Small Scale Lake Management Planning Grant Project Summary

Project Number: SPL-194-09

Project Name: Surface Water User Survey Design

Local Sponsor: Dane County Office of Lakes & Watersheds

Billing Period 10/1/2008 through 6/30/2010

Prepared by: Marcia Hartwig

Contact Information: 608-224-3746, hartwig@co.dane.wi.us

After first being awarded the grant, we had a difficult time finding an organization that would be able to complete the survey work. We had worked with the UW –Madison Environmental Resources Center in the past and were hoping they would take on this project with us, but learned that they already had too many projects and would not be available. Several other options were suggested, one of which was the UW –River Falls Survey Research Center (SRC). Sue Jones and I spoke with David Trechter and Shelly Hadley from the SRC and decided that the scope of our project would be a project they could take on.

Initially, Sue Jones and I were concerned about working with an organization long distance, but soon felt at ease after our first conference call. We shared what type of information we were interested in obtaining and why. Shelly and David educated us on pitfalls to avoid when asking the general public for information as well as different methods available to obtain what we sought. We shared that there was a survey completed in 1995 regarding water recreation on the Yahara chain of lakes, but that we wanted to expand that to all surface waters in Dane County to compare to the 1995 data. We also wanted to attempt to capture a fiscal snapshot that the water resources have on the local economy.

Enclosed is a copy of the survey implementation plan. Grant SPL-194-09 funded SRC's preparation of three draft survey instruments to gather water recreation data in Dane County, as well as plan and costs for implementing surveys and analyzing the data. Although titled, "...Proposal," this is the final plan we are using to gather data about water recreation in the Dane County area. The first of the three surveys was implemented this past fall under another grant. The second and third surveys will be implemented in 2011, if grants are awarded to fund those projects.

Also enclosed is a list of meetings that shows which county staff met with folks outside of the county. County staff salary/fringe are included with the exception of Sgt. Ritter, who works for a different department, so we don't have access to his salary/fringe. Included in my time are hours beyond meeting times preparing information for UW–River Falls' SRC.

### UW-River Falls, Survey Research Center Dane County Water Recreation Study Proposal January 20, 2010

#### **REVISION to:**

- July 15, 2009 original cost proposal and
- September 21, 2009 revised proposal/outline of estimated costs

Phase 1. Survey Development. The original Survey Research Center (SRC) proposal of July 2009 to Dane County's Office of Lakes and Watersheds was based on developing two survey instruments for two populations (1) Dane County summer water recreational users (boating, fishing, etc.) and (2) other Dane County seasonal water recreation users (ice fishing, etc.). Phase 1 of the project was modified in fall 2009 to include the development of 3 survey instruments (forms of data collection described below). In addition, the SRC identified methods best suited to obtain statistically valid samples for each form of data collection and the costs associated with each phase of the survey project. The SRC also developed an intercept survey - batch cover sheet and intercept instructions.

Phase 1: Costs. Phase 1 has been completed and the \$3,000 charge will be billed soon.

Phase 2. Data Collection. The second phase of the project calls for 3 forms of data collection:

- A short (one-page) survey mailed to a random sample of the general public (adult population)
  of Dane County. The intent of this survey is to get estimates of the number of Dane County
  water recreation users, how they use the waters (fishing, boating, and other forms of
  recreation on or by the waters), and a rough frequency of use.
- 2. An intercept survey conducted by volunteers/Dane County staff at selected locations around Dane County waters (boat launching areas, fishing venues, trails, and other sites on the waters). This short (one-page) survey will consist of general questions such as, zip code of water recreation user, water recreation activity(ies) in which they engage, etc. Results from the intercept survey could highlight non-local water recreation usage vs. local usage.

3. A two-page survey to be mailed to a random sample of known water recreation users (boaters, anglers, paddlers, etc.). This survey is intended to quantify the economic impact of the Dane County waters and get a handle on the purposes for which people use the waters. We expect that results of the other two portions of the study (general population and intercept surveys) will inform how best to proceed with this phase.

## Phase 2: Survey Implementation (Data Collection 1, 2, 3) Estimated Process and Costs

- 1. Random Sample General public of Dane County. Based on U.S. Census Bureau, 2005-2007 data, there were 366,215 adults in Dane County. In order to achieve estimates with a confidence level of 95% and a confidence interval of 5%, 384 completed surveys would need to be returned. If the Survey Research Center were to do a survey of this type, the SRC would expect to send 1,152 surveys (3 times sample size needed) to a random sample of Dane County residents. For the purposes of this proposal, we have assumed a 1-page, 1 oz. questionnaire. The survey will not include open-ended questions. A mailing list would be purchased for this particular survey. The survey process would include an initial mailing, a post card reminder to non-respondents within 14 days of the first mailing, and a second mailing to non-respondents within 14 days of the post card. The SRC would collect, input/scan, and clean data from the returned questionnaires. Data gathered will be provided, in an Excel spreadsheet, with all personal identifying information removed. The minimum cost for the general population survey will be \$3,500. If Dane County decides to go beyond the minimum sample size needed, data from the additional surveys will be entered at a rate of \$4.50 per survey. The advantage of processing surveys above the minimum sample size is that the confidence interval will be less than +/- 5%, which will mean that you can be more certain that respondents' answers truly reflect the opinions of your population. Processing additional surveys improves the accuracy of the results but does add to the overall expense.
  - 2. Intercept Survey Users/Visitors of Dane County Waters. <u>Assumption</u>: Local volunteers/County staff would do the actual data collection. The intercept surveys will be a standard 1-page survey. The completed surveys will be mailed to the SRC when all surveys have been collected. The SRC will scan/input data from questionnaires. Data gathered will be

provided, in an Excel spreadsheet, with all personal identifying information removed. As an example, although not a current figure or comprehensive in terms of other water activities, the annual swimming beach attendance at City of Madison swimming beaches for 1990 to 1995 was 102,000 people. Using this number, a sample size of 383 completed intercept surveys would be required to achieve estimates with a confidence interval of 5% with 95% confidence. The minimum cost for the intercept survey will be \$900. If Dane County decides to go beyond the minimum sample size needed, data from the additional surveys will be entered at a rate of \$1.00 per survey. Again, this survey option assumes volunteer/County staff implementation. For the cost of traveling to and from Madison, the SRC could arrange to do a training for volunteers or County staff (estimated cost, including gas, lodging, meals = \$500). This training would include sampling procedures, tips, etc. Alternatively, the SRC could also arrange a phone conference with County staff to discuss intercept procedures.

3. Random sample - Known Water Recreation Users (example: registered boaters) 28,000 boaters were registered in Dane County a few years ago. Using only this number, the SRC would expect to send 1,137 surveys (3 times the sample size needed of 379) to a random sample of registered Dane County boaters. This number (28,000 registered boaters) was used for estimate purposes only. It is unknown how many people are going to be in this population until a firm definition of the target audience (boaters, anglers, paddlers, etc.) is determined. Estimates for the number in Dane County who participate in these uses might come from the random sample of the general Dane County population (Data Collection 1) or the Intercept surveys (Data Collection 2). This survey will be a standard 2-page survey (plus cover letter), 1 oz. questionnaire. This survey will contain no more than 1-open ended question. Mailing list(s) will be provided by the County for this particular survey. The survey process would include an initial mailing, a post card reminder to non-respondents within 14 days of the first mailing, and a second mailing to non-respondents within 14 days of the post card. The SRC would collect, input/scan, and clean data from the returned questionnaires. Data gathered will be provided, in an Excel spreadsheet, with all personal identifying information removed. Note: The total costs for the random sample of known recreation users will be determined by how many populations Dane County will want/need to gather data. The minimum cost

for the water recreation survey will be \$4,000/per water recreation usage (i.e., anglers). If Dane County decides to go beyond the minimum sample size needed, data from the additional surveys will be entered at a rate of \$5.00 per survey.

### Phase 3: Analysis and Report

It is assumed that Dane County will request a full report (statistical analysis of the data, executive summary and full write-up of the results). The final report would summarize the individual survey results (general population, intercept, and water recreation users) and integrate these results into an overall picture of Dane County water recreation usage and economic impact. Due to one report being written for the three surveys, there is a cost savings in the reporting portion of the project. The cost for a full report will be \$3,000; as a comparison, three 'stand-alone', full reports currently cost \$4,200. We would expect to complete the analysis within 1 month after all data collection has been completed.

To summarize, the SRC expects the three surveys to cost approximately \$8,400 and the analysis/report to be an additional \$3,000 for a total cost of \$11,400. This estimate was written in January 2010. All amounts shown are derived from our best estimate of costs based on the project's dimensions as we understand them. A revised cost proposal may be necessary due to possible changes in direct project expenses such as postage and printing.

Phase 2 and 3	Mail Out	Estimated Sample Size Needed	Costs
Data Collection 1: General Population	1,152	384	\$3,500
Data Collection 2: Intercept		`383	\$900
Data Collection 3: Water Recreation Users (per water rec population, i.e., anglers)	1,137	379	\$4,000
Analysis and Report			\$3,000
TOTAL		Additional Interco	\$11,400

Entering Additional General Population Surveys (384+) = \$4.50 each, Entering Additional Intercept Surveys (383+) = \$1.00 each, Entering Additional Water Rec Users Surveys (379+) = \$5.00 each

Once you have had a chance to review, please contact us to discuss any questions you may have.

Thank you,

Shelly Hadley, <u>michelle.hadley@uwrf.edu</u>, 715/425-0701 David Trechter, <u>david.d.trechter@uwrf.edu</u>, 715/425-3129

# DRAFT - Data Collection #1 - Dane County Water Recreation General Population Survey \*\*Please return by DATE xx, 2010\*\*

Please fill the circle that most closely matches your response.

Like this: Not like this: W



# PLEASE ANSWER THE FOLLOWING QUESTIONS FOR DANE COUNTY WATER RECREATION ONLY.

IN A TYPICAL YEAR, do you participate in any of the following activities ON DANE COUNTY LAKES, RIVERS, OR STREAMS?				2. IF YES, please mark which best describes the frequency with which you participate ANNUALLY in the activity ON DANE COUNTY LAKES, RIVERS, OR STREAMS.			
	YES	NO	1-2 times/yr	3-5 times/yr	6-10 times/yr	11-20 times/yr	Over 20 times/yr
a. Swimming	0	0	0	0	0	0	0
b. Fishing from boat	0	0	0	0	0	Ο	Ο
c. Fishing from shore/pier	0	0	0	0	0	0	Ο
d. Rowing	0	0	0	0	0	0	Ο
e. Canoeing/Kayaking	Ο	0	0	0	Ο	0	Ο
f. Sailing	Ο	0	0	0	Ο	0	Ο
g. Water Skiing	Ο	0	0	0	Ο	Ο	Ο
h. Motor-boating (other than fishing or water skiing)	0	0	0	0	Ο	. 0	Ο
i. Jet Skiing	0	Ο	0	0	0	Ο	0
j. Water Fowl Hunting/Trapping	0	0	0	0	0	0	Ο
k. SCUBA Diving	0	0	0	Ο	0	0	O
1. Ice Fishing	Ο	0	0	Ο	0	Ο	O
m. Ice Boating	0	0	0	0	0	Ο	Ο
n. Snowmobiling (on lake or river)	0	. 0	0	Ο	0	0	0
o. Ice Skating	0	0	0	Ο	0	0	0
p. Cross Country Skiing (on lake or river)	Ο	0	0	0	0	Ο	Ο
q. Walking on lakes when frozen	0	Ο	0	Ο	Ο	Ο	Ο
r. Kite Skiing/Sail Boarding	Ο	0	0	0	0	Ο	0
s. Activities <u>near</u> Dane County waters (birding, biking, walking, etc.) please, specify your activity(ies):	0	0	0	0	0	0	0
t. Other activities, specify	0	0	0	0	0	0	0

6. Level of education	Less than High school O	High school diploma O	Som college/ trade so O	tech/ chool	2-year college/ tech/trade school degree O	4-year college degree	Graduate/ Professional degree O
5. Age		18 – 24 O .	25 – 34 O	35 – 1 O	44 45 – 54 O	55 – 64 O	65+ O
4. Gender	Male O		male O				
3. Zip Code	•		- Carrier and a second				

Thank you for completing the survey! Please return your survey by DATE xx, 2010 to:

Survey Research Center,

University of Wisconsin-River Falls,

124 RDI Bldg.,

410 S. Third St.

River Falls, WI 54022-5001

\$25,000-

49,999

0

Under

\$25,000

0

7. Household Income Range

\$50,000 -

\$74,999

0

\$100,000-

\$199,999

Ο

\$200,000+

O

\$75,000 -

\$99,999

O

This survey is available in alternative formats by contacting the Survey Research Center at 715-425-0701.

# Dane County Water Recreation Intercept Surveys - Batch Cover Sheet and Instructions

Thank you for assisting with the Dane County Water Recreation study. You will be collecting surveys from individuals participating in recreational activities at Dane County rivers, lakes, and streams. These surveys will be forwarded to the Survey Research Center (SRC) at the University of Wisconsin – River Falls for tabulation.

Location: (Dane County river, lake, or stream)	Date Survey	ed:	//2010						
Number of Surveys Collected:	Comments:	(weather, etc.)							

### INTERCEPT INTERVIEWING INSTRUCTIONS

- One common strategy when conducting intercept surveys is to approach every third, every fifth, etc.,
   person. This helps avoid any unintentional sampling bias.
- We recommend using at least 2 interviewers to conduct the surveys. Each interviewer should have copies of the survey, a clipboard, and several black pens.
- Interviewers should wear identification, such as a nametag.
- Individuals should always be approached in a friendly and professional manner.
- It is optimal for the interviewer to fill out the survey with the respondent. (i.e., no self-administering).
- Respondents should not fill out a survey and bring it back. It is not an option for respondents to take the survey with them to complete and return it via mail at a later date.
- Only one survey should be completed by a member of an immediate group. For example, if a couple is approached together, only one person should complete the survey for the couple.
- The survey should be completed by adults 18 years of age or older.
- Ideally, each person asked will agree to complete the survey. The reality, however, is that some people
  will refuse to participate. The best advice is to be friendly. Explain how the project is very important to
  Dane County and that the survey should not take more than two minutes to complete.
- Upon completion of each survey, thank the respondent for participating.
- At the conclusion of each intercept session, complete the Batch cover sheet and attach it to the applicable surveys. The surveys should be submitted to the Dane County Office of Lakes and Watersheds and/or SRC. [insert more information when available]
- The SRC will be happy to help if you have any questions (715) 425-0701.

Date	/2010		Time	AM/PM	•	
Location	(lake/rive	r/stream	Day of the Week (circ	le) M TU	W TH F. SA	, su
Launch Site/Boat R	amp	ado ela 199 <del>0 - 7 y a</del>	Park		technical -	
DRAFT - Data	Collection #2- D	ANE COUNTY V	VATER RECREATION	INTERCEPT	SURVEY	
I. <u>PRIMARY</u> Activ	vity <u>Mark (•) one o</u>	nl <u>v</u> :				
Swimming	Fishing from Boat	Fishing fror shore/pier	KOWINS		anoeing/ ayaking	
Ο	0	0	. 0		0	
Sailing	Water Skiing	Motor-boati (other than fish and water skiii	ing Skiing		ater Fowl ng/Trapping	
0	Ο	O	0		0	
SCUBA Diving O	Ice Fishing O	Ice Boating O	Snowmobiling lake or river)		Ice Skating O	
Cross Country Skiing	Walking on lakes when frozen	Kite Skiing Sail Boardii		Y Oth	ner, specify	
(on lake or river)		0		<u></u>	0	
0	0	0	0 .		O	
2. Including vour	self, how many peo	ple are in your	group today?			
		•			•	
spend in this i.e., nights you wi	hts away from your area because of the Il be staying at a hotel, v and any nights away fro	activity describ with friends, in veh	oed above? icle, etc.			
have you used	y, in the past twelv d rivers, lakes, or str ecreation activities	eams in Dane				
5. What is the M today? <u>Mark</u>		ided to choose	this Dane County w	/ater resou	rce for your a	ctivity
Proximity/ Location	Quality of the Water Resource (fishery, water	Size of the Lake/River/ Stream	Facilities (parking, launch ramps,	Nearb amenit (restaura	ies Othe ants,	er, specify
	quality, etc.)	0	restrooms, etc.)	shopping	, etc.)	$\circ$

6. What is the zip code of your primary residence

7. Gender	Male O	Female O				
8. Age	18 – 24	25 – 34	35 – 44	45 – 54 O	55 – 64 O	65+ O
	0	0	. 0		O	-
9. Level of education	Less than High school	High school diploma	Some college/ tech/ trade school	2-year college/ tech/trade school degree	4-year college degree	Graduate/ Professional degree
	0	0	Ο	0	Ο	0
10. Household Income Range	Under \$25,000 O	\$25,000- \$49,999 O	\$50,000 \$74,999 O	\$75,000 – \$99,999 O	\$100,000- \$199,999 O	\$200,000+ O

That is the end of the survey – Thank you very much for your help!

# DRAFT - Data Collection #3 - Dane County Water Recreation Users Survey \*\*PROTOTYPE/FISHING\*\*

\*\*Please return by DATE xx, 2010\*\*

### PLEASE ANSWER THE FOLLOWING QUESTIONS AS THEY PERTAIN TO DANE COUNTY WATER RECREATION ONLY.

1.	In the past twelve months, have you used rivers, lakes, or streams in Dane County for fishing?	Yes O	No O
	If no, please return the survey in the enclosed envelope. Thank you.		
2.	For each of the following activities, indicate the extent, time, and location of you	ur participation <u>on</u>	<u>Dane</u>

County waters.

Activity	Total # of times you engage in this activity annually on Dane County waters.  If you do not participate in the activity on Dane County waters, please write "O" in this column.	Name of <u>Dane County body of water</u> you <u>use most</u> for this activity
a. Fishing from boat		
b. Fishing from shore/pier		
c. Ice Fishing		

3. Please write in Column B how much money you spend on a typical Dane County recreational fishing trip for the expense categories listed in Column A. If you do not spend money in a particular category, please write "O" in Column B.

Next, write in Column C how much of the money that you spend for a typical recreational fishing trip in Dane County is spent in Dane County – an example is provided in the first row.

COLUMN A EXPENSE CATEGORIES	COLUMN B HOW MUCH MONEY DO YOU SPEND ON A TYPICAL RECREATIONAL FISHING TRIP IN DANE COUNTY?  PLEASE WRITE IN DOLLAR AMOUNT	COLUMN C HOW MUCH OF THE MONEY SPENT ON A TYPICAL RECREATION FISHING TRIP IN DANE COUNTY (COLUMN B) IS SPENT IN DANE COUNTY? PLEASE WRITE IN DOLLAR AMOUNT
EXAMPLE: Auto related expenses	\$50	\$25
a. Auto related expenses (fuel, etc.)	\$	\$
b. Boat related expenses (fuel, rental, etc.)	\$	\$
c. Contest/tournament fee	\$	\$
d. Fishing supplies (bait, tackle, etc.)	\$	\$
e. Groceries (snacks, soda, beer, etc.)	\$	\$
f. Guiding services	\$	\$
g. Launch fees	\$	\$
h. Lodging	\$	\$
i. Restaurants/bars	\$	\$
j. Souvenirs, gifts, apparel	\$	\$
k. Other, specify:	\$	\$

1		A	e- t	Danu	Many Dags
4. Overall, please rate your recreation	onal Very Good	Good	Fair	Poor	Very Poor
experiences on Dane County lake		0	0	0	0
rivers, and streams.	•				

5a.	<ul> <li>a. Do you normally use a boat when participating in fishing activities in Dane County?</li> </ul>					Yes O	No ⇒ <i>if No, GO TO Q6</i> O		
5b.	If yes to Que County?	estion 5a, what t	ype of boat do yo	ou normall	y use wh	en participati	ng in fishing acti	vities in Da	ine
	Open	otorboat motorboat sail boat boa		Sail (on	only) Rowboat		Canoe/Kayak	Other, specify	
n	notorboat O			boat O		0	0	C	)
5c.	Please write when partic (in inches)	ase write the length of the boat you normally use en participating in fishing activities in Dane County inches)						"	
5d	normally us	e in the motor size when participa y (in horsepower	ting in fishing ac					HP	
6.	Please Indicat	te how often you	have experience	ed each of t	the follo	wing during yo	our recreational	experience	es on
		water resources.			Never	Rarely	Sometimes	Often	Always
	a. Reckless	motorboat opera	tion		0	0	0	0	0
		personal watercr		• • •	0	0	0	0	0
		, y boats on the wa	Maria Cara Cara Cara Cara Cara Cara Cara		0	0	0	0	0
		ations with shore	•		0	0	0	Ο	Ο
		ng water levels	the second of the second of the second of	L. Britan Karens	0	0	0	0	0
	f. Poor wate				0	Ο	0	Ο	0
	g. Crowding	g at beaches and	facilities		0	Ο	O	0	Ο
		ulatory enforcem			0	Ο	Ο	0	0
		ery (type and size	the superior and the superior and a	格克尔	0	Ο	0	0	0
	•	om boats/other la		•	0	0	0	0	0
		ate shore facilitie		J. Bak	0	Ο	0	0	0
	l. City noise	(sirens, etc.)			0	0	0	0	О
	m. Poor fish	ning etiquette	t ing same of the large of the transfer of the following		0	0	0	0	0
		g at launch ramp			0	0	0	0	0
		quette at launch			0	0	0	0	0
		pecify			Ο	0	0	Ο,	0
<b>7.</b>	Please pro	vide any other co	omments you ma	y have abo	ut Dane	County water	recreation.		
Wind				•					

DEMOGRAPHICS All responses are anonymous and will be reported in group form only.

8. Zip Code	<del>,</del>					
· · · · · · · · · · · · · · · · · · ·	Male	Fem	ale			
9. Gender	Ο	C	)			
	18 – 24	25 – 34	35 – 44	45 – 54	55 - 64	65+
10. Age	Ο	0	0	0	0	о О
11, Education	Less than High school	High school diploma	Some college/ tech/ trade school	2-year college/ tech/trade school degree	4-year college degree	Graduate/ Professional degree
	0		Ο	0	Ο	Ο
			4=0.000	, ATT 000	ć100 000	
12. Household Income	Under \$25,000	\$25,000- \$49,999	\$50,000 – \$74,999	\$75,000 — \$99,999	\$100,000- \$199,999	\$200,000+
Range	0	0	0	0	0	Ο

Thank you for completing the survey!
Please return your survey by Date xx, 2010 to:

Survey Research Center, University of Wisconsin-River Falls 124 RDI Building, 410 S. Third St. River Falls, WI 54022-5001 This survey is available in alternative formats by contacting the Survey Research Center at <a href="mailto:src@uwrf.edu">src@uwrf.edu</a> or 715-425-0701.

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