Preliminary Summary – 2007 Recreational Boating Study

GSS Richtman – 11-28-07

Introduction

Overall the 2007 Recreational Boating Study (RBS) was a success. Ten flights were completed during the boating season between Memorial Day weekend and Labor Day weekend. There were seven peak-day (holidays and weekends) and three off-peak flights completed. Each flight covered portions of the Mississippi, Minnesota, and Saint Croix rivers. Total length of waterway covered in each flight was in excess of 300 miles. The data was processed and analyzed to determine seasonal use estimates for the 2007 season. Where applicable, this year's data was compared to data from previous years in an attempt to recognize developing patterns and trends in year to year recreational use.

Data Collection

The data collection methodology for the 2007 is essentially identical to that of previous years. Aerial imagery was gathered with the plane flying over the center of the channel, and pictures were taken for 100% coverage of the main channel. This year refinements to the equipment were introduced to streamline the process. A Nikon 10MP Digital SLR with an 8 GB memory card was employed. The size of the memory card allowed an entire day's worth of data to be gathered without changing cards. GPS technology was used to not only track the plane's position as it had been in the past, but also for navigational purposes of keeping the plane over the centerline of the channel. The introduction of the GPS for navigational purposes all but eliminated the need for re-flying any areas that were missed due to the plane drifting off the channel. After the initial flight, an aluminum camera mounting fixture was introduced. This fixture mounted the camera directly in the camera port of the plane, eliminating the need for the camera operator to hold it and eliminating a primary source of fatigue for the operator. A remote shutter trip further reduced operator fatigue. Imagery was downloaded directly from the camera to the GSS server for processing. The DNR Garmin extension was used to dump the track log from the GPS and link the track points to their respective photos. Boat counts were accomplished using on-screen photo-interpretation methods with the numbers entered directly into a personal geodatabase.

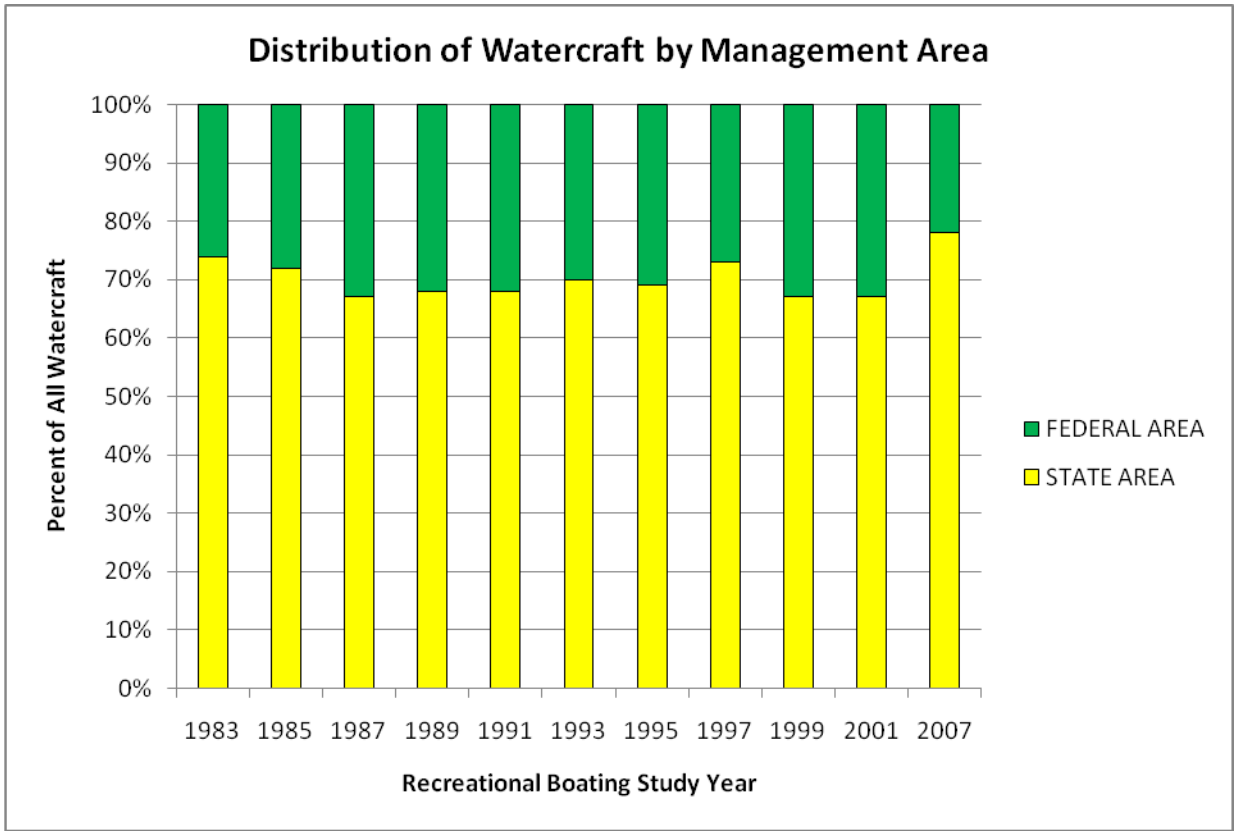
Results

Saint Croix River

Seasonal use estimates, as shown below, indicate an increase in recreational use for the Saint Croix River.

	Peak Day	Off-Peak Day	101-Day Season
1989-2001 Boat-Hours	477,519	245,941	723,460
2007 Boat-Hours	826,443	334,789	1,161,232
1989-2001 Boats	102,770	43,917	147,421
2007 Boats	147,579	59,783	207,362
1989-2001 People	247,630	105,162	352,792
2007 People	354,190	143,481	497,671

The state managed area of the Saint Croix accounted for almost 80% of the total boats counted on the Saint Croix. This is a shift from previous years as shown by the table below.



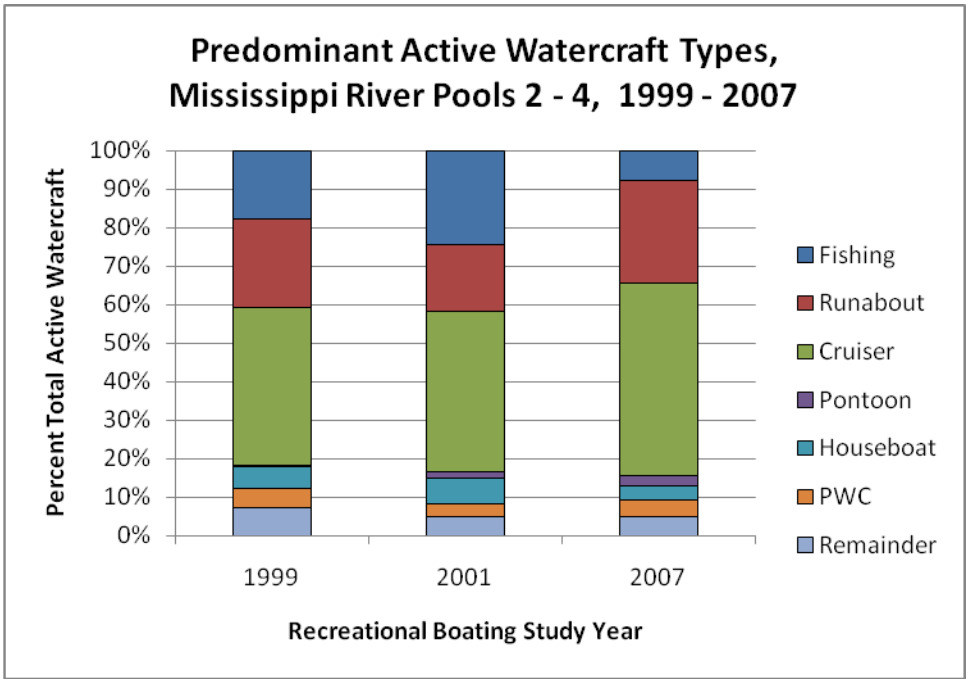
Cruisers continue to be the dominant watercraft type in the state managed area. This type accounts for 57.4% of active boats and 64.0% of beached boats. Canoes continue to be the predominant type in the federally managed areas, although there were increases in runabouts, pontoons and cruisers.

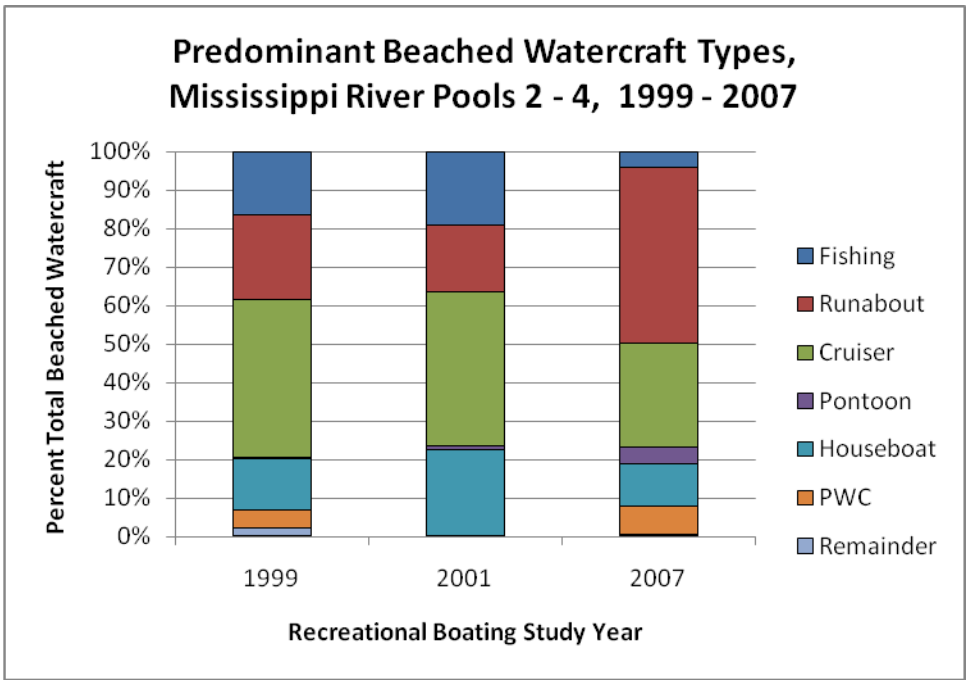
Mississippi River – Lock and Dam #1 to the Head of Lake Pepin

This reach continues to see increases in recreational use as shown by the following table. However, the percent increase is not as large as that seen on the Saint Croix.

	Peak Day	Off-Peak Day	101-Day Season
1989-2001 Boat-Hours	175,274	68,409	243,683
2007 Boat-Hours	181,128	91,199	272,327
1989-2001 Boats	31,298	12,216	43,514
2007 Boats	32,344	16,285	48,629
1989-2001 People	75,118	29,318	104,436
2007 People	77,626	39,085	116,711

Cruisers accounted for approximately 50% of the active boats in this area as shown by the graph below. Runabouts were the predominant beached watercraft type for this area.



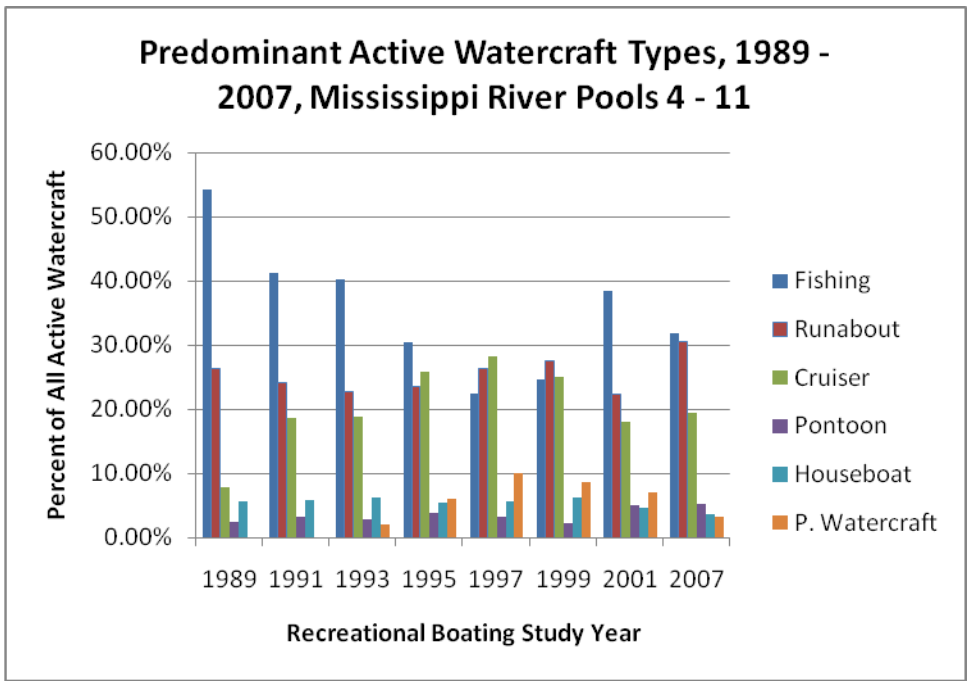


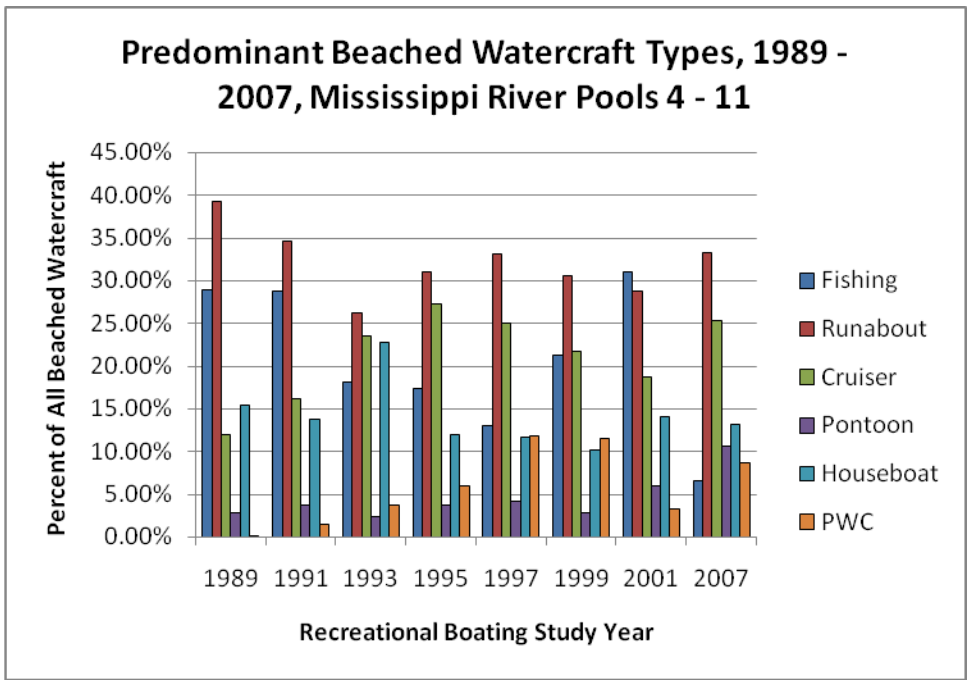
Mississippi River - Foot of Lake Pepin to COE Saint Paul/Rock Island District Line

Seasonal use estimates indicate a decrease in use for this reach over previous years.

	Peak Day	Off-Peak Day	101-Day Season
1989-2001 Boat-Hours	694,459	341,959	1,036,428
2007 Boat-Hours	417,351	293,357	710,708
1989-2001 Boats	124,010	61,066	185,076
2007 Boats	74,527	52,385	126,912
1989-2001 People	297,625	146,559	444,184
2007 People	178,865	125,725	304,590

Runabouts accounted for the majority of both active and beached boats. Runabouts also showed the largest percent increase over previous years with the percentage of other types either decreasing or showing very minimal gains. It should also be noted that between 2001 and 2007 fishing boats dropped from over 30% to less than 10% of beached watercraft.





Mississippi River – Lock and Dam #1 to Cloquet Island, Dayton, MN
Minnesota River – Fort Snelling to Carver Rapids

This is the first time these areas were sampled as part of the Recreational Boating Study. It appears that the recreational use is rather limited in both areas. The data is still in the process of

being analyzed, and although year to year comparisons are not possible, the data could be used as a baseline for future studies.

Conclusions

The data indicates that recreational use has continued to increase on the Saint Croix River and the Mississippi River between Lock and Dam #1 and the head of Lake Pepin. The Mississippi River form the foot of Lake Pepin to the Corps of Engineers – Saint Paul District Line appears to have decreased. There appears to be comparatively little recreational use of the Mississippi River above Lock and Dam #1 and the Minnesota River from Fort Snelling to Carver Rapids.

Recommendations

Although all ten flights were successfully completed in 2007 this study represents the maximum of what can be accomplished using current methods. Without the updated camera technology and other refinements, it is doubtful this year's study would have been completed successfully. Also the large study area made it impossible to build any flexibility into the schedule for dealing with issues such as weather or air traffic around Minneapolis. A suggestion would be to sample smaller areas, or divide the study area into segments that could be flown on different days. This may be a departure from the "snapshot" concept of the data, but given the amount of time required to fly the entire study area, there are likely to be temporal effects present in the current data.