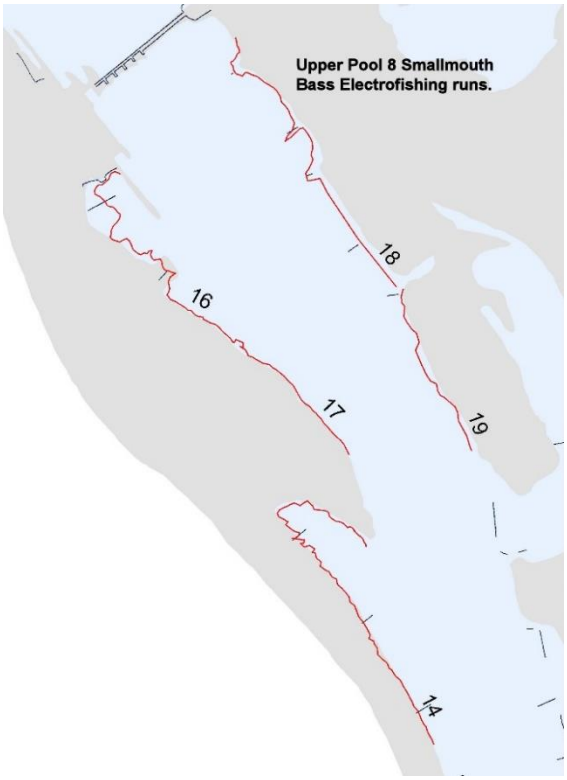
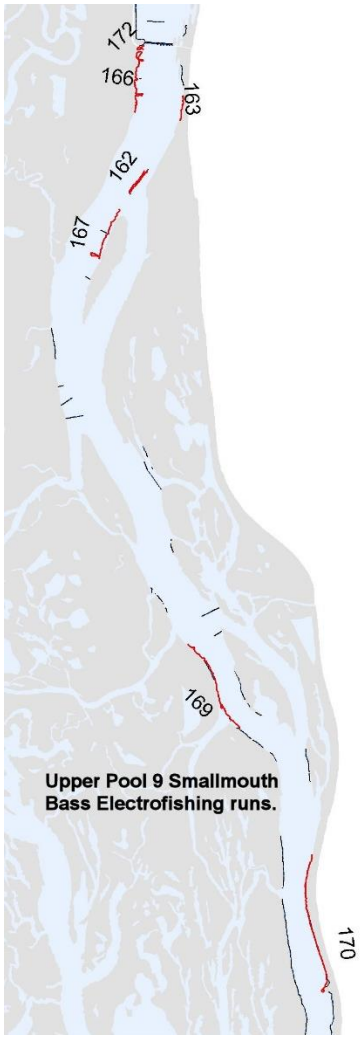
FISHERIES INFORMATION SHEET. SMALLMOUTH BASS, POOLS 8 AND 9, MISSISSIPPI RIVER.

WATERBODY: MISSISSIPPI R.
COUNTY: LA CROSSE & VERNON **YEAR**: 2019

The WDNR surveyed upper navigation pools 8 and 9 of the Mississippi River during August of 2019 using spatially fixed, nighttime electrofishing to determine the health of the smallmouth bass fishery. A total of 132 smallmouth bass were collected, measured and released. A subsample was weighed. In Pool 9, these same electrofishing runs were previously sampled during 2010 and 2011.



During the 2011 sampling. Pool 9 water surface elevation in the tailwater was about 2.3 feet lower than 2010 and 2019. Water temperature was also lower in 2011 by about 3.0°C.

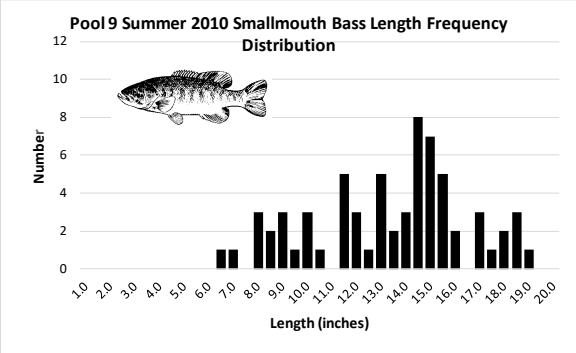


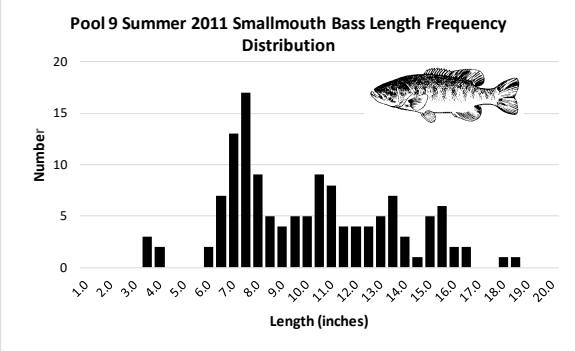
Statistically, the number of Pool 9 juvenile and adult smallmouth bass per hour, a measure of relative abundance, did not change over the years. In 2010 (n=7), 2011 (n=7) and 2019 (n=6) we caught 47.3, 49.5 and 25.7 per hour, respectively. In 2019 (n=5), Pool 8 catch per hour was 30.4 and was not different from Pool 9. Power of our tests was low considering the small number of electrofishing runs. Future additons of the planned fall runs, which were not completed in 2019, would substantially increase this power. Also, several more years of data will facilitate detection of trends, and annual differences.

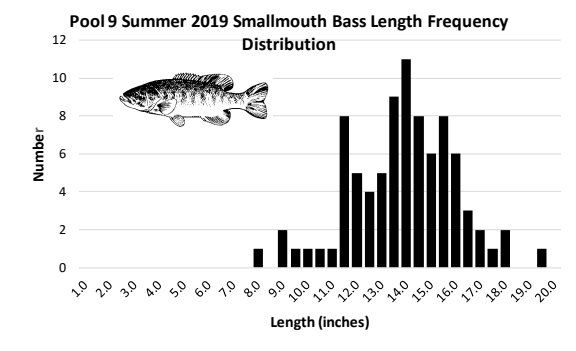
POOL	YEAR	ELEVATION STATION	MEAN TEMPERATURE (°C)	ELEVATION (FT, MSL 1912)	MEAN DISCHARGE (CFS)	n
9	2010	DAM 8-TAIL	24.4	624.98	53658	19
9	2011	DAM 8-TAIL	21.6	622.38	31800	18
9	2019	DAM 8-TAIL	25.0	624.38	51372	6
8	2019	DAM 7-TAIL	24.9	633.55	49838	5

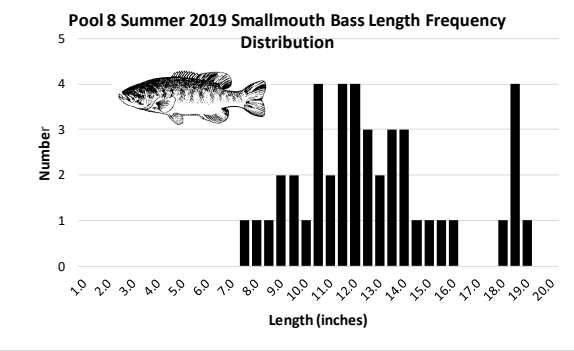
The average size of 2019 Pool 9 juvenile and adult smallmouth (13.9 inches, n=86) were 1.2 inches larger than Pool 8 (12.7 inches, n=43). The average size of 2019 Pool 9 smallmouth was the same as 2010 (13.4 inches, n=66) but was larger than 2011 (10.4 inches, n=129).

POOL	YEAR	MEAN CATCH PER HOUR	STANDARD DEV.	MIN.	MAX.	NO. OF RUNS	TOTAL HRS	MEAN CATC PER MILE
9	2010	47.3	50.7	2.6	143.7	7	1.982	41.6
9	2011	49.5	50.7	0.0	153.2	7	2.683	51.7
9	2019	25.7	31.0	0.0	84.6	6	2.433	22.8
8	2019	30.4	28.1	1.5	60.1	5	2.116	28.4



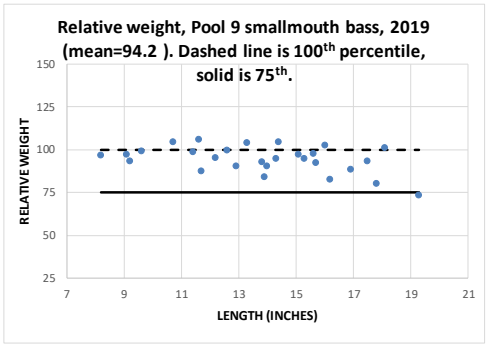


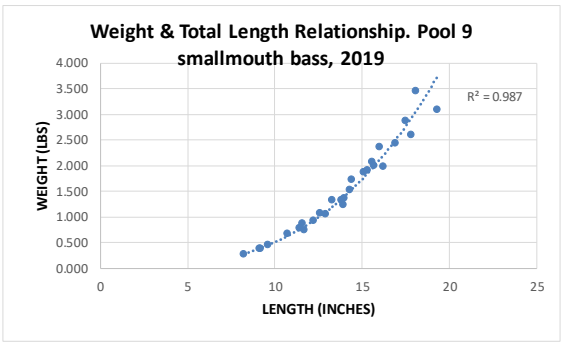




In Pool 9, the percent of all smallmouth bass greater than or equal to 14 inches was 51.5, 15.7 and 50.0 for 2010, 2011 and 2019, respectively. In Pool 8 during 2019 it was 30.2.

The mean relative weight, a measure of body condition, was slightly below normal in 2019. Pool 9 mean relative weight was below 100 percent (94.2 percent, n=28). To calculate this, we used general standard weights, that were not seasonally adjusted.





Contact Information: *David Heath - Fisheries Biologist; 3550 Mormon Coulee Rd.; La Crosse, WI 54601; Telephone: 608-785-9993.* *David.heath@Wisconsin.gov*.

Mississippi River SMB Survey Protocols, WDNR, 2011.

Introduction: Smallmouth bass (*Micropterus dolomieu*) (SMB) is an important warm-water recreational and tournament game species in the Upper Mississippi River (UMR). However, there is a paucity of data on SMB populations in the UMR, specifically in Wisconsin Waters. The Mississippi River Fisheries team presently tracks populations of lentic species (largemouth bass, sunfishes, yellow perch, etc.). The only riverine species tracked are sauger and walleye. We have quite limited information on SMB. Information collected from tournaments provides some cursory data on both SMB, but little useful data can be derived from these reports. More information needs to be collected if we are to effectively manage SMB populations in the UMR There is some anecdotal information that SMB size, condition, and abundance has changed since the colonization of zebra mussels in the mid 1990's and subsequent trophic status change starting in about 2003.

During 2010 and 2011 SMB pilot sampling efforts in Pool 9 provided insights into effective ways to sample this fish. We did a total of 69 daytime and nighttime electrofishing runs (67 to 1557m, 2 to 42 minutes) in borders of the main channel and secondary channels. We sampled during four periods: April (early spring), June (spring), late August and early September (summer), and October (fall). We did fall samples concurrently with adult walleye and sauger surveys. Early spring had very poor catch rates. Spring and summer were good, and fall was the highest. Night samples had a significantly higher catch rate. Fish from fall samples measured significantly smaller on average than those from summer (9.9 vs. 11.3 inches), which is a concern.

Sampling plan: Continue summer (August) nighttime sampling at established stations in Pool 9 (Figure 1) and continue Pool 9 fall nighttime samples concurrently during adult walleye sampling at standard stations (Figure 2). In Pool 8, sample in August at night using standard adult walleye sampling stations (Figure 3). In addition, sample smallmouth bass concurrently during fall nighttime adult walleye surveys at these same stations. Individual fish length (mm), time shocked, habitat type sampled, and start/end points recorded in UTM's (NAD 83 datum) will be collected during sampling events.

Data Analysis: Year class strength, size structure, proportional size structure, and stock density obtained from this study will be compared and contrasted against regional and statewide SMB populations. Any differences (mean size, catch rates, etc.) will be analyzed based on differing treatments of time of day, season, location, and habitat. Ultimately, information collected during this study may provide a greater understanding of SMB populations in the Mississippi river and may advance future management strategies.

Figure 1. Pool 9 Standard Summer Smallmouth Bass Electroshocking Runs.

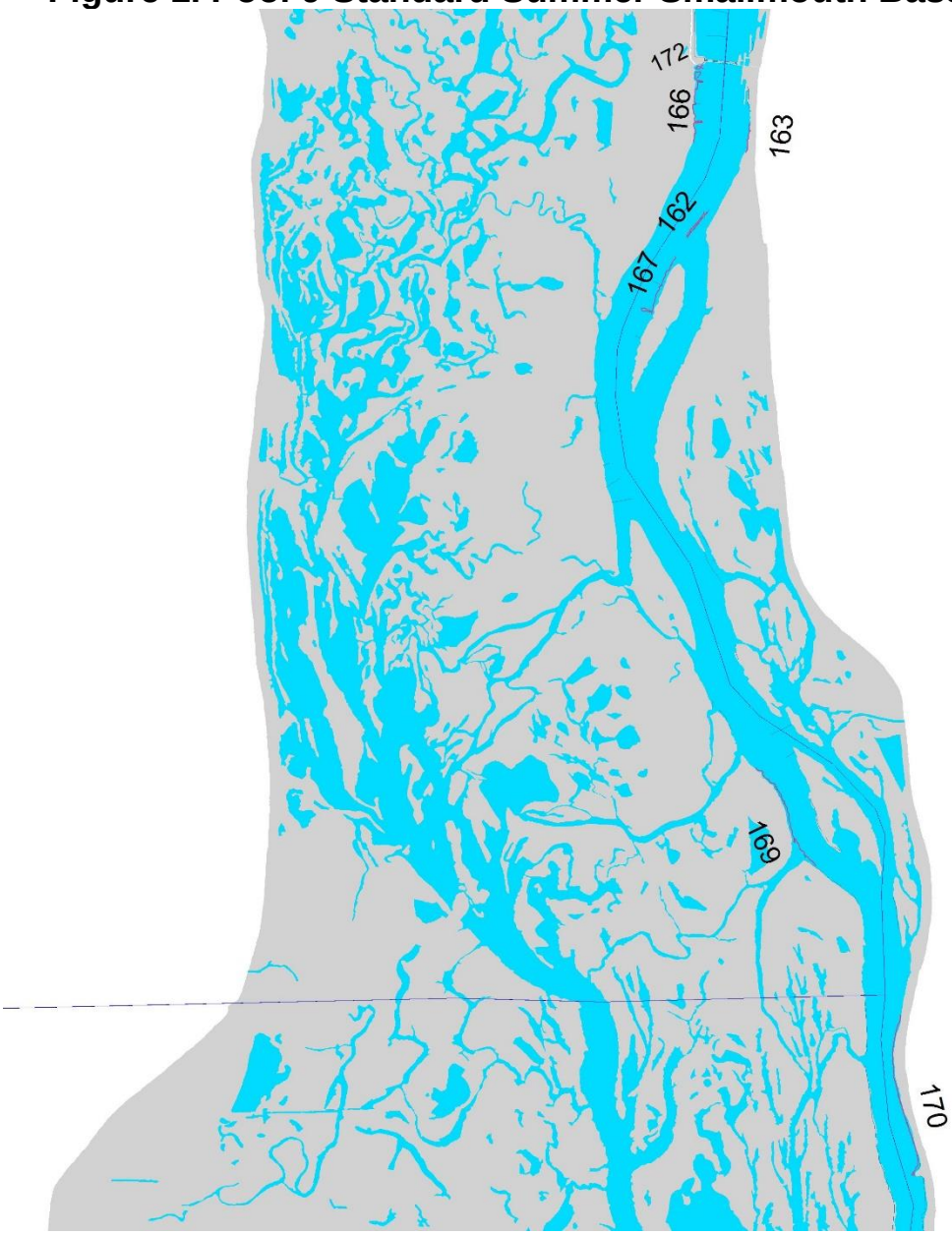
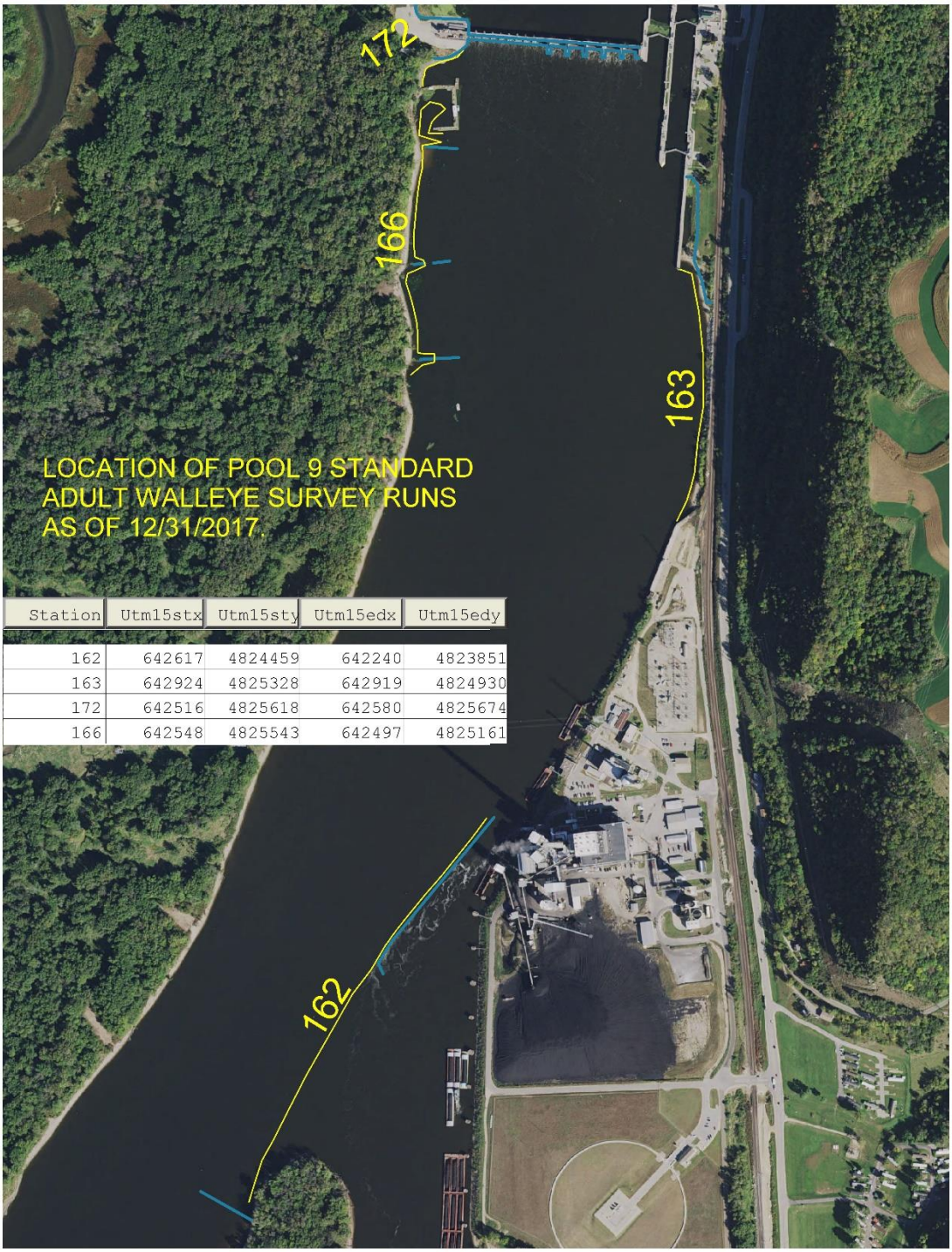


Figure 2. Pool 9 Standard Fall Walleye Electroshocking Runs.



Station	Utm15stx	Utm15sty	Utm15edx	Utm15edy
162	642617	4824459	642240	4823851
163	642924	4825328	642919	4824930
172	642516	4825618	642580	4825674
166	642548	4825543	642497	4825161

Figure 3. Pool 8 Standard Fall Walleye Electroshocking Runs.