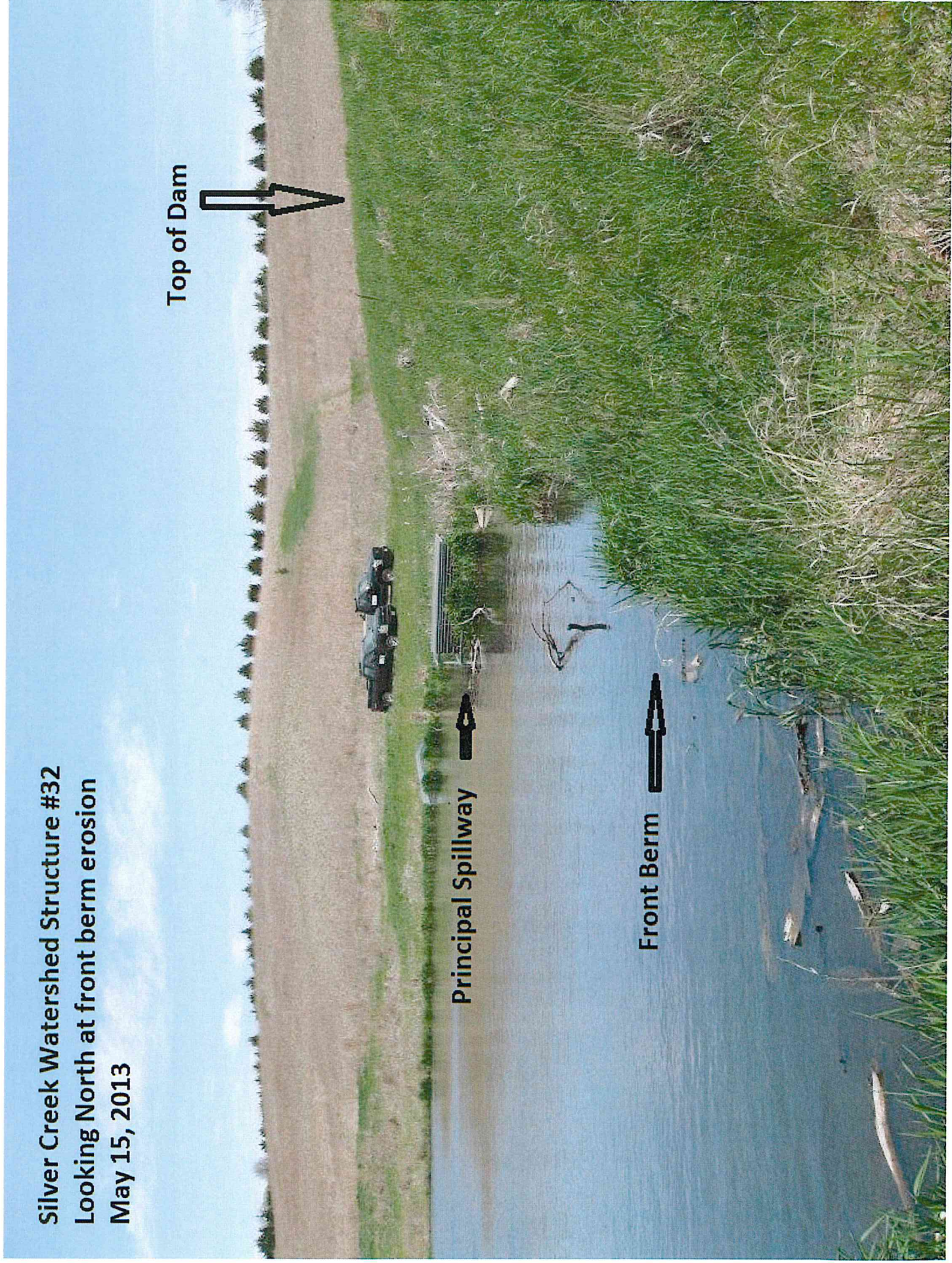
Top of Dam

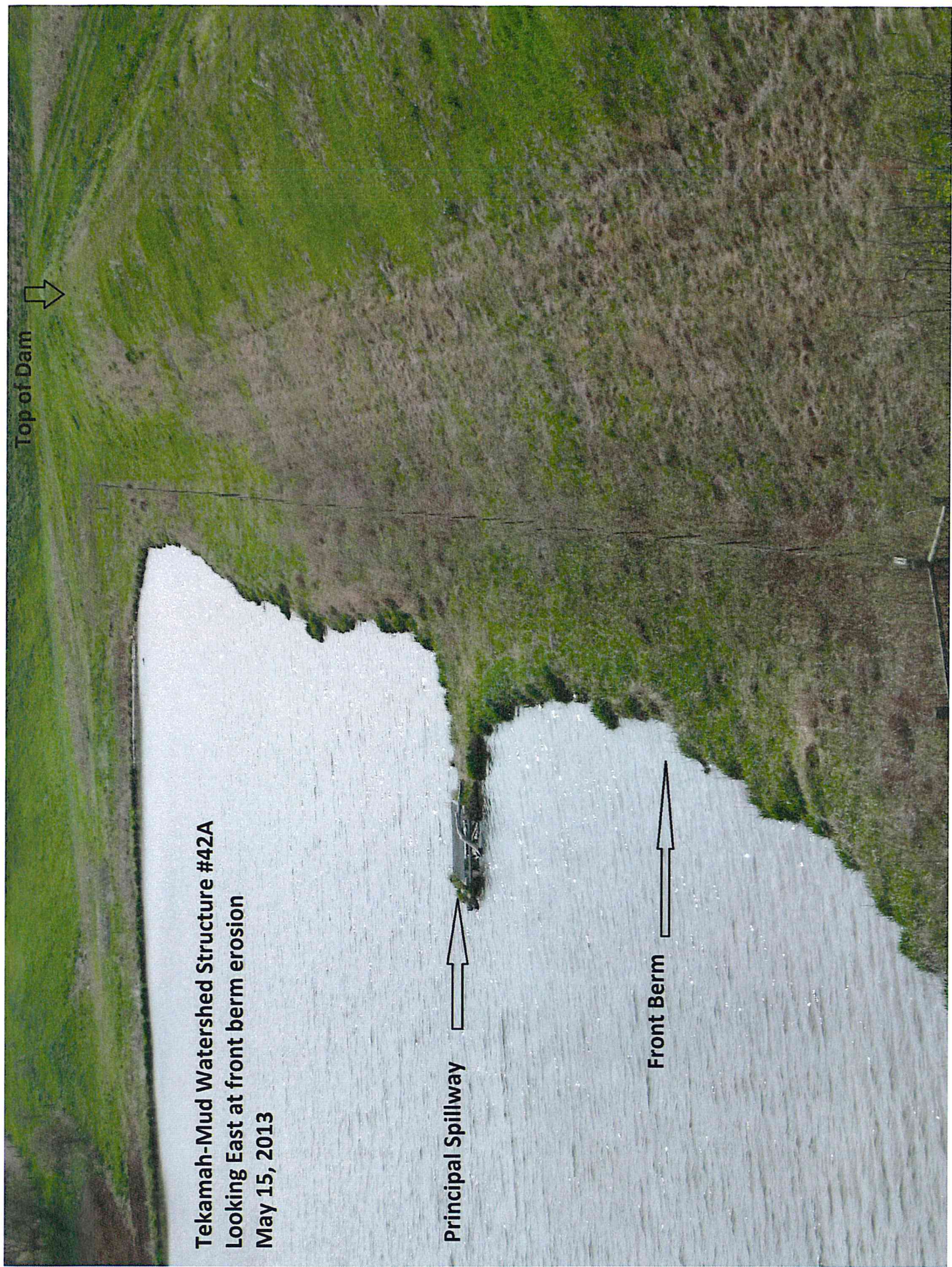


Principal Spillway



Front Berm





Tekamah-Mud Watershed Structure #42A
Looking East at front berm erosion
May 15, 2013

Principal Spillway

Front Berm

Top of Dam