Missouri Sedimentation Action Coalition Survey -- November 2013

Quick Assessment on Sedimentation Concerns and Ideas on Missouri River Reservoirs in South Dakota

Lewis and Clark Lake near Springfield, SD
November 2011

This report includes:

- a 5-page summary, and combined results of the web-based and mailed/emailed survey prepared by MSAC staff.
- Survey Monkey report of mailed/emailed survey.
- Survey Monkey report of web-based survey.

It should be noted that this survey represents a quick assessment tool for the Title IX Task Force. It is not a scientific-based survey. Participants were not randomly sampled. The general public was invited to participate, with limited actual participation. However, this survey can serve as a tool to gauge public opinion and attitudes regarding sedimentation management.

MSAC Survey November 2013: Tool for Title IX Task Force
Quick Assessment on Sedimentation Concerns & Ideas Focused on Missouri River Reservoirs in South Dakota

Summary:
In October and November of 2013, the Missouri Sedimentation Action Coalition surveyed approximately 300 people, including elected officials; tribal, state and federal employees; tribal, city and county representatives along the Missouri River in South Dakota; conservation districts; water districts and others who are members of river-related organizations (including MSAC members).

- Nearly all the respondents (97.3%) supported best management practices on tributaries/watershed to decrease sediment inflow as one way to address sedimentation. Nearly 81% support bank stabilization.
- Nearly 85 percent said the Missouri River and its reservoirs were "very important."
- Nearly 70 percent said sediment management should address long-term sustainability of the reservoir and enhance short-term benefits.
- Nearly 90 percent said addressing sedimentation was a maintenance task of reservoir management.
- Of the 8 authorized purposes, flood control was ranked the most important by nearly half of respondents (47.8%). Water supply had a rating average of second and hydropower third.
- Ranking seven impacts of sedimentation, respondents said reduced storage capacity for flood control was the most important (rating average: 2.37) with blockages of drinking water intakes/poor water quality a close second with a rating average of 2.44.
- Respondents ranked Lewis and Clark Lake as the reservoir in South Dakota needing the most attention in regards to sediment management. The Niobrara River needs the most attention to reduce sedimentation problems, according to respondents.
- More than 80% (83.1%) support using existing state funds to perform sediment management projects that likely will require a percentage of nonfederal funds. More than 60% support using new funds derived from a designated user fee.
- 31 respondents identified a sediment management project that needed to be addressed first. See the comments at the end of this report.

Survey Respondents:
The survey was mailed to an estimated 100 addresses and emailed to approximately 200 addresses. The survey was made available to the public via a web link. People had about two weeks to respond. A response rate will not be tabulated since the pool of surveys distributed is an estimate and it was made available to the general public. Twelve people responded via the web. A total of 74 people responded to the survey. Survey Monkey tabulated the results of the web survey separately. *For purposes of this report, the results are combined.* Results of both are attached.

74 Respondents:

- 17 elected government officials (24%)
- 12 state, county, or local government employees (17%)
- 0 elected tribal officials or tribal employees
- 10 business owners/managers (14%)
- 18 directors/members of a river-related organization (25%)
- 14 individuals (20%)
- 3 did not answer
- (9 who checked one of the above or did not answer elaborated with "other"; those comments are available in the Survey Monkey report)

Only 6 respondents indicated they were not from South Dakota.

Missouri River
Nearly 85 percent said the Missouri River and its reservoirs were "very important." About 14 percent reported "somewhat important" and 1 person said they were "somewhat unimportant."

Nearly 37% of respondents indicated that Lewis and Clark Lake was closest to their home or the reservoir they visited most often. Nearly 31% said Lake Oahe, 24% Lake Francis Case and 8% Lake Sharpe.

Authorized Purposes
Respondents were asked to rank the 8 authorized purposes of the Missouri River Mainstem system in order of importance.

47.8% ranked flood control as the most important purpose. Flood control had the highest overall rating average of 2.55. The closer the rating average is to 1, the more people selected it as their top answer choice. Six of the other purposes received about 5 percent or less support for being ranked the most important. Nearly 30% ranked water supply as the most important purpose. Water supply's overall rating average was 3.20. Hydropower was third with 3.87.

Rating Averages of the Eight Authorized Purposes

- Flood Control 2.55
- Water Supply 3.20
- Hydropower 3.87
- Water Quality Control 4.41
- Recreation 4.70
- Fish & Wildlife 4.76
- Irrigation 5.77
- Navigation 6.75

Sedimentation Impacts
Respondents were asked to rank seven impacts of sedimentation with one being the most important to address and eight being the least important to address. Respondents were given the opportunity to indicate "other" as an impact, which more than 90 percent ranked eighth, or last.

Respondents ranked "reduced storage capacity for flood control" the most important with "blockages of drinking water intakes/poor water quality" a close second. The closer the rating average is to 1, the more people selected it as their top answer choice.

- Reduced storage capacity for flood control 2.37
- Blockages of drinking water intakes/Poor water quality 2.44
- Decreased ability to produced hydropower 4.01
- Restricted access to recreation 4.62
- Localized flooding 4.25
- Increased ground water table levels 5.2
- Endangerment of cultural resources 5.3
- Other 7.82

Methods of addressing sedimentation
Respondents were asked what methods they supported to address sedimentation. They could select as many as they supported. Respondents like the idea of keeping sediment out of the system in the first place.

Nearly all support reducing sediment inflow with best management practices on tributaries/watershed (97.3%). Nearly 81 percent support bank stabilization. More than 64% support dredging.

- Best Management Practices on tributaries/watershed to decrease sediment inflow 97.3%
- Bank Stabilization 80.8%
- Dredging 64.4%
- Dam modification/flushing 52.1%
- Distributing sand/sediment to existing sandbars enhancing channel/flows 49.3%
- Pipeline or other physical means of transport to other location 37%

Three web survey respondents indicated "other" with these comments: "removal of dams below the Niobrara and Bad Rivers," "Dam Removal," and "possibly dam modification."

Funding
Respondents were asked what sources of funding they supported for performing sediment management practices that likely will require a percentage of nonfederal funds.

- Existing state funds 83.1%
- New state/county/or municipal funds derived from a designated user fee (ex: additional fee on park entrance permit) 63.4%
- Existing county funds 39.4%
- Existing municipal funds 33.8%

Other ideas included: tax electrical bills, federal funding, charge on water used, fees on Missouri River water withdrawals and private foundations.

Focus
No respondent felt that sediment management should focus solely on enhancing short-term benefits. Nearly 70 percent said sediment management should address long-term sustainability of the reservoir and enhance short-term benefits. About 30 percent said it should address the long-term sustainability.

River & Reservoirs
Respondents ranked the reservoirs in South Dakota in regards to sediment management needs, with 1 needing the most attention and 4 needing the least attention. Just over 70 percent felt Lewis and Clark Lake needed the most attention. Lake Oahe, the largest reservoir, was ranked fourth, needing the least attention in the group.

- Lewis and Clark Lake 1.48
- Lake Francis Case 2.33
- Lake Sharpe 2.88
- Lake Oahe 3.31

More than 75% feel that sediment management below Gavins Point Dam in South Dakota is somewhat important or important. Twenty percent were neutral. About 3% indicated it was somewhat unimportant or not important.

Respondents indicated that sediment management above Lewis and Clark Lake was more important. About 93% said it is important or somewhat important with 86% of those saying important. About 7 percent was neutral. No one felt it was unimportant at any level.

Nearly 89% felt that addressing sedimentation was a maintenance task of reservoir management. About 11% did not know; no one felt it was not a maintenance task.

Next, respondents were asked to rank five Missouri River tributaries in regards to which one needs the most attention to reduce sedimentation problems in the reservoirs located in South Dakota, with 1 needing the most attention and 6 the least. Respondents were given the opportunity to select "other" and later indicate which tributary they referred to. Nearly 57% ranked the Niobrara River in need of the most attention. More than 18% thought the White River needed the most attention. About 12% thought the Bad River and 8% the Cheyenne River. One person thought the Grand River needed the most attention and two indicated "other."

- Niobrara River 1.85
- White River 2.46
- Bad River 2.95
- Cheyenne River 3.25
- Grand 4.71
- Other 5.78

The other tributaries named in this question needing attention: Ponca, Moreau, James River, Choatare Creek (illegible), Moreau, and Oak Creek. A couple of surveys were returned with just one river checked.

Projects

Thirty-one respondents identified a sediment management project that needs to be addressed first. They were also asked how to do it.

Here are their responses:

- "clear out near the mouth of the Niobrara"
- "unprotected field waterways"
- "Niobrara – Dams, collection basin & Pipeline"
- "upstream farming & livestock practices"
- "Niobrara"
- "I was born & raised by the Missouri River, so that's the one with which I'm most familiar." It used to have 2 channels; there were sandbars and no sediment, thus I don't feel qualified to answer."
- "grass watershed, incentives for farmers reduce irrigation Niobara"
- "something to limit sediment into Missouri River from the Niobrara River"
- "Bank control, rip rap"
- "Bank stabilization due to dangers of 2011 flood and further emphasis of tributary sedimentation"
- "Tributaries, siltation, dams"
- "Gavins Point – Dredge"
- "Sharpe flushing daming trib whenever possible"
- "Seeking solutions for Lewis and Clark reservoir, which is losing storage capacity so fast, relative to the other, larger reservoirs."
- "White River"
- "grassland conversion to cropland educational programs"
- "Lewis and Clark"
- "Sand movement is number one from sandy sites along all rivers. Stop farming close to rivers. Fix or repair cattle drinking areas, riparian areas"
- "Extensive dredging at the mouth of the Niobrara River"
- "Would like to see more info on the different options in question 7 before I would make a decision"

- “Identify Best Management Practice needs in small watersheds of Niobrara River. Implement Watershed Improvement Projects similar to Lewis and Clark Watershed Implementation Project.”
- “Niobrara River/Springfield area – channel dredging and sed management on the upstream of the Niobrara & White Rivers.”
- “Stopping erosion, studies on how much fertilizer, pesticides, and etc. that are running into the rivers. Also the sediment buildup, what is drain tiling doing to the rivers, Should there be retention areas to slow the process.”
- “Lewis and Clark Lake; dredging some to enhance channels, pipeline long-term”
- “Niobrara river”
- “The dam at Lewis and Clark should be removed so the river can flow naturally below the dam, which would reduce sediment build up near Springfield and increase sediment load downstream”
- “Removal of Gavins Point Dam”
- “A large portion of the sediment load is naturally occurring so the primary project needs to be how to move the sediment past Gavins Point to the sediment starved lower reach of the Missouri River”
- “The Niobrara. Work with the Conservation Districts in SD and Natural Resource Districts in NE to work with landowners in establishing BMPs to reduce the soil loss on the crop and pasture lands. Also, work with the USF&WL and the ACE to implement streambank erosion BMPs.”
- “Lewis and Clark Lake; reduce sediment inflow; pipeline to transport sediment downstream where it is needed”
- “Lewis and Clark Lake; a combination of dredging and transport via pipeline past GP dam”

MSAC Survey October 2013

1. Tell us more about yourself. Check one below. I am a/an...

	Response Percent	Response Count
Elected Government Official	**23.7%**	**14**
State, County, or Local Government Employee	18.6%	11
Elected Tribal Official	0.0%	0
Tribal Employee	0.0%	0
Business Owner/Manager	16.9%	10
Director or Member of an Organization interested in River Issues	**23.7%**	**14**
Individual	16.9%	10
Other (please specify)		9
answered question		**59**
skipped question		**3**

2. Tell us where you live. Check one below.

	Response Percent	Response Count
South Dakota or Three Affiliated Tribes of North Dakota Member	**95.1%**	**58**
Outside South Dakota	4.9%	3
answered question		**61**
skipped question		**1**

3. How important is the Missouri River and six reservoirs to you or the interest you represent?

	Response Percent	Response Count
Not important	0.0%	0
Somewhat unimportant	1.6%	1
Neutral	0.0%	0
Somewhat important	11.5%	7
Very important	**86.9%**	**53**
	answered question	**61**
	skipped question	**1**

4. Which South Dakota reservoir is closest in proximity to your home or which one do you visit most often?

	Response Percent	Response Count
Lewis and Clark Lake	31.7%	19
Lake Francis Case	28.3%	17
Lake Sharpe	6.7%	4
Lake Oahe	**33.3%**	**20**
	answered question	**60**
	skipped question	**2**

5. The six mainstem dams, working together as a system, store water for eight purposes. Ple rank the authorized purposes of the Missori River mainstem system in order of importance, w 1 being the most important and 8 being the least important.

	1	2	3	4	5	6	7	8	Rating Average	Ra Co
Navigation	3.4% (2)	3.4% (2)	1.7% (1)	10.2% (6)	1.7% (1)	13.6% (8)	11.9% (7)	**54.2% (32)**	6.63	
Recreation	5.1% (3)	6.8% (4)	16.9% (10)	10.2% (6)	**25.4% (15)**	15.3% (9)	15.3% (9)	5.1% (3)	4.76	
Irrigation	5.1% (3)	0.0% (0)	5.1% (3)	10.2% (6)	18.6% (11)	15.3% (9)	**35.6% (21)**	10.2% (6)	5.76	
Flood Control	**49.2% (29)**	13.6% (8)	8.5% (5)	11.9% (7)	5.1% (3)	6.8% (4)	3.4% (2)	1.7% (1)	2.53	
Hydropower	3.4% (2)	23.7% (14)	**27.1% (16)**	18.6% (11)	6.8% (4)	5.1% (3)	6.8% (4)	8.5% (5)	3.86	
Water Quality Control	3.4% (2)	20.3% (12)	10.2% (6)	**22.0% (13)**	10.2% (6)	11.9% (7)	11.9% (7)	10.2% (6)	4.49	
Water Supply	**28.8% (17)**	15.3% (9)	27.1% (16)	1.7% (1)	6.8% (4)	11.9% (7)	1.7% (1)	6.8% (4)	3.19	
Fish and Wildlife	1.7% (1)	16.9% (10)	3.4% (2)	15.3% (9)	**25.4% (15)**	20.3% (12)	13.6% (8)	3.4% (2)	4.78	
								answered question		
								skipped question		

6. Please rank the following impacts of sedimentation, with 1 being the most important to address and 8 being the least important to address.

	1	2	3	4	5	6	7	8	Rating Average	Ra Co
Reduced storage capacity for flood control	**40.7% (24)**	23.7% (14)	16.9% (10)	11.9% (7)	1.7% (1)	0.0% (0)	3.4% (2)	1.7% (1)	2.32	
Endangerment of cultural resources	5.1% (3)	3.4% (2)	1.7% (1)	5.1% (3)	28.8% (17)	**30.5% (18)**	25.4% (15)	0.0% (0)	5.42	
Restricted access to recreation	3.4% (2)	10.2% (6)	16.9% (10)	15.3% (9)	18.6% (11)	**20.3% (12)**	13.6% (8)	1.7% (1)	4.59	
Blockages of drinking water intakes/Poor water quality	**39.0% (23)**	16.9% (10)	16.9% (10)	11.9% (7)	8.5% (5)	6.8% (4)	0.0% (0)	0.0% (0)	2.54	
Decreased ability to produce hydropower	3.4% (2)	**25.4% (15)**	18.6% (11)	16.9% (10)	11.9% (7)	13.6% (8)	8.5% (5)	1.7% (1)	3.92	
Increased ground water table levels	3.4% (2)	3.4% (2)	10.2% (6)	10.2% (6)	18.6% (11)	23.7% (14)	**30.5% (18)**	0.0% (0)	5.31	
Localized flooding	3.4% (2)	16.9% (10)	18.6% (11)	**28.8% (17)**	10.2% (6)	5.1% (3)	15.3% (9)	1.7% (1)	4.10	
Other	1.7% (1)	0.0% (0)	0.0% (0)	0.0% (0)	1.7% (1)	0.0% (0)	3.4% (2)	**93.2% (55)**	7.80	
									answered question	
									skipped question	

7. What methods of addressing sedimentation do you support? Check all that apply.

	Response Percent	Response Count
Dredging	67.2%	41
Best management practices on tributaries/watershed to decrease sediment inflow	**96.7%**	**59**
Bank stabilization	80.3%	49
Dam modification/flushing	52.5%	32
Distributing sand/sediment to existing sandbars enhancing channel/flows	47.5%	29
Pipeline or other physical means of transport to other location	37.7%	23
Other (please specify)		0
answered question		**61**
skipped question		**1**

8. Performing sediment management projects likely will require a percentage of nonfederal funds. What sources do you support for providing this funding? Check all that apply.

	Response Percent	Response Count
Existing state funds	**83.1%**	**49**
Existing county funds	42.4%	25
Existing municpal funds	35.6%	21
New state/county/or municipal funds derived from a designated user fee (ex: additional fee on park entrance permit)	62.7%	37
Other (please specify)		3
answered question		**59**
skipped question		**3**

9. What should sedimentation management focus on? (Select one)

	Response Percent	Response Count
Enhancing short-term benefits	0.0%	0
Addressing long-term sustainability of the reservoir	30.6%	19
Both	**69.4%**	**43**
Other (please specify)		0
answered question		**62**
skipped question		**0**

10. Rank the reservoirs in South Dakota in regards to sediment management needs, with 1 needing the most attention and 4 needing the least attention.

	1	2	3	4	Rating Average	Rating Count
Lewis and Clark Lake	**65.5% (36)**	20.0% (11)	10.9% (6)	3.6% (2)	1.53	55
Lake Francis Case	14.5% (8)	**49.1% (27)**	23.6% (13)	12.7% (7)	2.35	55
Lake Sharpe	5.5% (3)	20.0% (11)	**52.7% (29)**	21.8% (12)	2.91	55
Lake Oahe	14.5% (8)	10.9% (6)	12.7% (7)	**61.8% (34)**	3.22	55
				answered question		**55**
				skipped question		**7**

11. How important is sediment management to the Missouri River below Gavins Point Dam in South Dakota?

		Response Percent	Response Count
Not Important		1.7%	1
Somewhat Unimportant		1.7%	1
Neutral		15.5%	9
Somewhat Important		36.2%	21
Important		**44.8%**	**26**
		answered question	**58**
		skipped question	**4**

12. How important is sediment management to the Missouri River above Lewis and Clark Lake?

	Response Percent	Response Count
Not Important	0.0%	0
Somewhat Unimportant	0.0%	0
Neutral	5.2%	3
Somewhat Important	6.9%	4
Important	**87.9%**	**51**
	answered question	**58**
	skipped question	**4**

13. Do you view addressing sedimentation to be a maintenance task of reservoir management?

	Response Percent	Response Count
Yes	**87.9%**	**51**
No	0.0%	0
I don't know	12.1%	7
	answered question	**58**
	skipped question	**4**

14. Rank the following tributaries in regards to which one needs the most attention to reduce sedimentation problems in Missouri River reservoirs located in South Dakota, with 1 needing the most attention and 6 needing the least attention.

	1	2	3	4	5	6	Rating Average	Rating Count
Niobrara River	**54.7% (29)**	18.9% (10)	17.0% (9)	5.7% (3)	3.8% (2)	0.0% (0)	1.85	53
White River	22.6% (12)	**39.6% (21)**	22.6% (12)	11.3% (6)	0.0% (0)	3.8% (2)	2.38	53
Cheyenne River	9.4% (5)	7.5% (4)	**39.6% (21)**	**39.6% (21)**	3.8% (2)	0.0% (0)	3.21	53
Bad River	7.5% (4)	28.3% (15)	18.9% (10)	**39.6% (21)**	5.7% (3)	0.0% (0)	3.08	53
Grand	1.9% (1)	3.8% (2)	1.9% (1)	3.8% (2)	**86.8% (46)**	1.9% (1)	4.75	53
Other	3.8% (2)	1.9% (1)	0.0% (0)	0.0% (0)	0.0% (0)	**94.3% (50)**	5.74	53
						answered question		**53**
						skipped question		**9**

15. If you checked "other" on question 14, please indicate which tributary you are referring to below:

	Response Count
	8
answered question	**8**
skipped question	**54**

16. What sediment management project needs to be addressed first and how would you do it?

	Response Count
	24
answered question	**24**
skipped question	**38**

17. Please check here if you would like to receive updates by email from the Missouri Sedimentation Action Coalition.

		Response Percent	Response Count
Yes		**59.2%**	**29**
No		40.8%	20

Please provide your email address here. If you would rather not provide your email address with your survey responses, please email your request for updates to msaconline@gmail.com.	22
answered question	**49**
skipped question	**13**

Q1. Tell us more about yourself. Check one below.
I am a/an...

1	farmer	Nov 19, 2013 11:23 AM
2	retired Bad River W.Q. Project	Nov 13, 2013 7:42 AM
3	retired	Nov 13, 2013 7:39 AM
4	Retired school teacher, I rent the other side of my duplex.	Nov 12, 2013 3:20 PM
5	Bank Facility Management	Nov 8, 2013 7:15 AM
6	owner guide Swrvice stared 1980	Nov 7, 2013 12:58 PM
7	Federal employee	Nov 7, 2013 11:20 AM
8	Chairman of local Conservation District in South Dakota	Nov 5, 2013 1:00 PM
9	Individual and Government employee	Nov 5, 2013 9:37 AM

Q8. Performing sediment management projects likely will require a percentage of nonfederal funds. What sources do you support for providing this funding? Check all that apply.

1	tax electrical bills	Nov 19, 2013 11:29 AM
2	federal funding	Nov 13, 2013 7:36 AM
3	charge on water used	Nov 5, 2013 2:21 PM

Q15. If you checked "other" on question 14, please indicate which tributary you are referring to below:

1	Ponca & Moreau	Nov 13, 2013 7:36 AM
2	I don't feel qualified to answer.	Nov 12, 2013 3:20 PM
3	James River Choatare (Really couldn't tell what was written here) Creek	Nov 8, 2013 7:30 AM
4	Note: White River was the only one checked on the mailed in survey.	Nov 8, 2013 7:18 AM
5	Note: only the Bad River was ranked 1, the others were not ranked on the survey mailed in	Nov 8, 2013 7:08 AM
6	MOREAU	Nov 7, 2013 12:58 PM
7	Oak Creek. Many sediments and contaminents travel in this tributary.	Nov 5, 2013 9:37 AM
8	James	Nov 4, 2013 5:49 AM

Q16. What sediment management project needs to be addressed first and how would you do it?		
1	clear out near the mouth of the Niobrara	Nov 19, 2013 11:29 AM
2	unprotected field waterways	Nov 19, 2013 11:23 AM
3	Niobrara - Dams, collection basin & Pipeline	Nov 13, 2013 4:58 PM
4	upstream farming & livestock practices	Nov 13, 2013 7:39 AM
5	Niobrara	Nov 13, 2013 7:36 AM
6	I was born & raised by the Missouri River, so that's the one with which I'm most familiar. It used to have 2 channels; there were sandbars and no sediment, thus I don't feel qualified to answer.	Nov 12, 2013 3:20 PM
7	grass watershed, incentives for farmers reduce irrigation Niobrara	Nov 8, 2013 7:35 AM
8	something to limit sediment into Missouri River from the Niobrara River	Nov 8, 2013 7:32 AM
9	Bank control, rip rap	Nov 8, 2013 7:30 AM
10	Bank stabilization due to dangers of 2011 flood and further emphasis of tributary sedimentation	Nov 8, 2013 7:15 AM
11	Tributaries, siltation, dams	Nov 8, 2013 7:11 AM
12	Gavins Point - Dredge	Nov 7, 2013 1:54 PM
13	Sharpe fushing daming trib whenever possible	Nov 7, 2013 12:58 PM
14	Seeking solutions for Lewis and Clark reservoir, which is losing storage capacity so fast, relative to the other, larger reservoirs.	Nov 7, 2013 11:20 AM
15	White River	Nov 6, 2013 8:31 AM
16	grassland conversion to cropland educational programs	Nov 5, 2013 9:45 PM
17	Lewis and Clark	Nov 5, 2013 2:21 PM
18	Sand movement is number one from sandy sites along all rivers. Stop farming close to rivers. Fix or repair cattle drinking areas ,riparian areas	Nov 5, 2013 1:00 PM
19	Extensive dredging at the mouth of the Niobrara River	Nov 5, 2013 11:15 AM
20	Would like to see more info on the different options in question 7 before I would make a decision.	Nov 5, 2013 9:37 AM
21	Identify Best Management Practice needs in small watersheds of Niobrara River. Implement Watershed Improvement Projects similar to Lewis & Clark Watershed Implementation Project.	Nov 5, 2013 8:10 AM
22	Niobrara River / Springfield area - channel dredging and sed management on the upstream of the Niobrara & White Rivers.	Nov 5, 2013 5:15 AM
23	Stopping erosion, studies on how much fertilizer, pesticides, and etc. that are	Nov 4, 2013 5:49 AM

Q16. What sediment management project needs to be addressed first and how would you do it?		
	running into the rivers. Also the sediment buildup, what is drain tiling doing to the rivers, Should there be retention areas to slow the process,	
24	Lewis and Clark Lake; dredging some to enhance channels, pipeline long-term	Nov 1, 2013 9:35 AM

MSAC Survey October 2013 Website

SurveyMonkey

1. Tell us more about yourself. Check one below. I am a/an...

		Response Percent	Response Count
Elected Government Official		25.0%	3
State, County, or Local Government Employee		8.3%	1
Elected Tribal Official		0.0%	0
Tribal Employee		0.0%	0
Business Owner/Manager		0.0%	0
Director or Member of an Organization interested in River Issues		**33.3%**	**4**
Individual		**33.3%**	**4**
		Other (please specify)	0
		answered question	**12**
		skipped question	**0**

2. Tell us where you live. Check one below.

		Response Percent	Response Count
South Dakota or Three Affiliated Tribes of North Dakota Member		**75.0%**	**9**
Outside South Dakota		25.0%	3
		answered question	**12**
		skipped question	**0**

3. How important is the Missouri River and six reservoirs to you or the interest you represent?

	Response Percent	Response Count
Not important	0.0%	0
Somewhat unimportant	0.0%	0
Neutral	0.0%	0
Somewhat important	25.0%	3
Very important	**75.0%**	**9**
	answered question	**12**
	skipped question	**0**

4. Which South Dakota reservoir is closest in proximity to your home or which one do you visit most often?

	Response Percent	Response Count
Lewis and Clark Lake	**66.7%**	**8**
Lake Francis Case	0.0%	0
Lake Sharpe	16.7%	2
Lake Oahe	16.7%	2
	answered question	**12**
	skipped question	**0**

5. The six mainstem dams, working together as a system, store water for eight purposes. Ple rank the authorized purposes of the Missori River mainstem system in order of importance, w 1 being the most important and 8 being the least important.

	1	2	3	4	5	6	7	8	Rating Average	Ra Co
Navigation	0.0% (0)	0.0% (0)	0.0% (0)	8.3% (1)	8.3% (1)	0.0% (0)	8.3% (1)	**75.0% (9)**	7.33	
Recreation	8.3% (1)	8.3% (1)	0.0% (0)	25.0% (3)	**41.7% (5)**	16.7% (2)	0.0% (0)	0.0% (0)	4.33	
Irrigation	0.0% (0)	0.0% (0)	16.7% (2)	0.0% (0)	16.7% (2)	25.0% (3)	**33.3% (4)**	8.3% (1)	5.83	
Flood Control	**41.7% (5)**	8.3% (1)	8.3% (1)	33.3% (4)	0.0% (0)	8.3% (1)	0.0% (0)	0.0% (0)	2.67	
Hydropower	8.3% (1)	**25.0% (3)**	16.7% (2)	16.7% (2)	0.0% (0)	16.7% (2)	16.7% (2)	0.0% (0)	3.92	
Water Quality Control	0.0% (0)	**25.0% (3)**	**25.0% (3)**	8.3% (1)	**25.0% (3)**	0.0% (0)	16.7% (2)	0.0% (0)	4.00	
Water Supply	**33.3% (4)**	16.7% (2)	16.7% (2)	0.0% (0)	8.3% (1)	16.7% (2)	0.0% (0)	8.3% (1)	3.25	
Fish and Wildlife	8.3% (1)	16.7% (2)	16.7% (2)	8.3% (1)	0.0% (0)	16.7% (2)	**25.0% (3)**	8.3% (1)	4.67	
								answered question		
								skipped question		

6. Please rank the following impacts of sedimentation, with 1 being the most important to address and 8 being the least important to address.

	1	2	3	4	5	6	7	8	Rating Average	Ra Co
Reduced storage capacity for flood control	**41.7% (5)**	16.7% (2)	0.0% (0)	33.3% (4)	0.0% (0)	8.3% (1)	0.0% (0)	0.0% (0)	2.58	
Endangerment of cultural resources	8.3% (1)	8.3% (1)	8.3% (1)	16.7% (2)	**25.0% (3)**	16.7% (2)	8.3% (1)	8.3% (1)	4.67	
Restricted access to recreation	0.0% (0)	8.3% (1)	8.3% (1)	25.0% (3)	**33.3% (4)**	8.3% (1)	16.7% (2)	0.0% (0)	4.75	
Blockages of drinking water intakes/Poor water quality	33.3% (4)	**41.7% (5)**	25.0% (3)	0.0% (0)	0.0% (0)	0.0% (0)	0.0% (0)	0.0% (0)	1.92	
Decreased ability to produce hydropower	8.3% (1)	8.3% (1)	**25.0% (3)**	8.3% (1)	8.3% (1)	16.7% (2)	**25.0% (3)**	0.0% (0)	4.50	
Increased ground water table levels	8.3% (1)	8.3% (1)	16.7% (2)	0.0% (0)	16.7% (2)	**41.7% (5)**	8.3% (1)	0.0% (0)	4.67	
Localized flooding	0.0% (0)	8.3% (1)	16.7% (2)	16.7% (2)	16.7% (2)	8.3% (1)	**33.3% (4)**	0.0% (0)	5.00	
Other	0.0% (0)	0.0% (0)	0.0% (0)	0.0% (0)	0.0% (0)	0.0% (0)	8.3% (1)	**91.7% (11)**	7.92	
									answered question	
									skipped question	

7. What methods of addressing sedimentation do you support? Check all that apply.

		Response Percent	Response Count
Dredging		50.0%	6
Best management practices on tributaries/watershed to decrease sediment inflow		**100.0%**	**12**
Bank stabilization		83.3%	10
Dam modification/flushing		50.0%	6
Distributing sand/sediment to existing sandbars enhancing channel/flows		58.3%	7
Pipeline or other physical means of transport to other location		33.3%	4
		Other (please specify)	3
		answered question	**12**
		skipped question	**0**

8. Performing sediment management projects likely will require a percentage of nonfederal funds. What sources do you support for providing this funding? Check all that apply.

	Response Percent	Response Count
Existing state funds	**83.3%**	**10**
Existing county funds	25.0%	3
Existing municpal funds	25.0%	3
New state/county/or municipal funds derived from a designated user fee (ex: additional fee on park entrance permit)	66.7%	8
Other (please specify)		2
answered question		**12**
skipped question		**0**

9. What should sedimentation management focus on? (Select one)

	Response Percent	Response Count
Enhancing short-term benefits	0.0%	0
Addressing long-term sustainability of the reservoir	30.0%	3
Both	**70.0%**	**7**
Other (please specify)		2
answered question		**10**
skipped question		**2**

10. Rank the reservoirs in South Dakota in regards to sediment management needs, with 1 needing the most attention and 4 needing the least attention.

	1	2	3	4	Rating Average	Rating Count
Lewis and Clark Lake	**91.7% (11)**	0.0% (0)	0.0% (0)	8.3% (1)	1.25	12
Lake Francis Case	0.0% (0)	**75.0% (9)**	25.0% (3)	0.0% (0)	2.25	12
Lake Sharpe	0.0% (0)	25.0% (3)	**75.0% (9)**	0.0% (0)	2.75	12
Lake Oahe	8.3% (1)	0.0% (0)	0.0% (0)	**91.7% (11)**	3.75	12
				answered question		**12**
				skipped question		**0**

11. How important is sediment management to the Missouri River below Gavins Point Dam in South Dakota?

		Response Percent	Response Count
Not Important		0.0%	0
Somewhat Unimportant		0.0%	0
Neutral		**41.7%**	**5**
Somewhat Important		16.7%	2
Important		**41.7%**	**5**
		answered question	**12**
		skipped question	**0**

12. How important is sediment management to the Missouri River above Lewis and Clark Lake?

	Response Percent	Response Count
Not Important	0.0%	0
Somewhat Unimportant	0.0%	0
Neutral	16.7%	2
Somewhat Important	8.3%	1
Important	**75.0%**	**9**
	answered question	**12**
	skipped question	**0**

13. Do you view addressing sedimentation to be a maintenance task of reservoir management?

	Response Percent	Response Count
Yes	**91.7%**	**11**
No	0.0%	0
I don't know	8.3%	1
	answered question	**12**
	skipped question	**0**

14. Rank the following tributaries in regards to which one needs the most attention to reduce sedimentation problems in Missouri River reservoirs located in South Dakota, with 1 needing the most attention and 6 needing the least attention.

	1	2	3	4	5	6	Rating Average	Rating Count
Niobrara River	**66.7% (8)**	8.3% (1)	8.3% (1)	8.3% (1)	8.3% (1)	0.0% (0)	1.83	12
White River	0.0% (0)	**50.0% (6)**	33.3% (4)	0.0% (0)	16.7% (2)	0.0% (0)	2.83	12
Cheyenne River	0.0% (0)	16.7% (2)	25.0% (3)	**58.3% (7)**	0.0% (0)	0.0% (0)	3.42	12
Bad River	**33.3% (4)**	16.7% (2)	25.0% (3)	25.0% (3)	0.0% (0)	0.0% (0)	2.42	12
Grand	0.0% (0)	8.3% (1)	8.3% (1)	8.3% (1)	**75.0% (9)**	0.0% (0)	4.50	12
Other	0.0% (0)	0.0% (0)	0.0% (0)	0.0% (0)	0.0% (0)	**100.0% (12)**	6.00	12
						answered question		**12**
						skipped question		**0**

15. If you checked "other" on question 14, please indicate which tributary you are referring to below:

	Response Count
	1
answered question	**1**
skipped question	**11**

16. What sediment management project needs to be addressed first and how would you do it?

	Response Count
	7
answered question	**7**
skipped question	**5**

17. Please check here if you would like to receive updates by email from the Missouri Sedimentation Action Coalition.

		Response Percent	Response Count
Yes		**71.4%**	**5**
No		28.6%	2
Please provide your email address here. If you would rather not provide your email address with your survey responses, please email your request for updates to msaconline@gmail.com.			4
answered question			**7**
skipped question			**5**

Q7. What methods of addressing sedimentation do you support? Check all that apply.		
1	removal of dams below the Niobrara and Bad Rivers	Nov 8, 2013 2:07 PM
2	DAM REMOVAL	Nov 5, 2013 2:16 PM
3	possibly dam modification	Oct 31, 2013 4:59 AM

Q8. Performing sediment management projects likely will require a percentage of nonfederal funds. What sources do you support for providing this funding? Check all that apply.		
1	FEES ON MISSOURI RIVER WATER WITHDRAWALS	Nov 5, 2013 2:16 PM
2	Private foundations	Nov 1, 2013 6:15 PM

Q9. What should sedimentation management focus on? (Select one)		
1	Removal of dams which should never have been built	Nov 8, 2013 2:07 PM
2	RIVER ECOSYSTEM RESTORATION	Nov 5, 2013 2:16 PM

Q15. If you checked "other" on question 14, please indicate which tributary you are referring to below:		
1	I didn't intend to check "other" but I don't know how to uncheck it.	Nov 1, 2013 6:15 PM

Q16. What sediment management project needs to be addressed first and how would you do it?		
1	Niobrarariver	Nov 8, 2013 5:06 PM
2	The dam at Lewis and Clark should be removed so the river can flow naturally below the dam, which would reduce sediment build up near Springfield and increase sediment load downstream	Nov 8, 2013 2:07 PM
3	REMOVAL OF GAVINS POINT DAM	Nov 5, 2013 2:16 PM
4	A large portion of the sediment load is naturally occurring so the primary project needs to be how to move the sediment past Gavins Point to the sediment starved lower reach of the Missouri River	Nov 5, 2013 12:38 PM
5	The Niobrara. Work with the Conservation Districts in SD and Natural Resource Districts in NE to work with landowners in establishing BMPs to reduce the soil loss on the crop and pasture lands. Also, work with the USF&WL and the ACE to implement streambank erosion BMPs.	Nov 1, 2013 6:15 PM
6	Lewis and Clark Lake; reduce sediment inflow; pipeline to transport sediment downstream where it is needed	Oct 31, 2013 5:16 PM
7	Lewis and Clark Lake; a combination of dredging and transport via pipeline past GP dam	Oct 31, 2013 4:59 AM